Advanced
CCIE Routing & Switching
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Narbik Kocharians
CCSI, CCIE #12410
R&S, Security, SP

VOL-I

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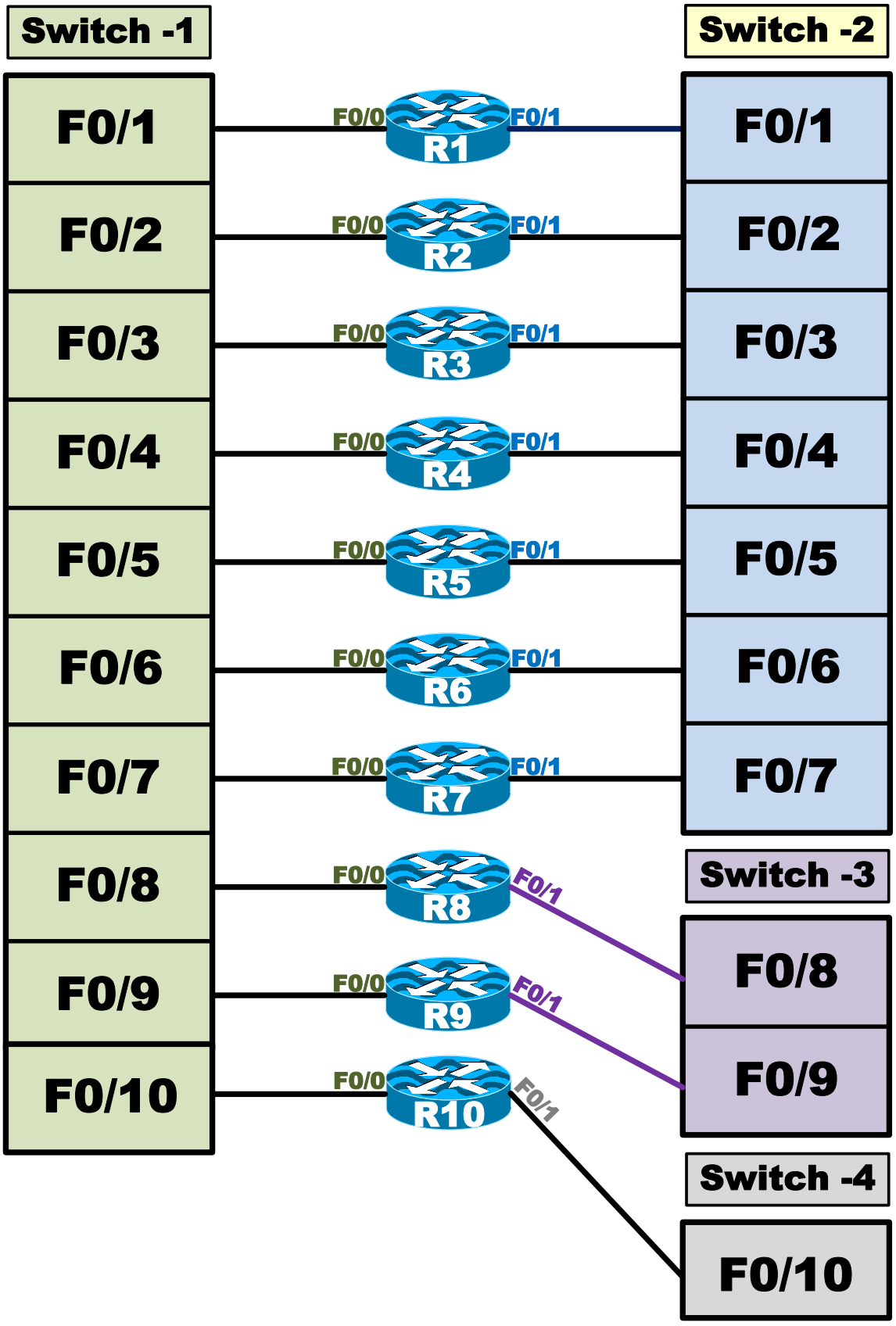
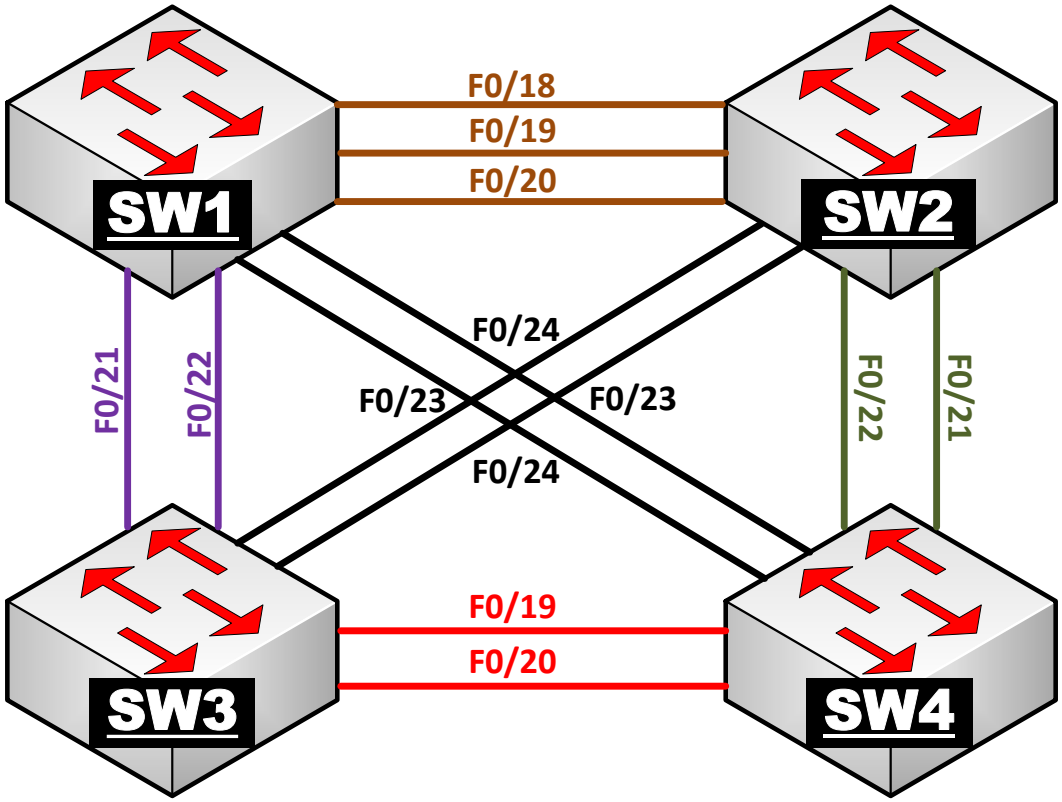


Serial connections:

Router	Interface	Router	Interface
R1	S1/2	R2	S1/1
R1	S1/3	R3	S1/1
R1	S1/4	R4	S1/1
R1	S1/5	R5	S1/1
R1	S1/6	R6	S1/1
R2	S1/1	R1	S1/2
R2	S1/3	R3	S1/2
R2	S1/4	R4	S1/2
R2	S1/5	R5	S1/2
R2	S1/6	R6	S1/2
R3	S1/1	R1	S1/3
R3	S1/2	R2	S1/3
R3	S1/4	R4	S1/3
R3	S1/5	R5	S1/3
R3	S1/6	R6	S1/3
R4	S1/1	R1	S1/4
R4	S1/2	R2	S1/4
R4	S1/3	R3	S1/4
R4	S1/5	R5	S1/4
R4	S1/6	R6	S1/4
R5	S1/1	R1	S1/5
R5	S1/2	R2	S1/5
R5	S1/3	R3	S1/5
R5	S1/4	R4	S1/5
R5	S1/6	R6	S1/5
R6	S1/1	R1	S1/6
R6	S1/2	R2	S1/6
R6	S1/3	R3	S1/6
R6	S1/4	R4	S1/6
R6	S1/5	R5	S1/6

R9	**S0/0/0**	**R10**	**S0/0/0**
R9	**S0/1/0**	**R10**	**S0/1/0**
R10	**S0/0/0**	**R9**	**S0/0/0**
R10	**S0/1/0**	**R9**	**S0/1/0**

Switch to Switch connections



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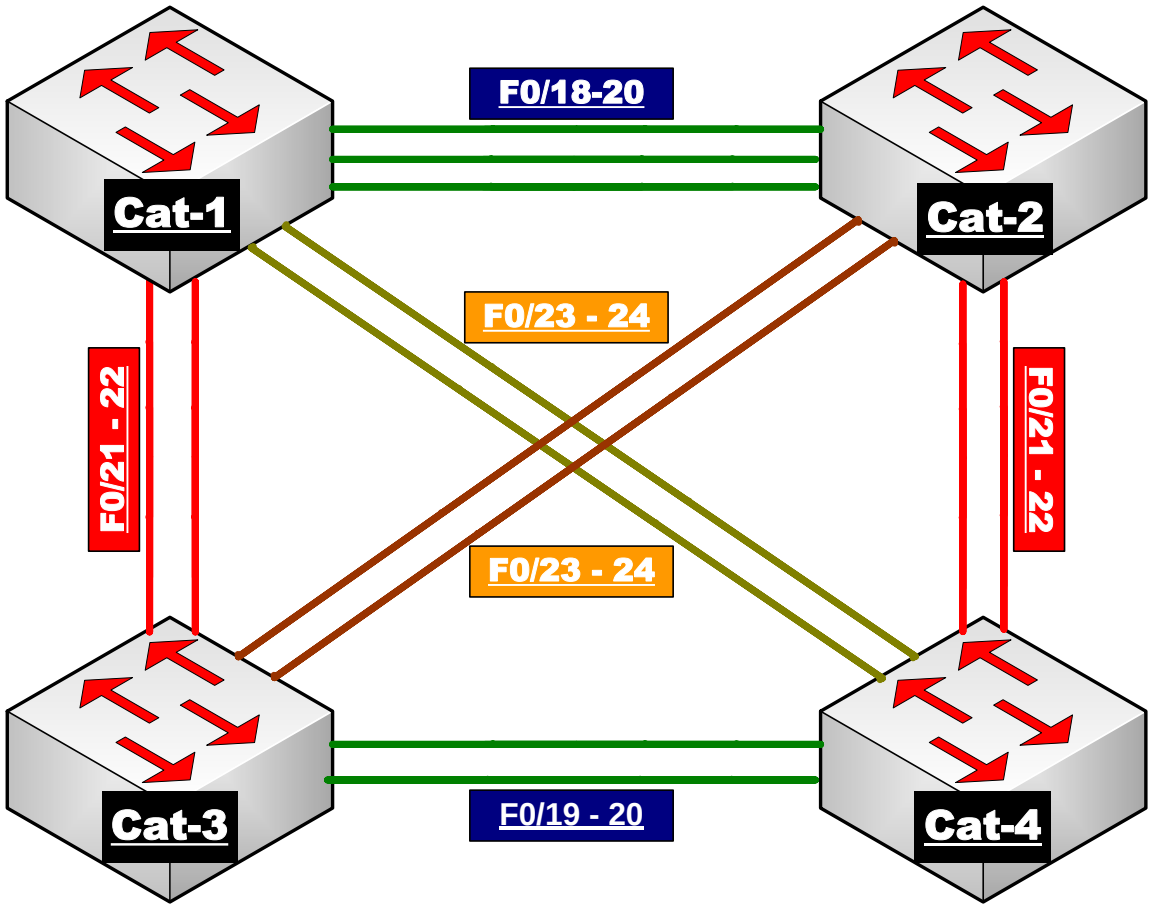
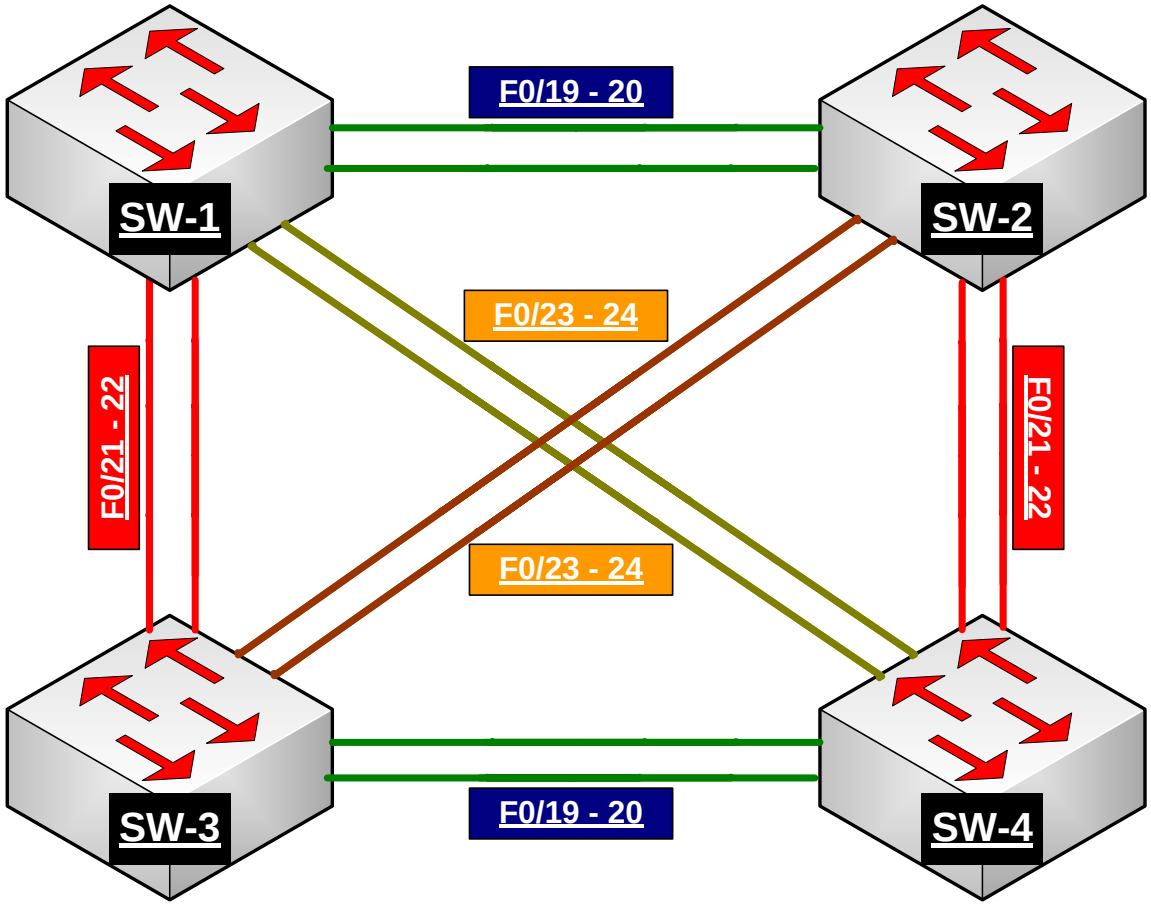
Switching

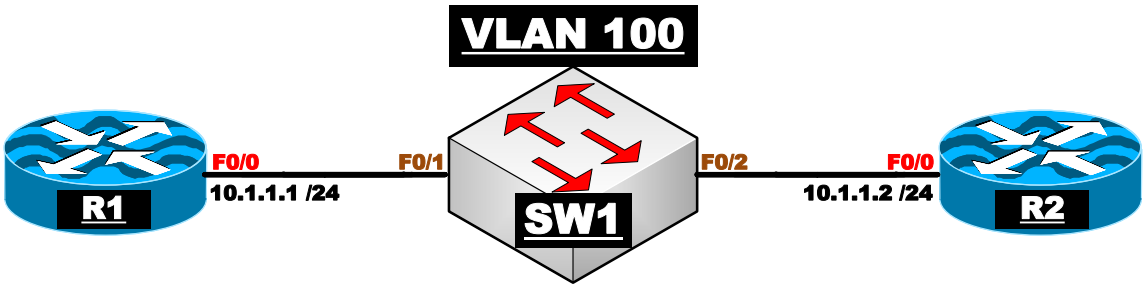
Lab 1
Configuring Trunks



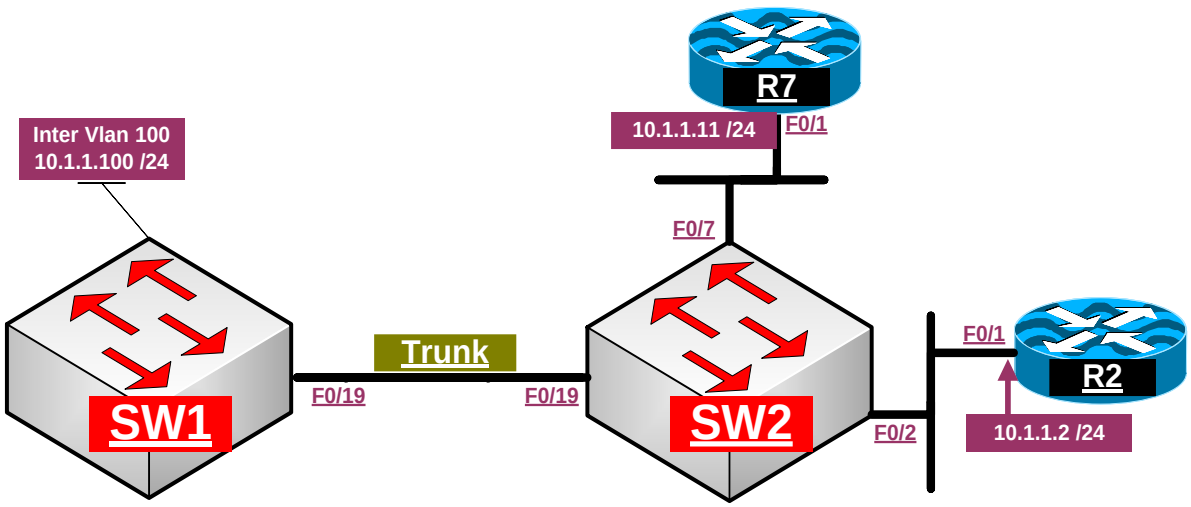
Lab 2
Configuring EtherChannels



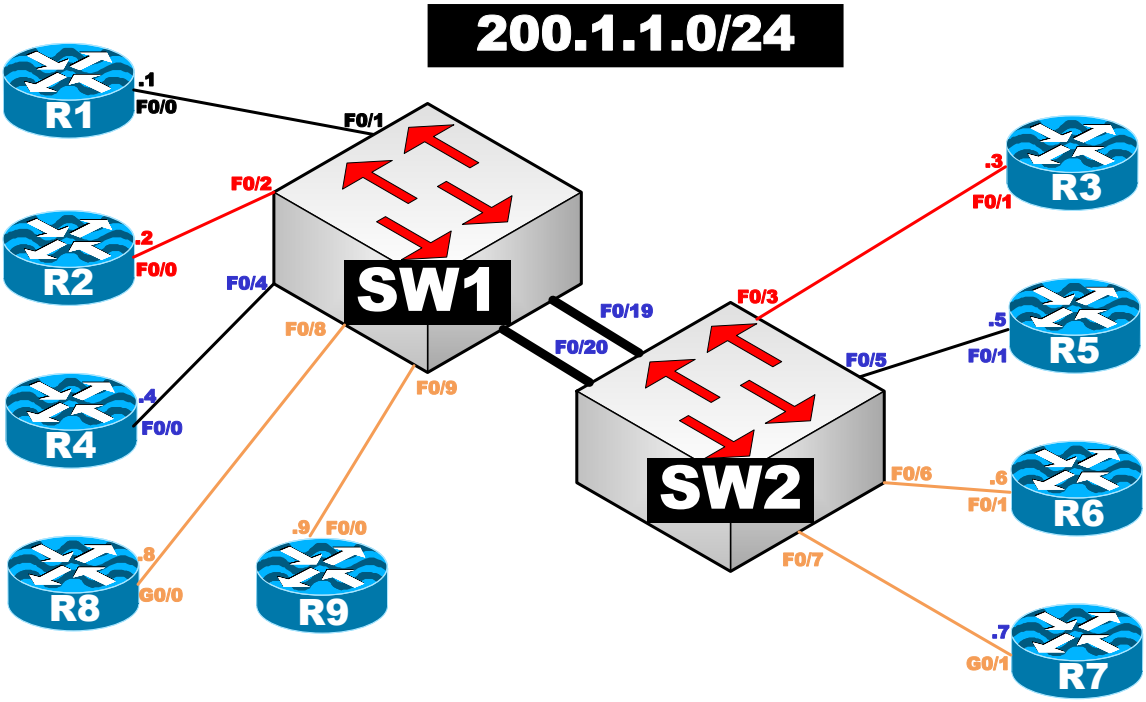
Lab 3
Storm Control - I



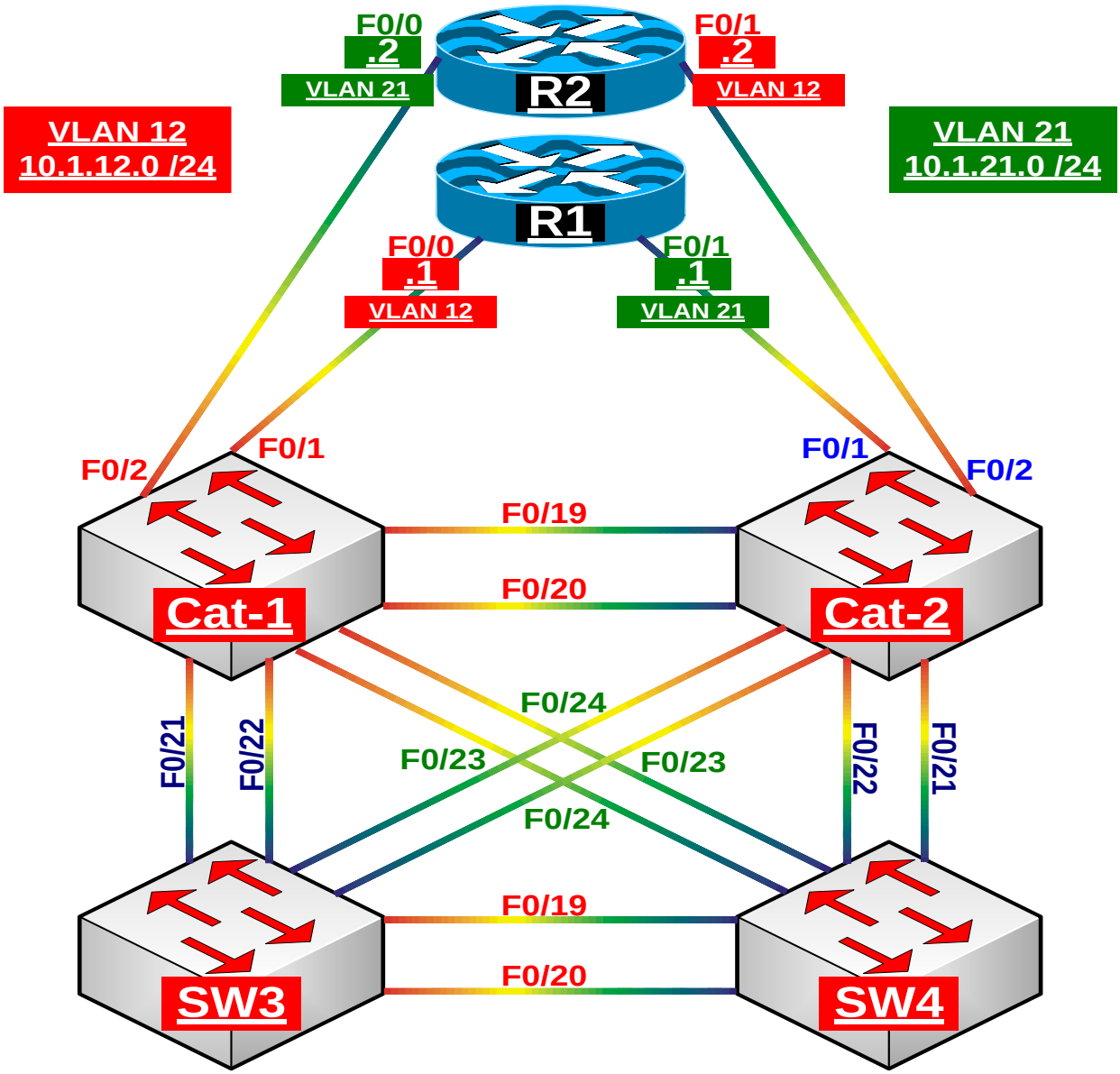
Lab 4
Storm Control - II



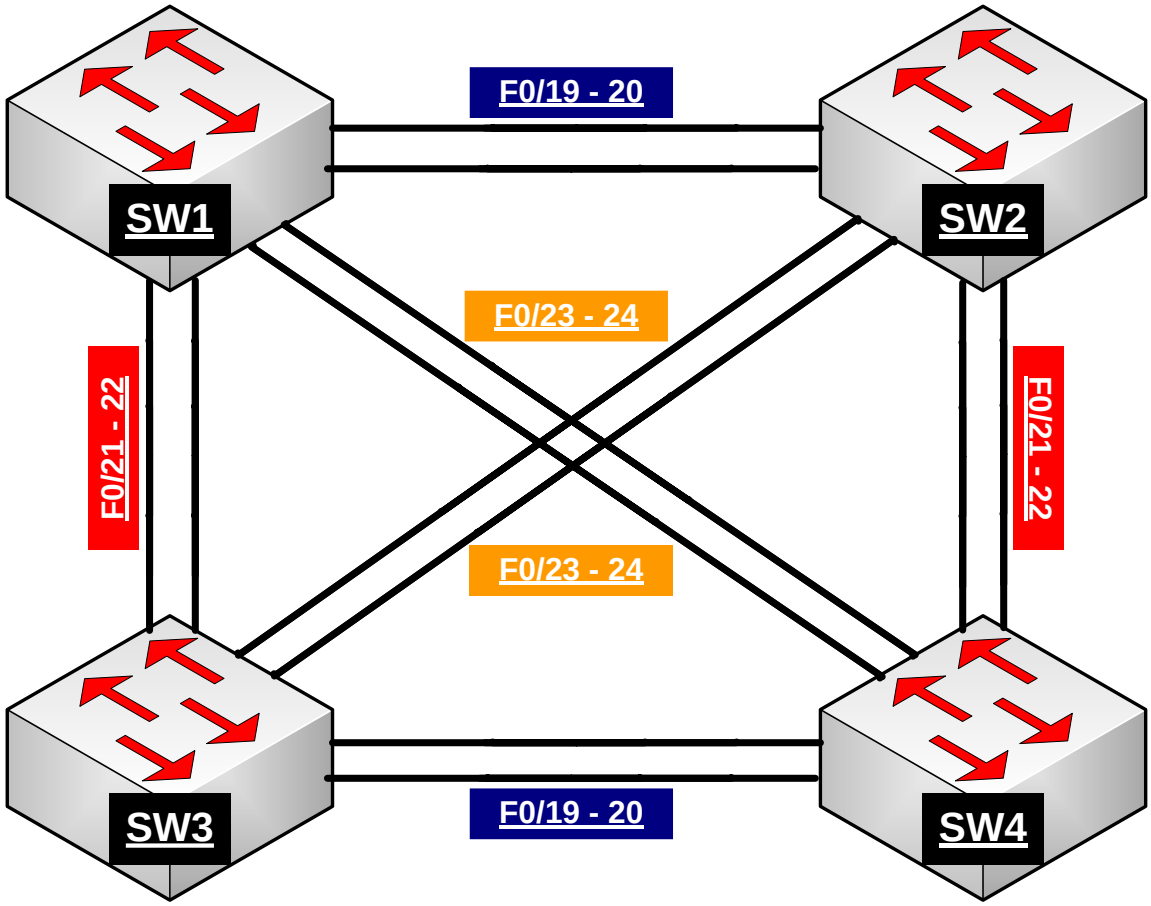
Lab 5
Configuring Private VLANs



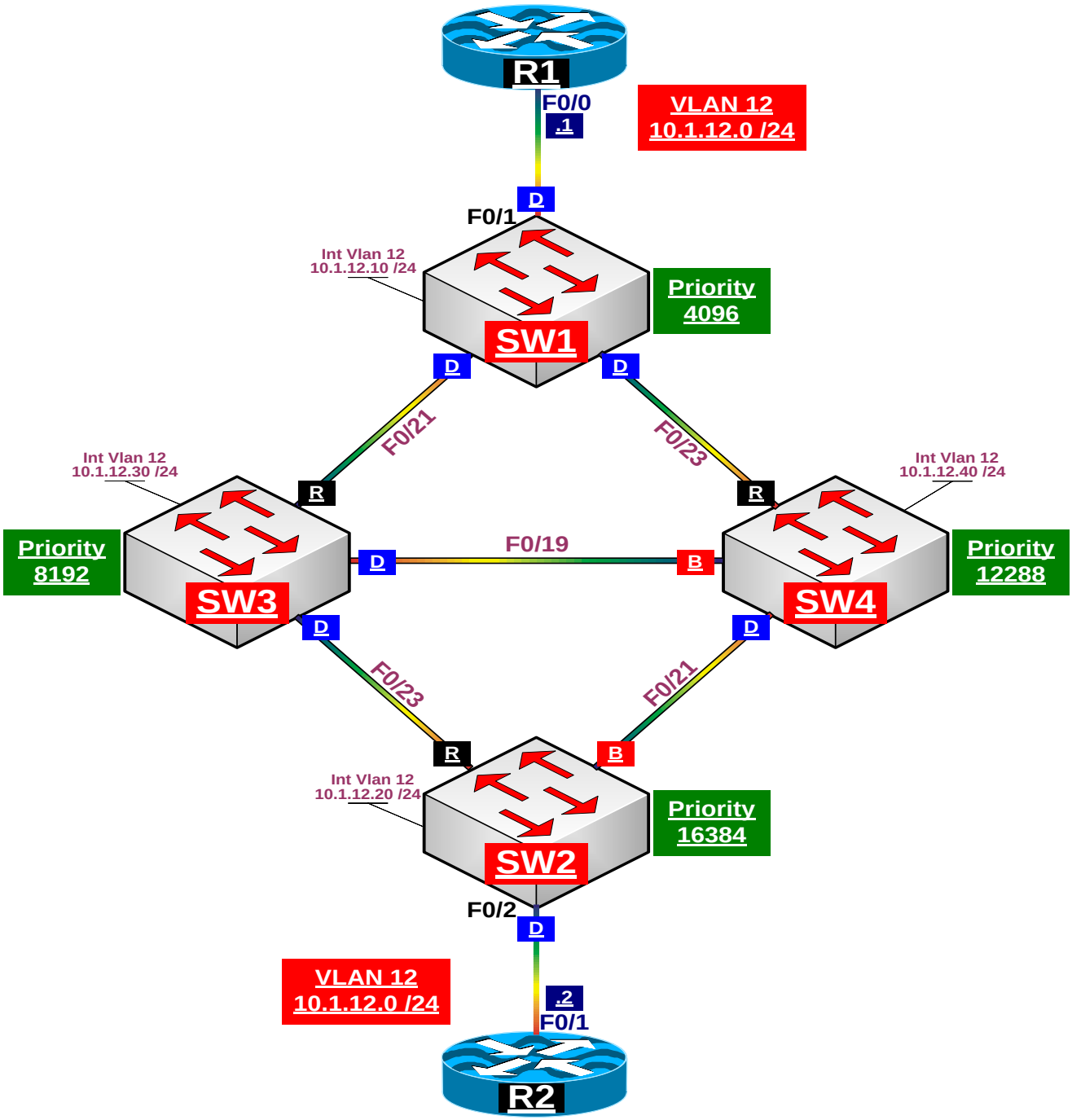
Lab 6
Basic Spanning-tree Configuration



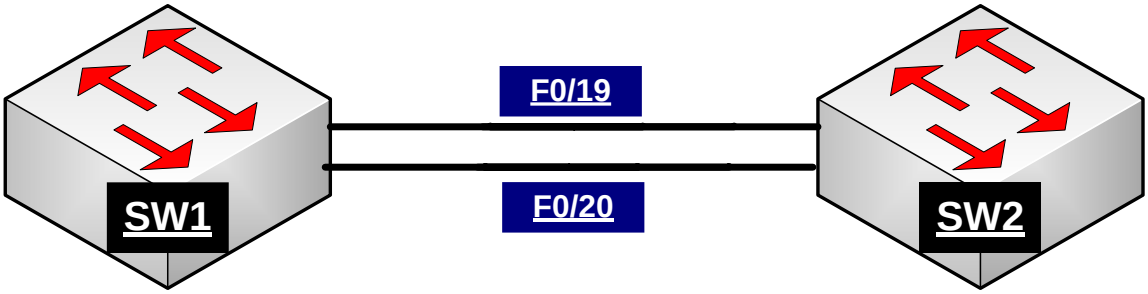
Lab 7
Advanced Spanning-tree Configuration



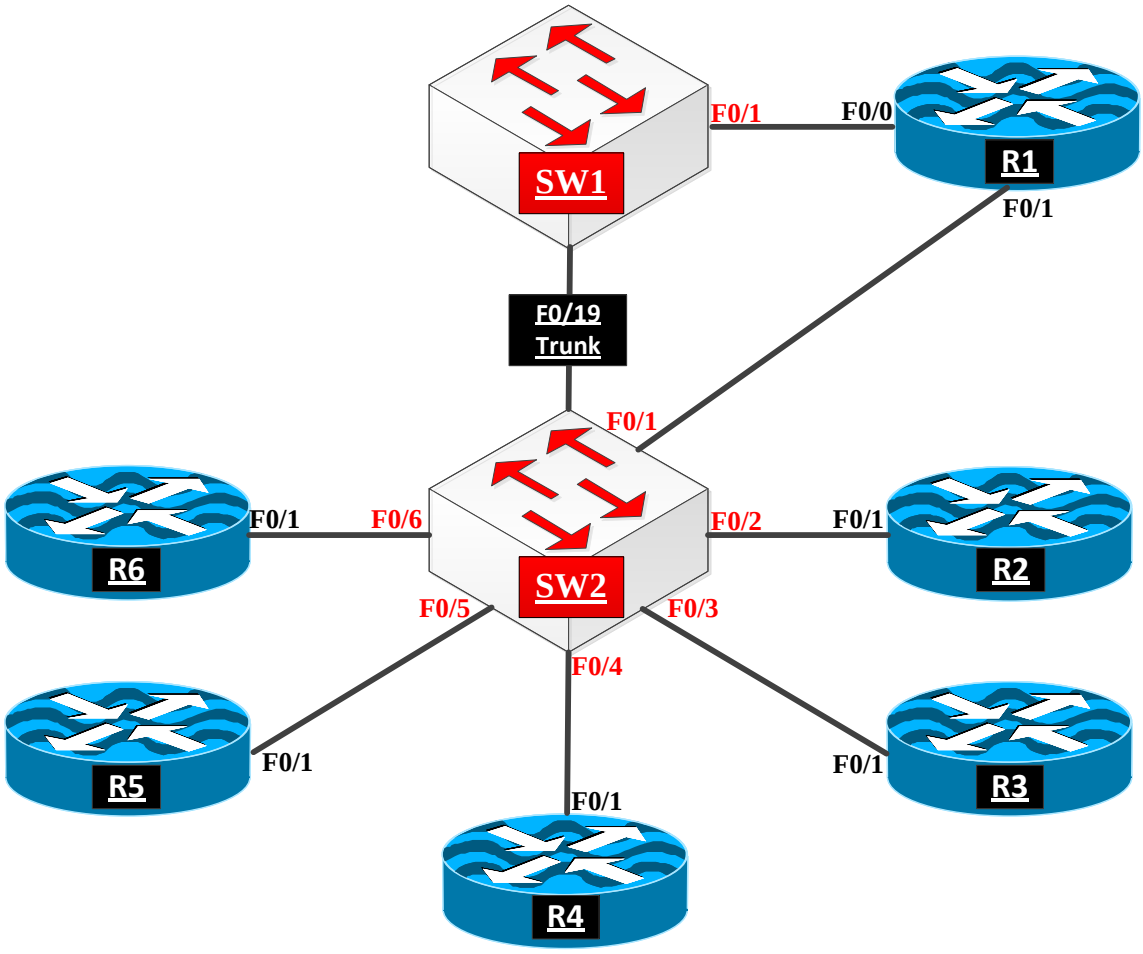
Lab 8
Rapid Spanning-Tree Protocol (802.1w)



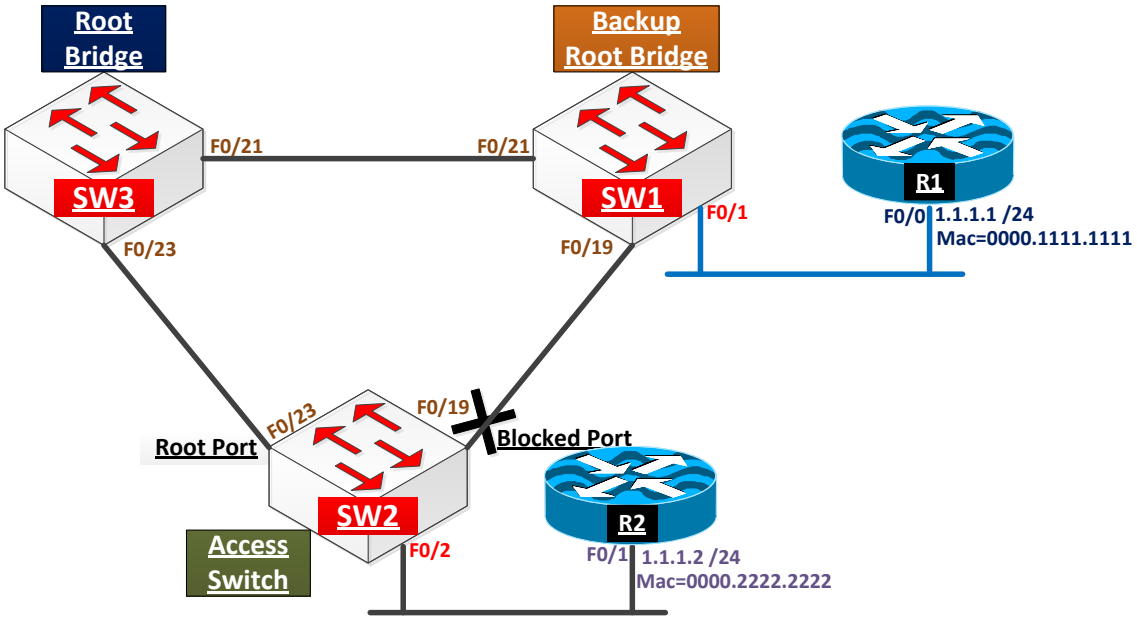
Lab 9
Multiple Spanning Tree Protocol (802.1s)



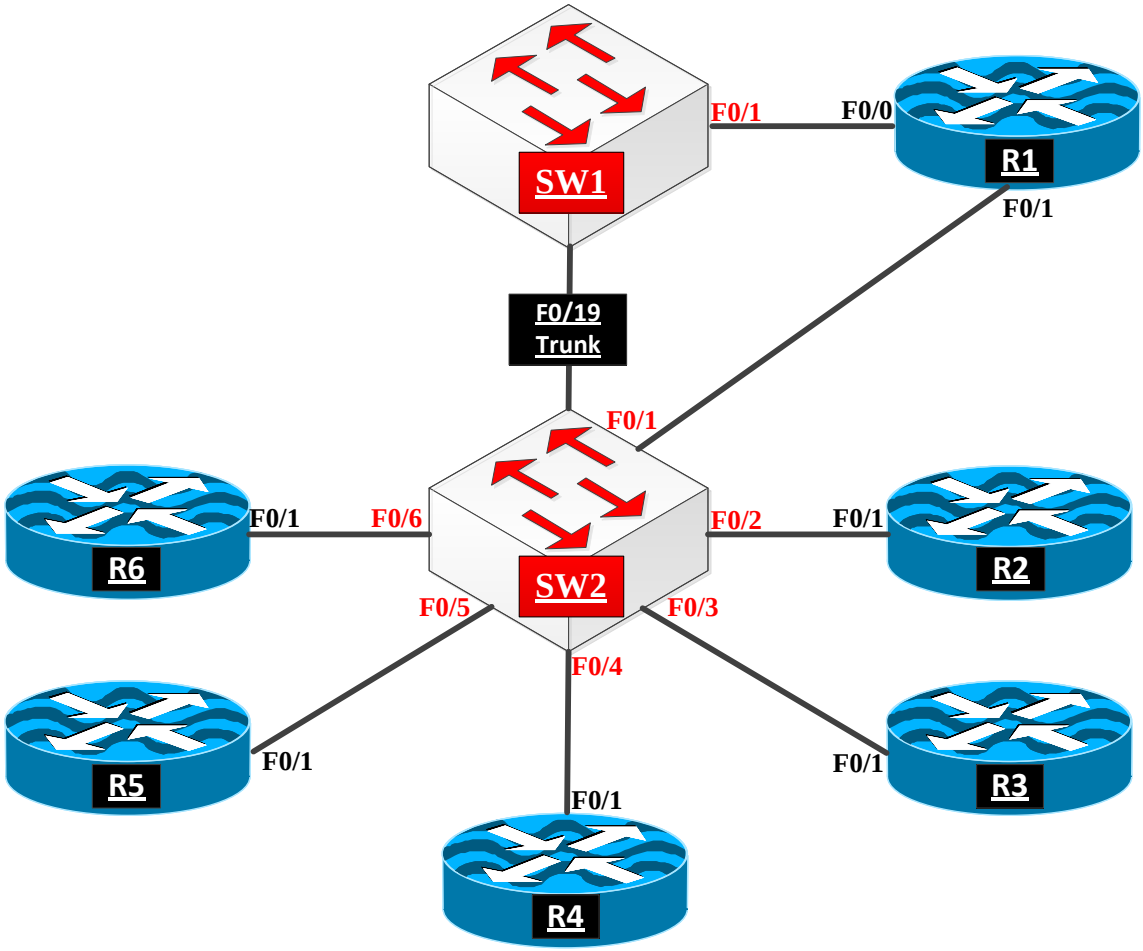
Lab 10
Spanning-Tree PortFast



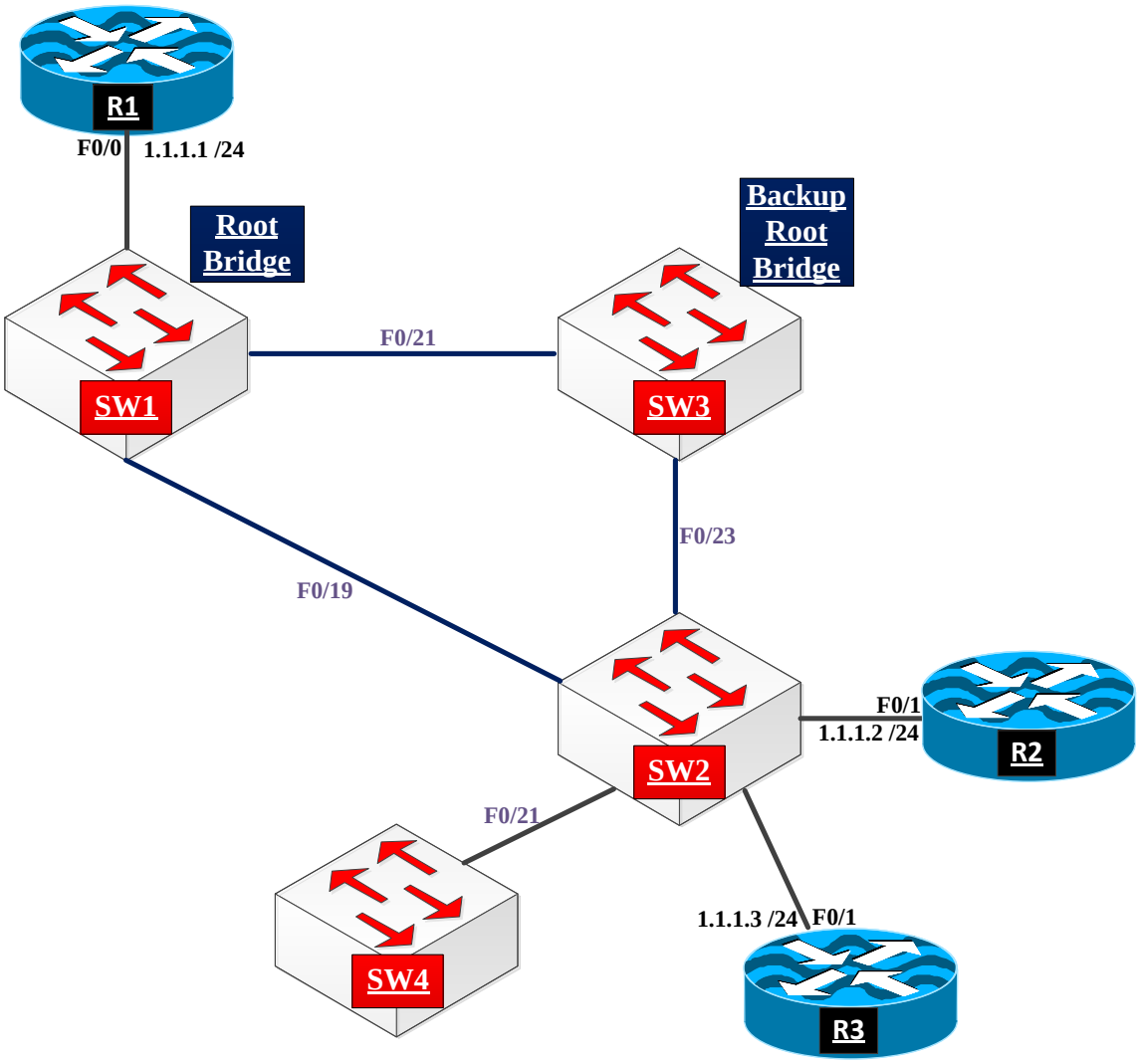
Lab 11
Configuring UplinkFast



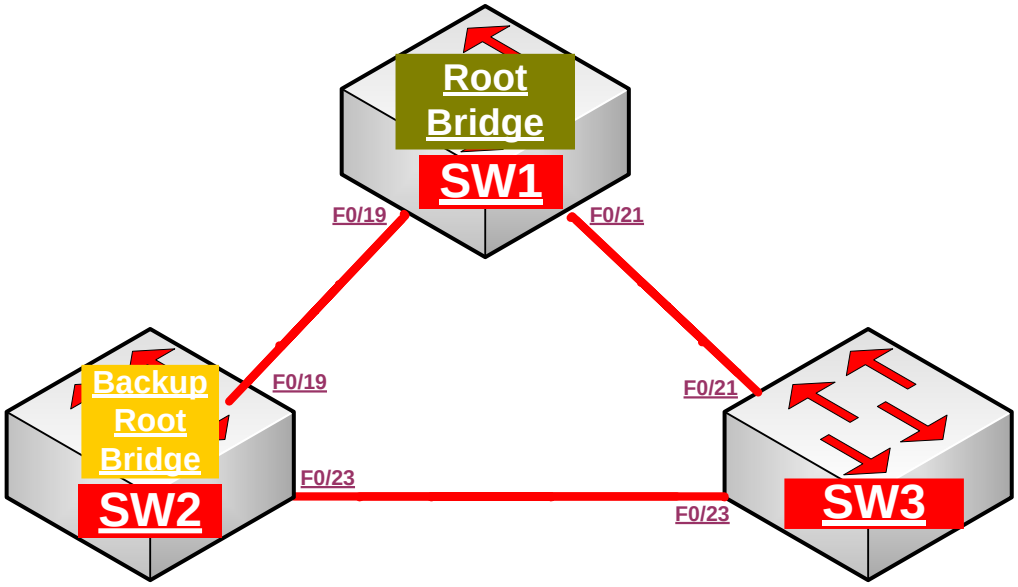
Lab 12
Configuring BPDUGuard



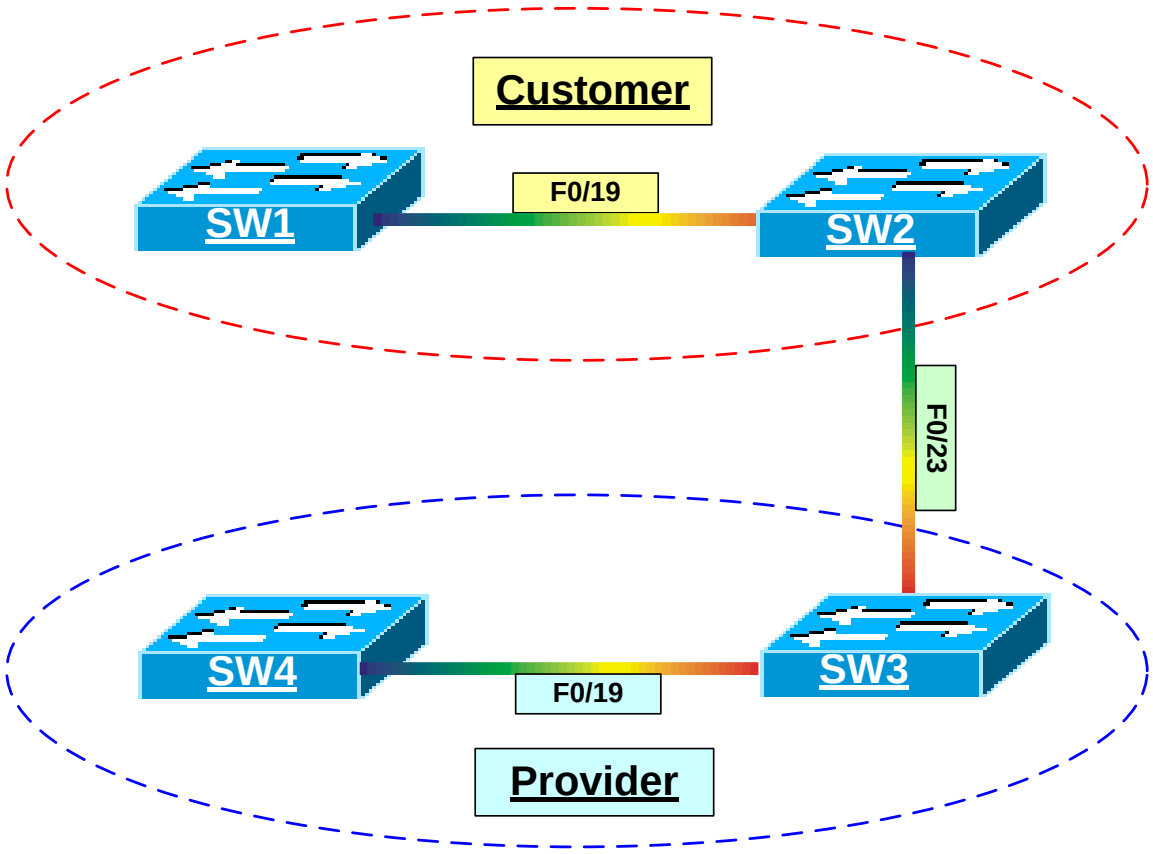
Lab 13
Configuring BPDUFilter



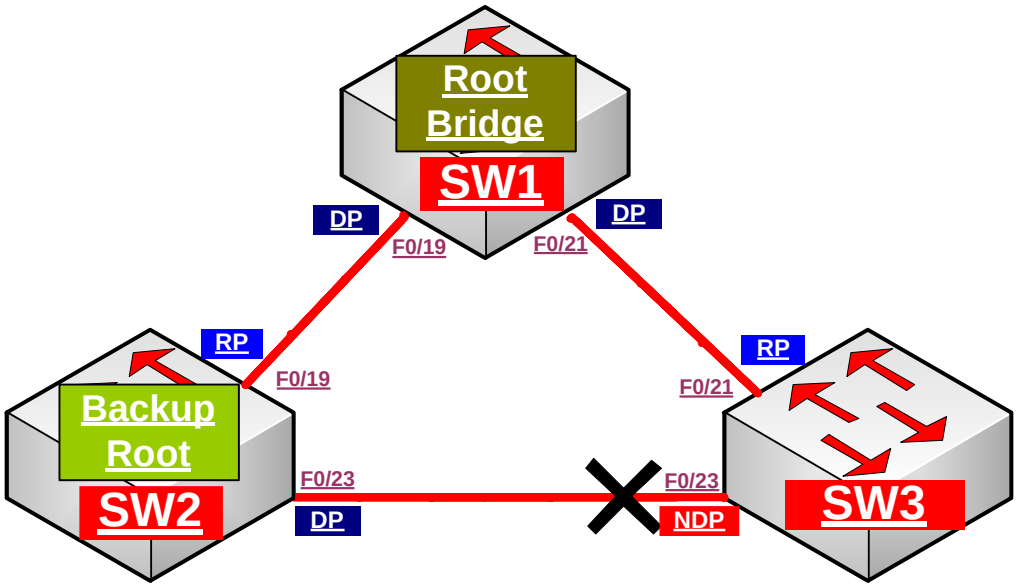
Lab 14
Spanning-tree BackBoneFast



Lab 15
Spanning-tree RootGuard



Lab 16
Spanning-tree LoopGuard



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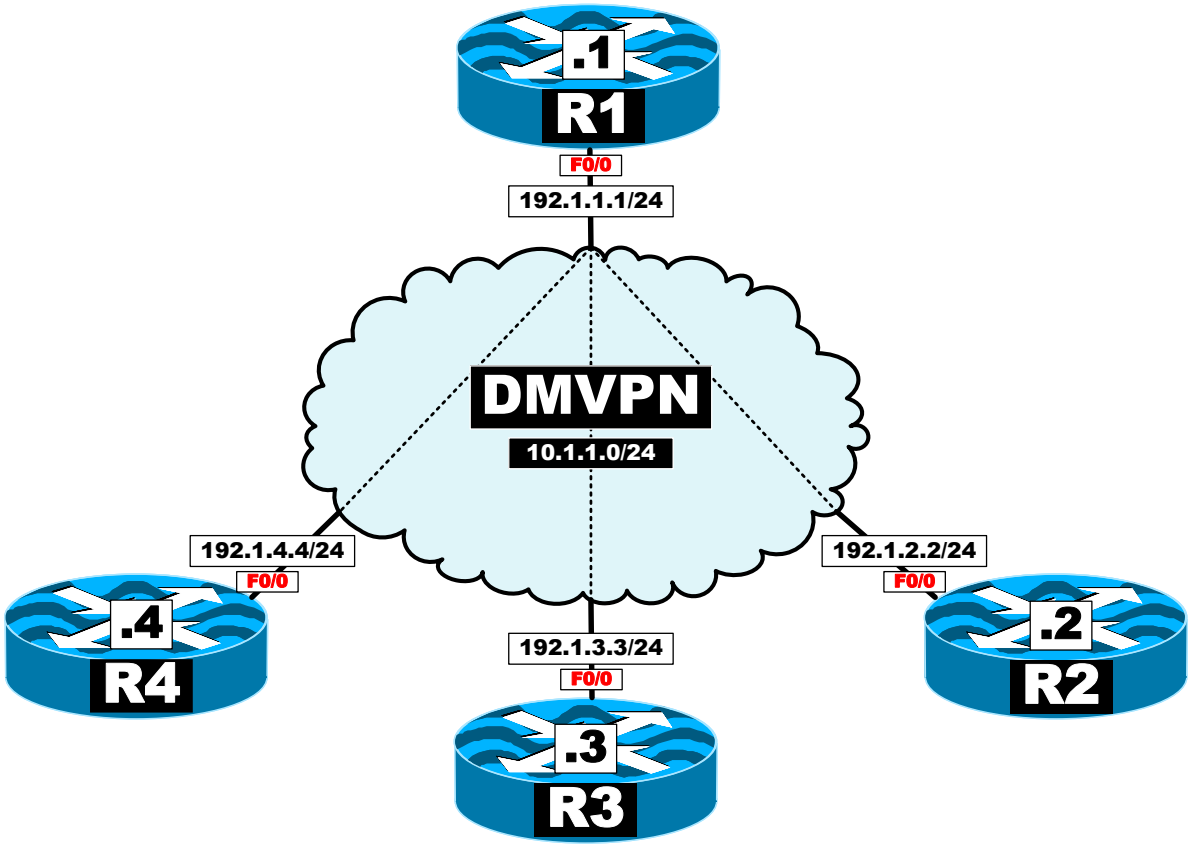
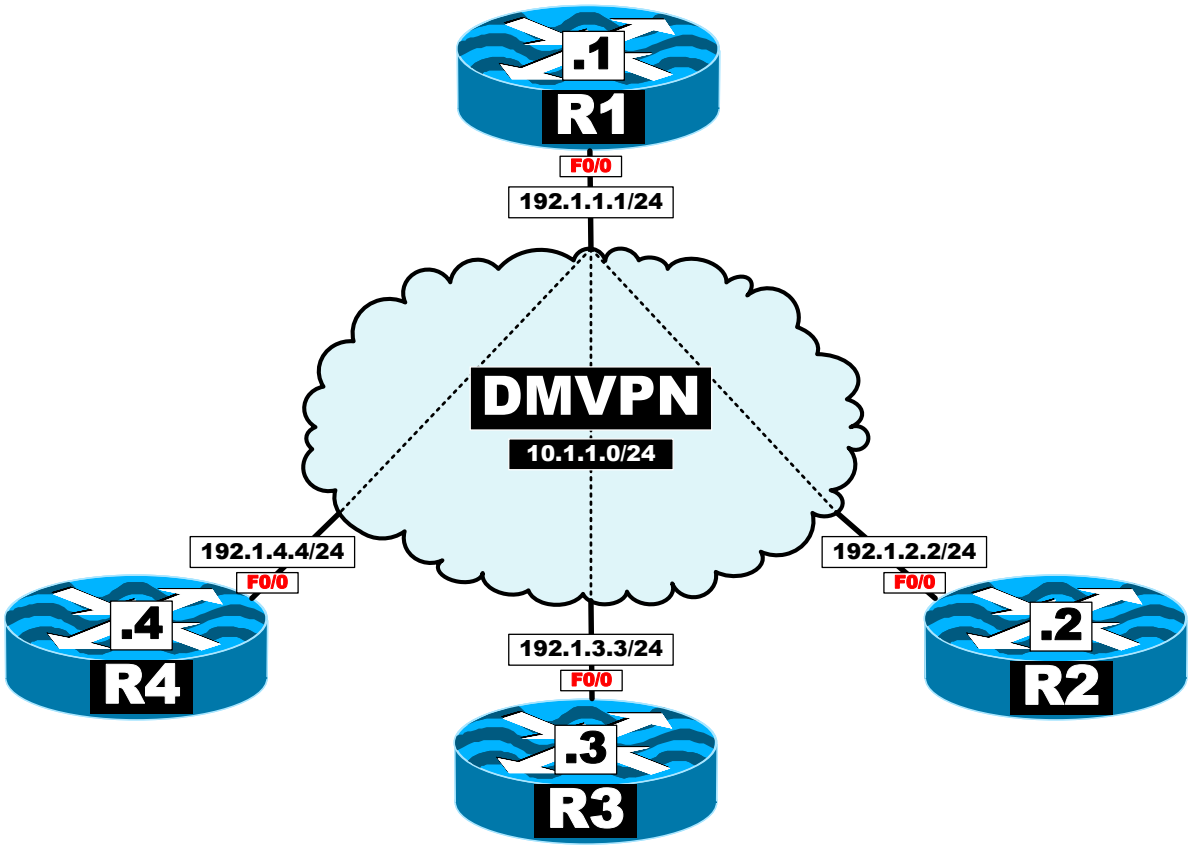
DMVPN

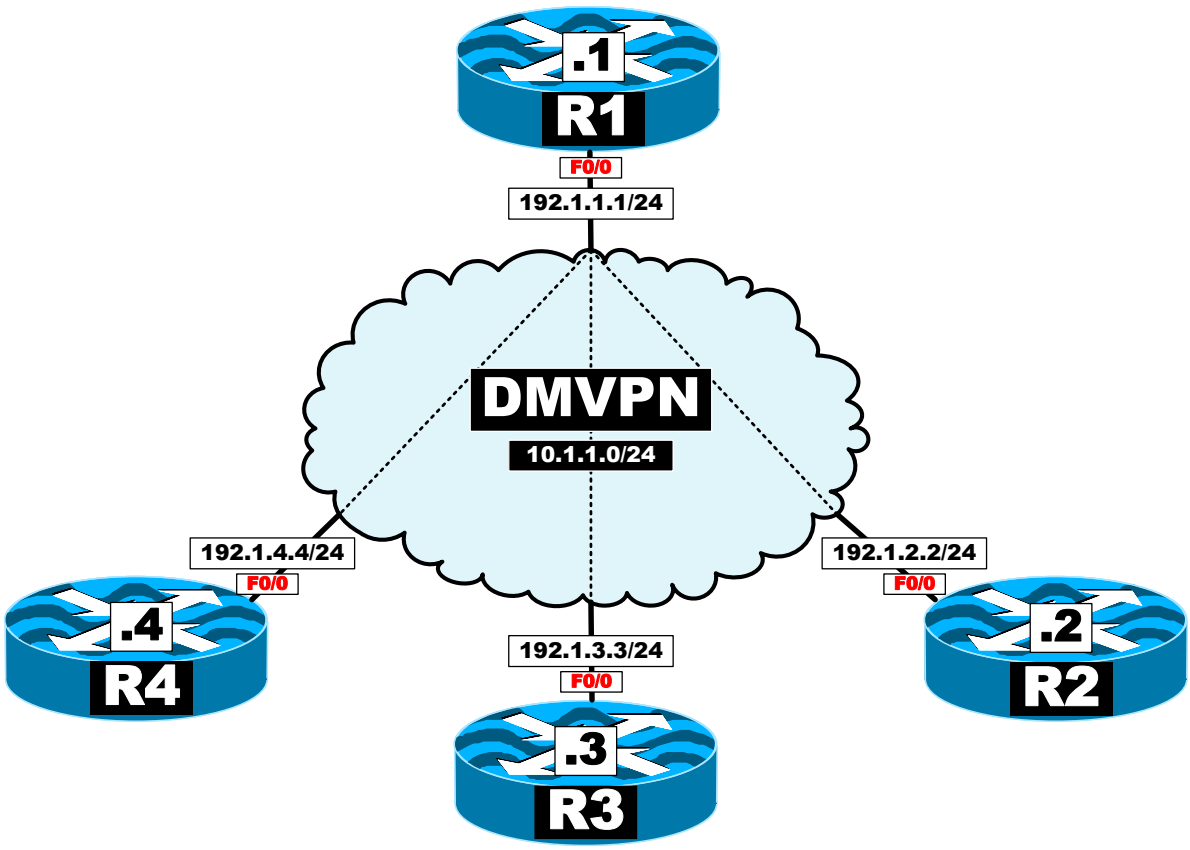
Lab 1 - DMVPN – Phase #1 with Static Mapping



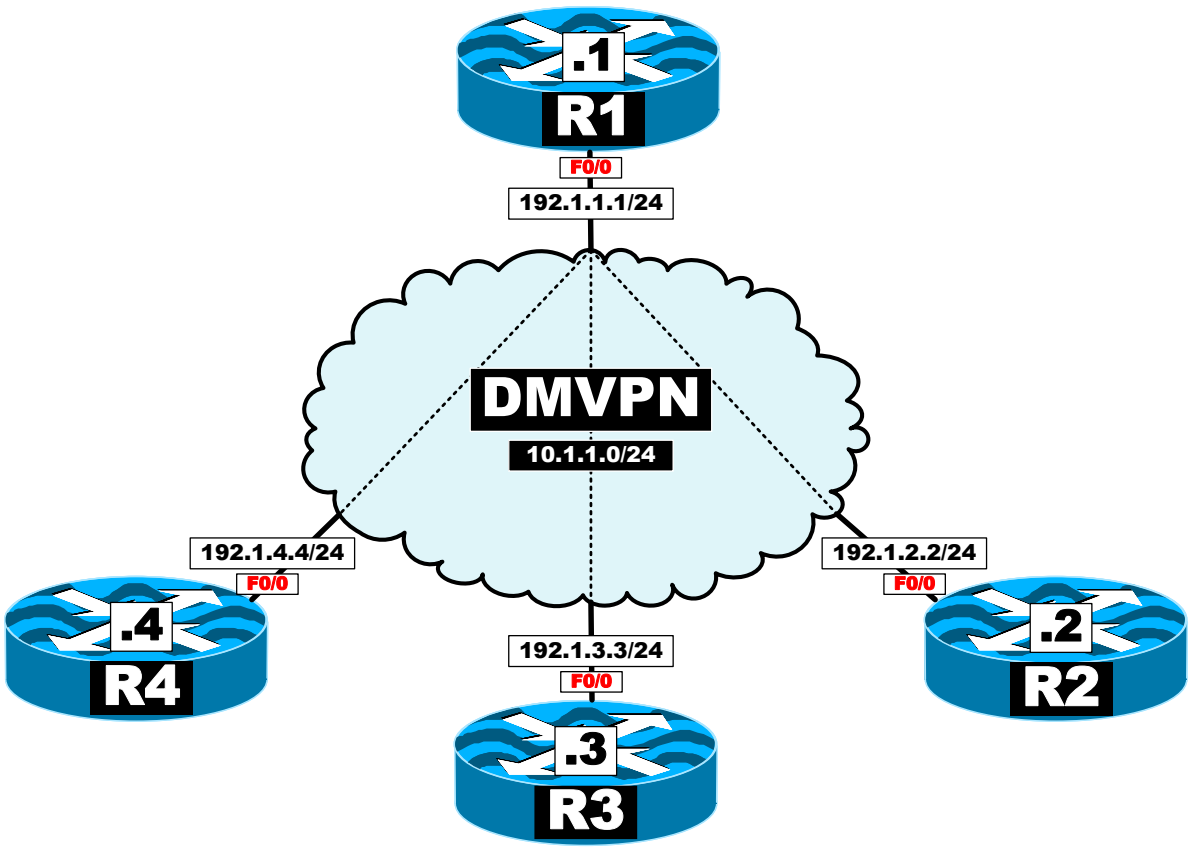
Lab 2 - DMVPN – Phase #1 with Dynamic Mapping



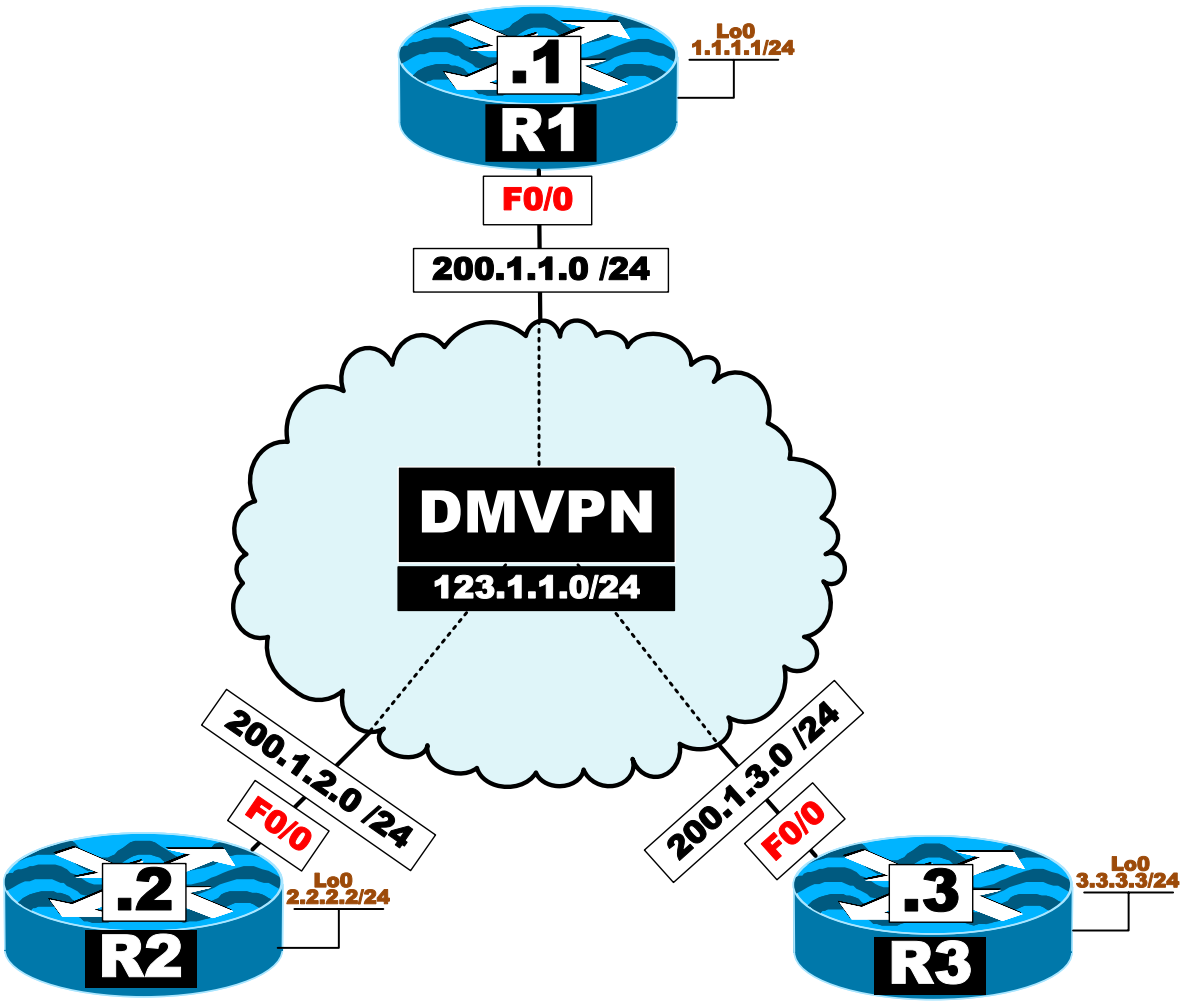
Lab 3 – DMVPN – Phase #2 Using Static Mappings



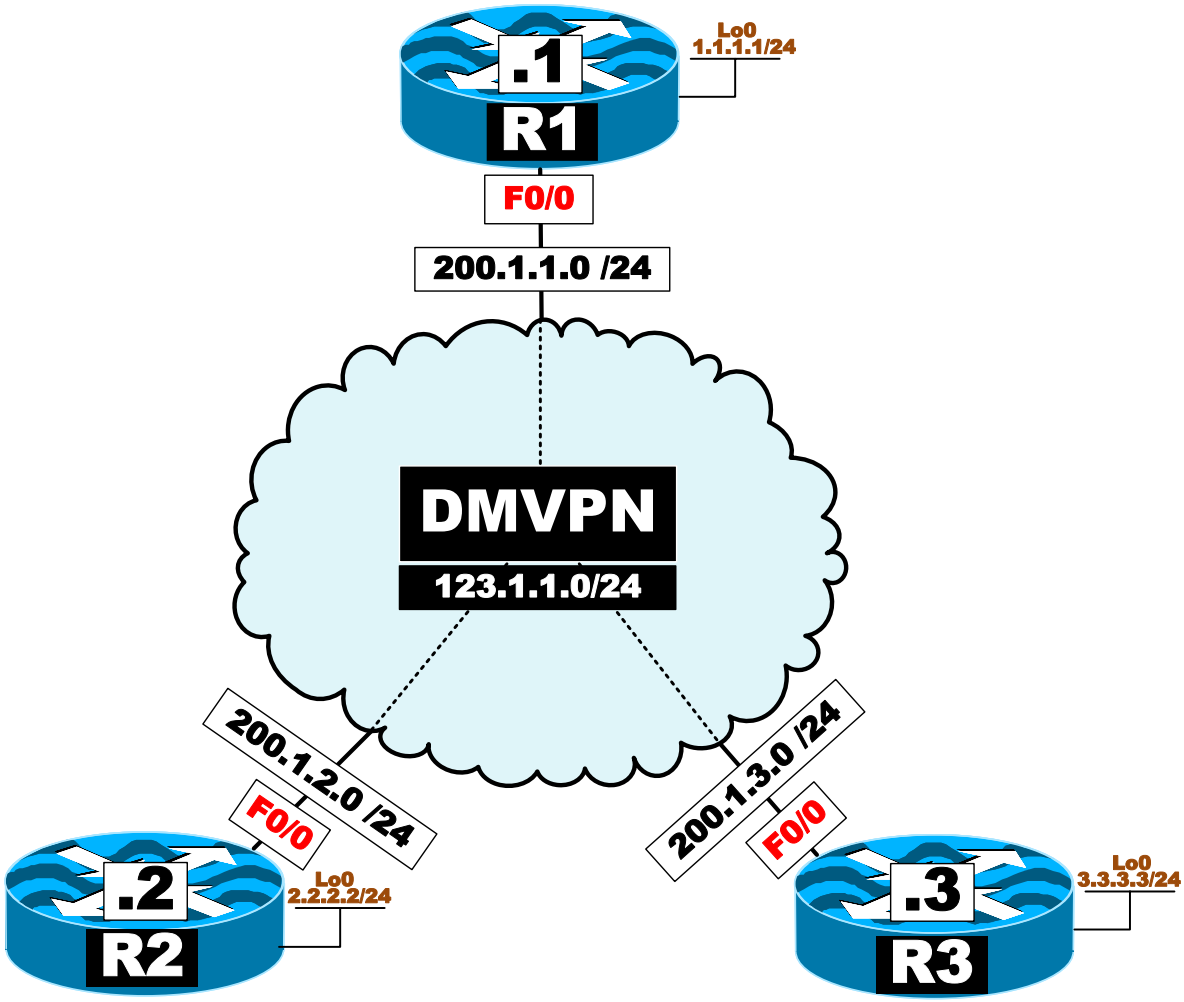
Lab 4 – DMVPN – Phase #2 Using Dynamic Mappings



Lab 5 – Running Routing Protocols on DMVPN Phase #1



Lab 6 – Running Routing Protocols on DMVPN Phase #2 and Phase #3



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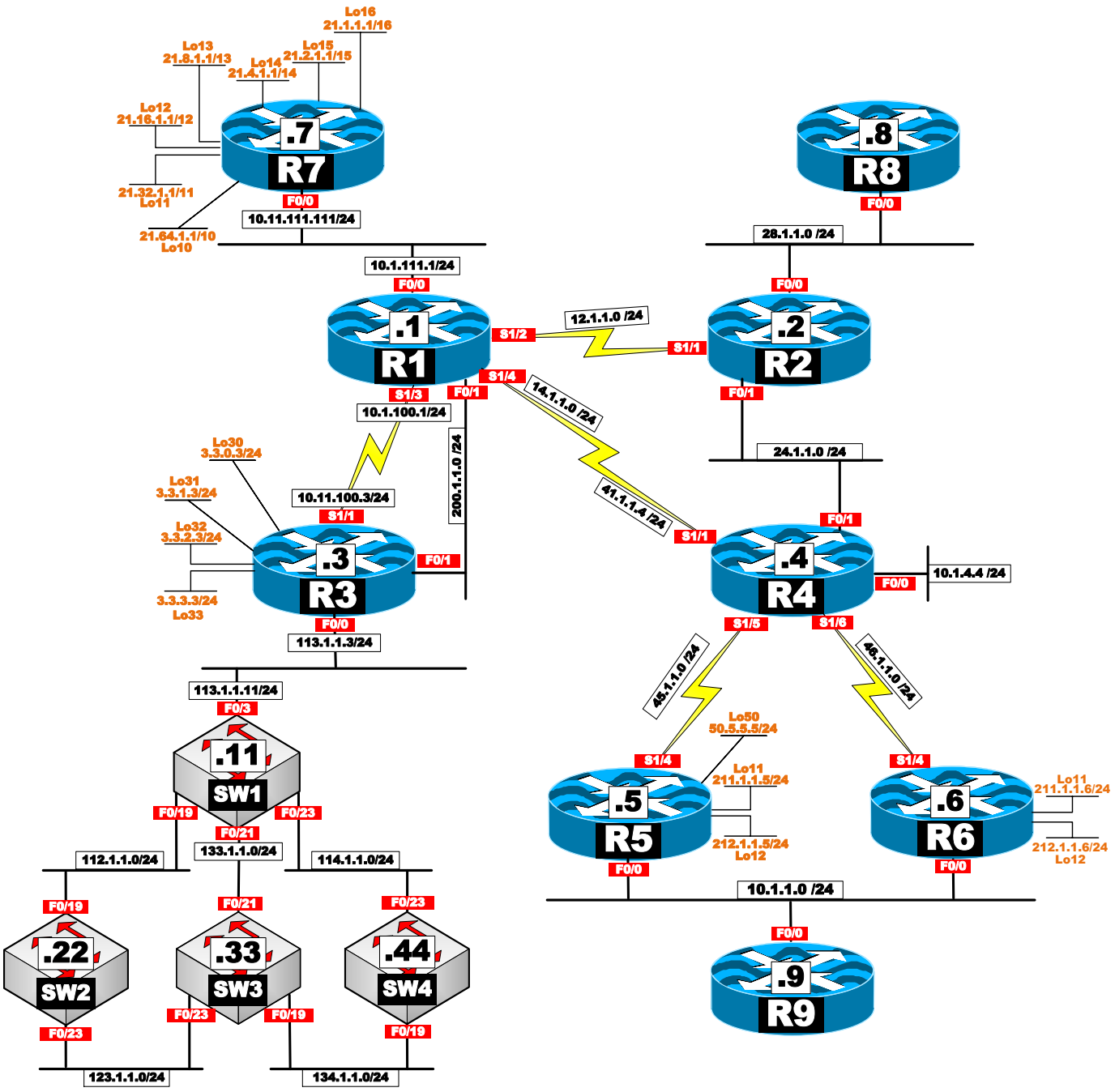
RIPv2

Lab 1
Configuring RIPv2



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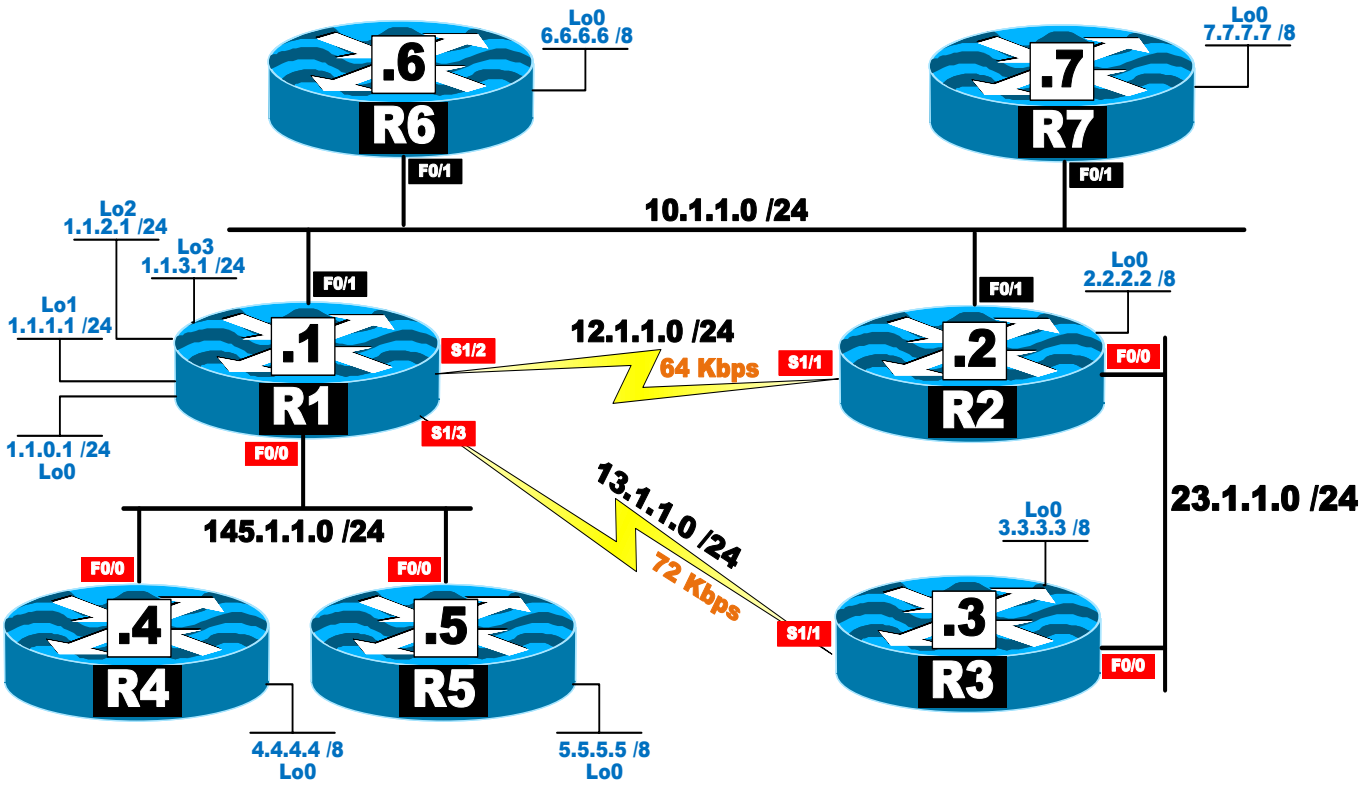
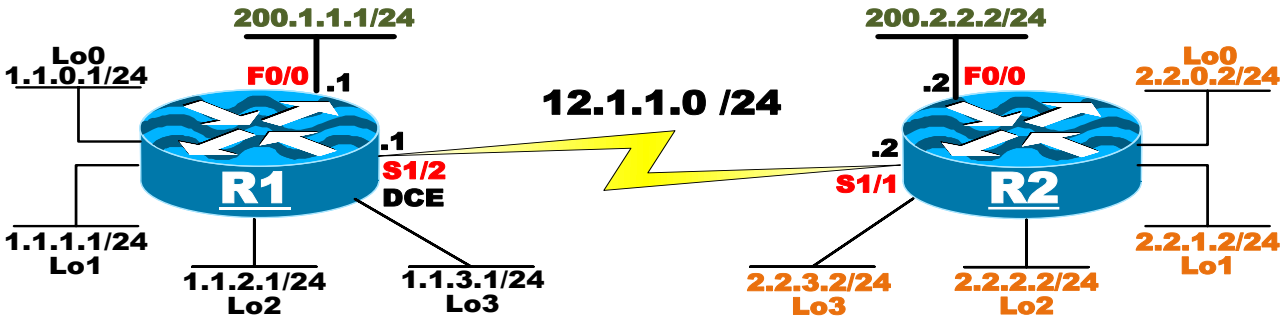
EIGRP

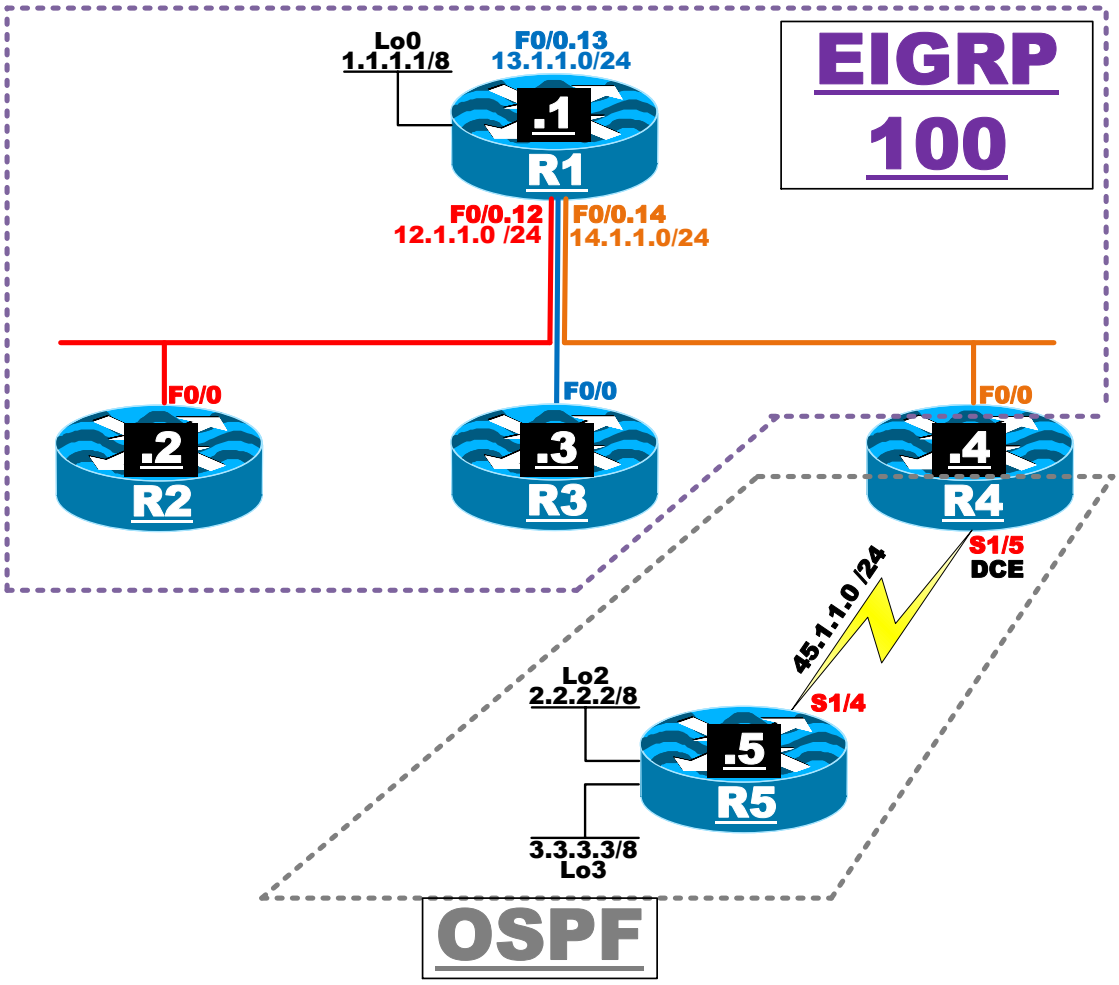
Lab 1 - EIGRP Named Configuration



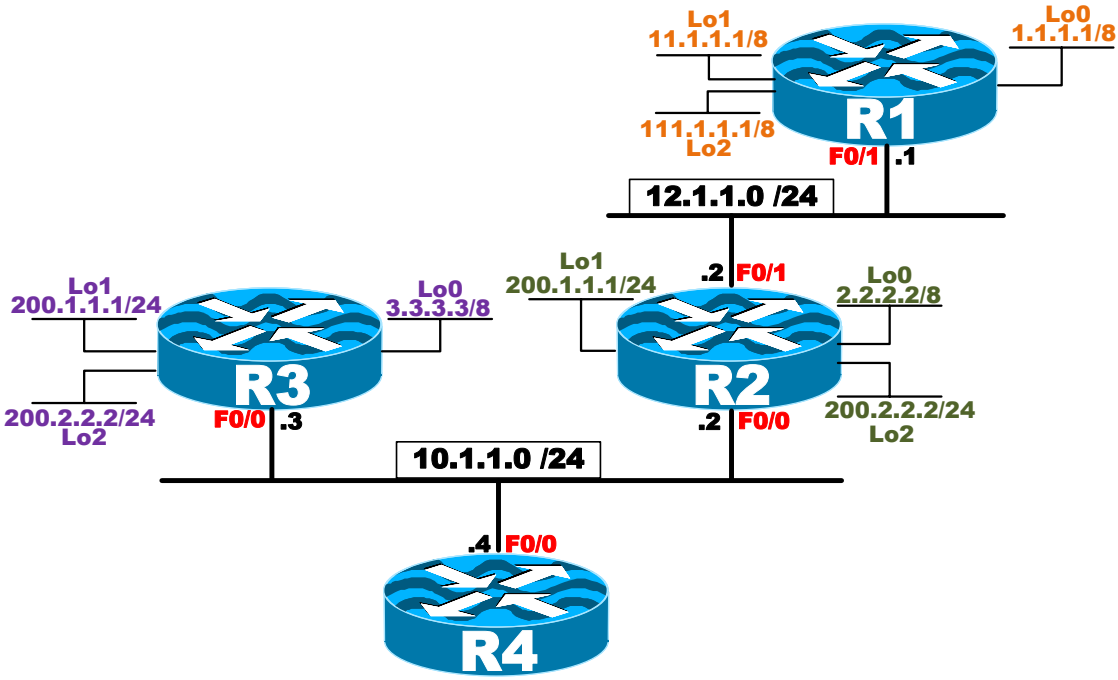
Lab 2 - EIGRP Stub



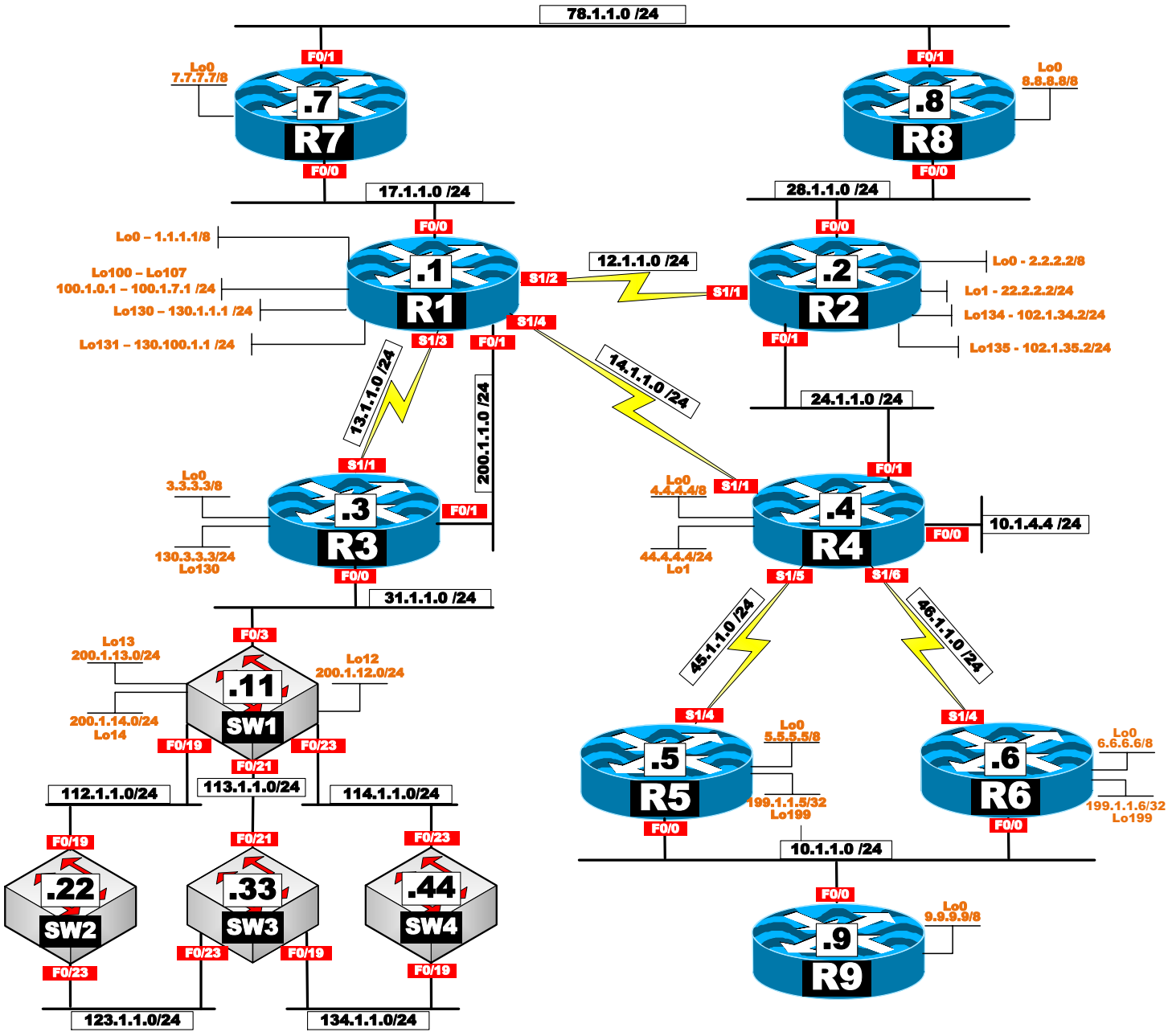
Lab 3 – Advanced EIGRP Stub Configuration



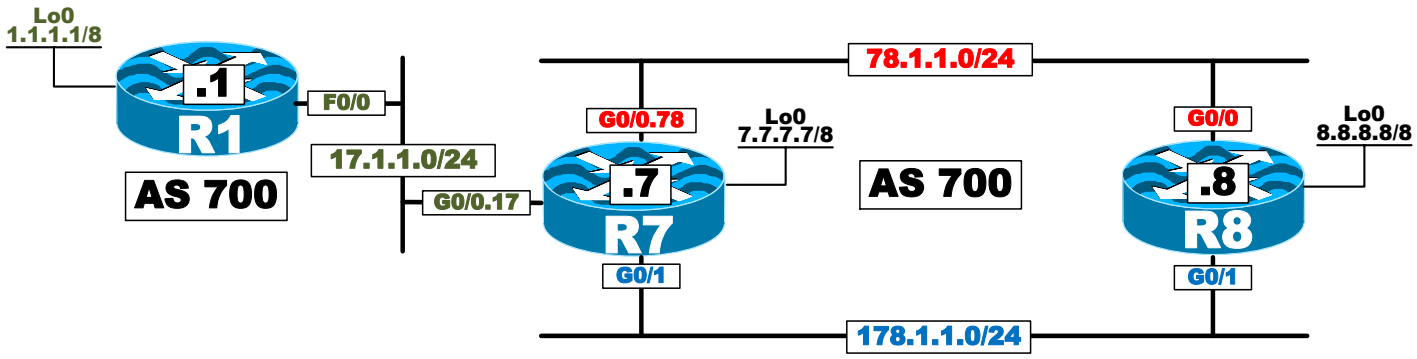
Lab 4 – EIGRP Filtering



Lab 5
EIGRP Mock Lab



Lab 6
Configuring EIGRP SHA-2 256 Authentication



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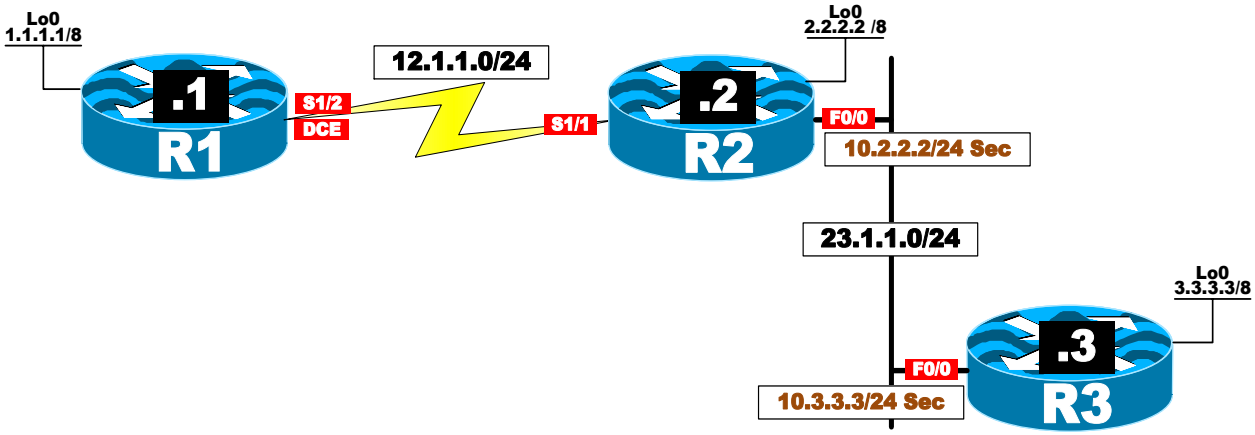
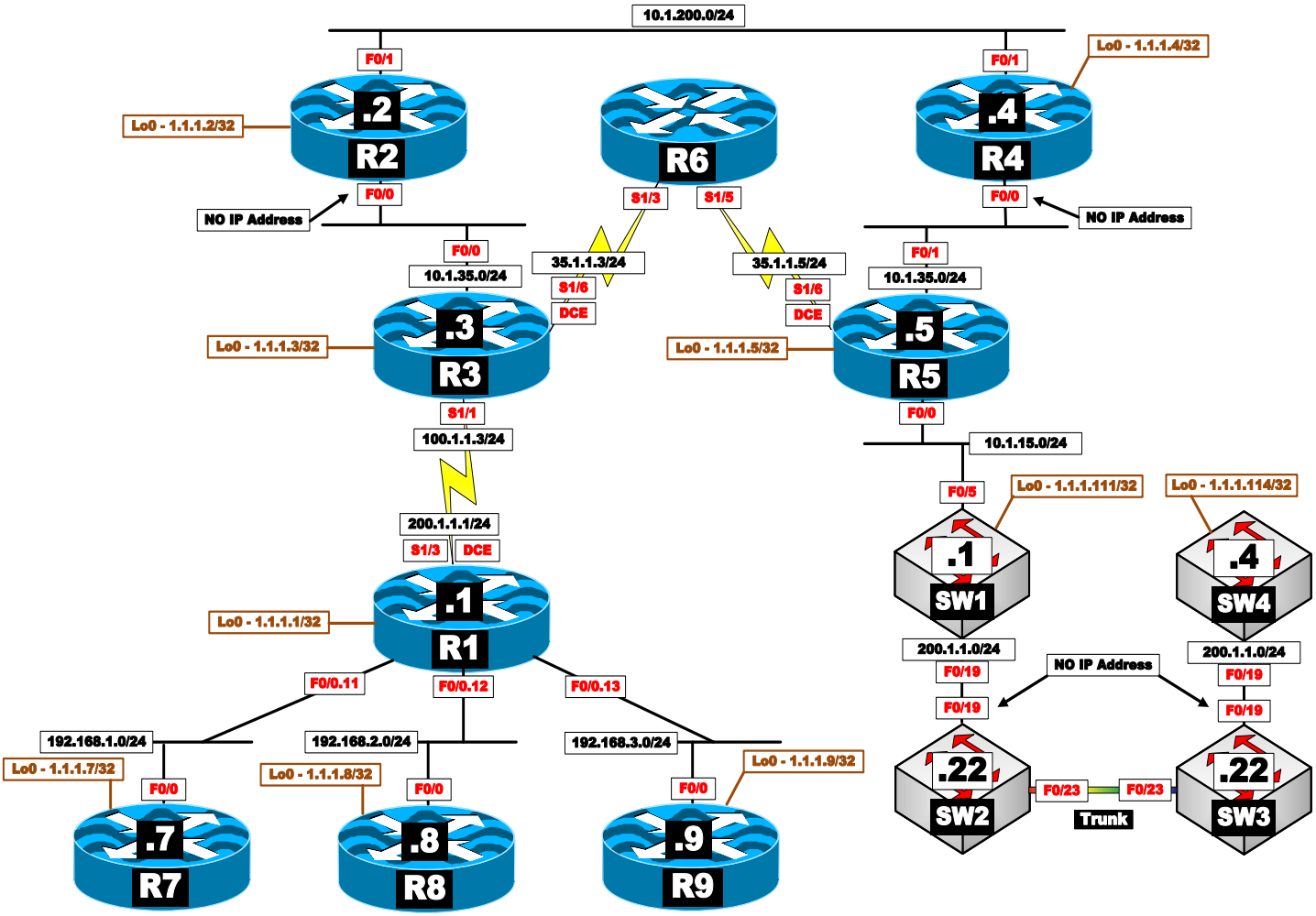
OSPF

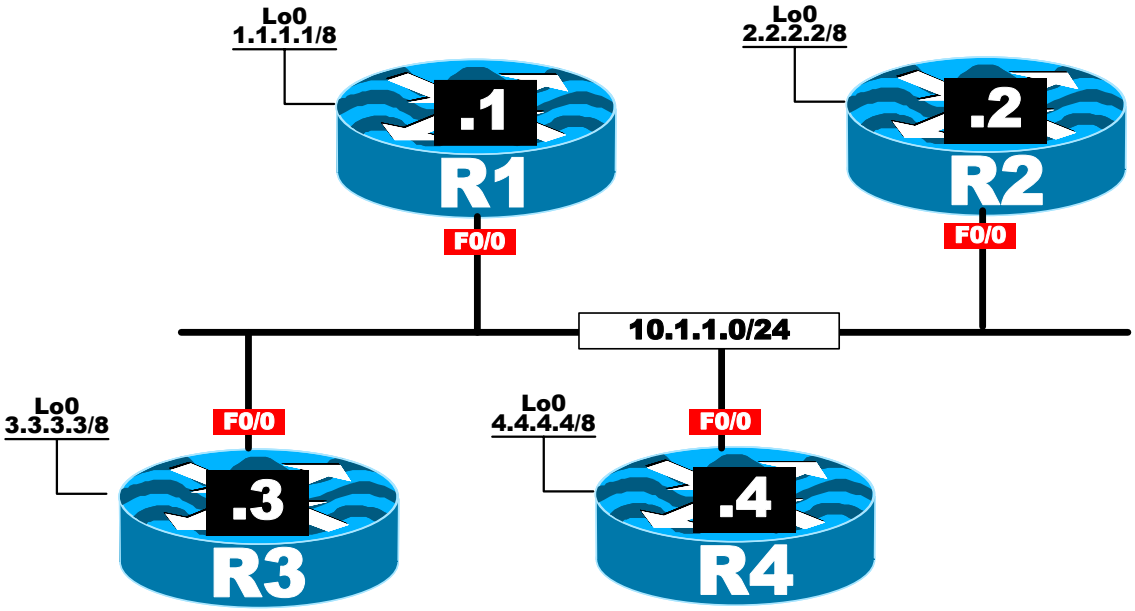
Lab 1
Running OSPF on the interfaces



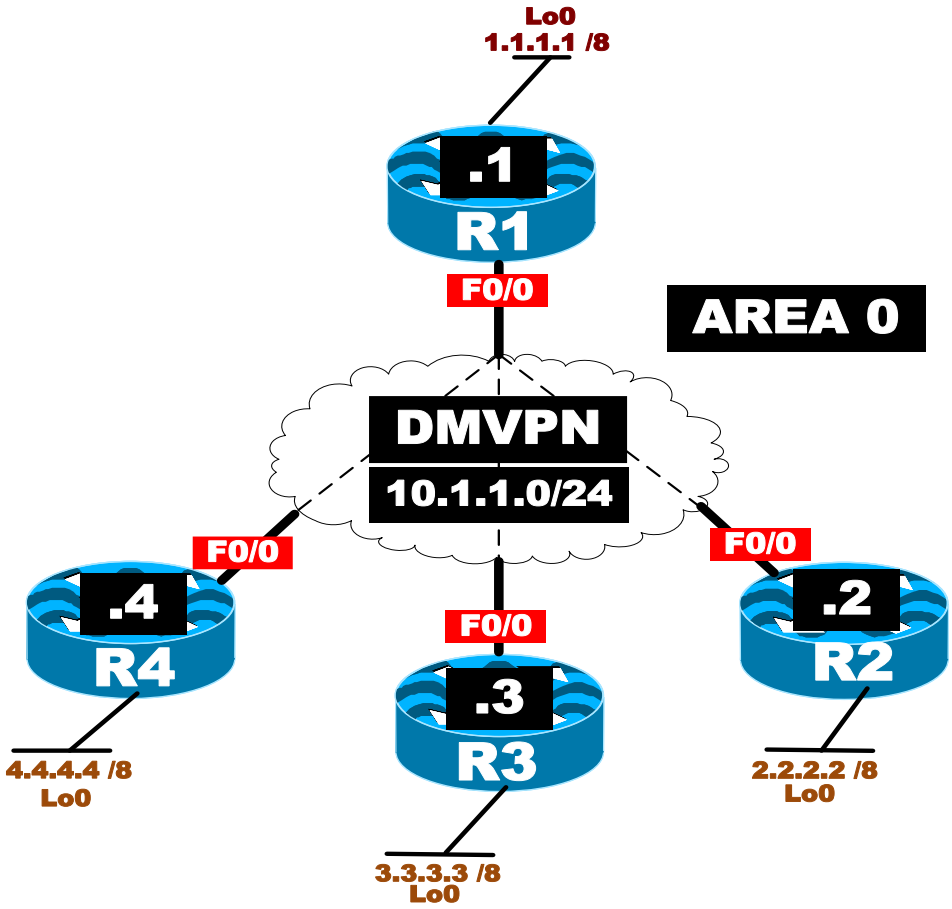
Lab 2
Establishing OSPF Adjacency



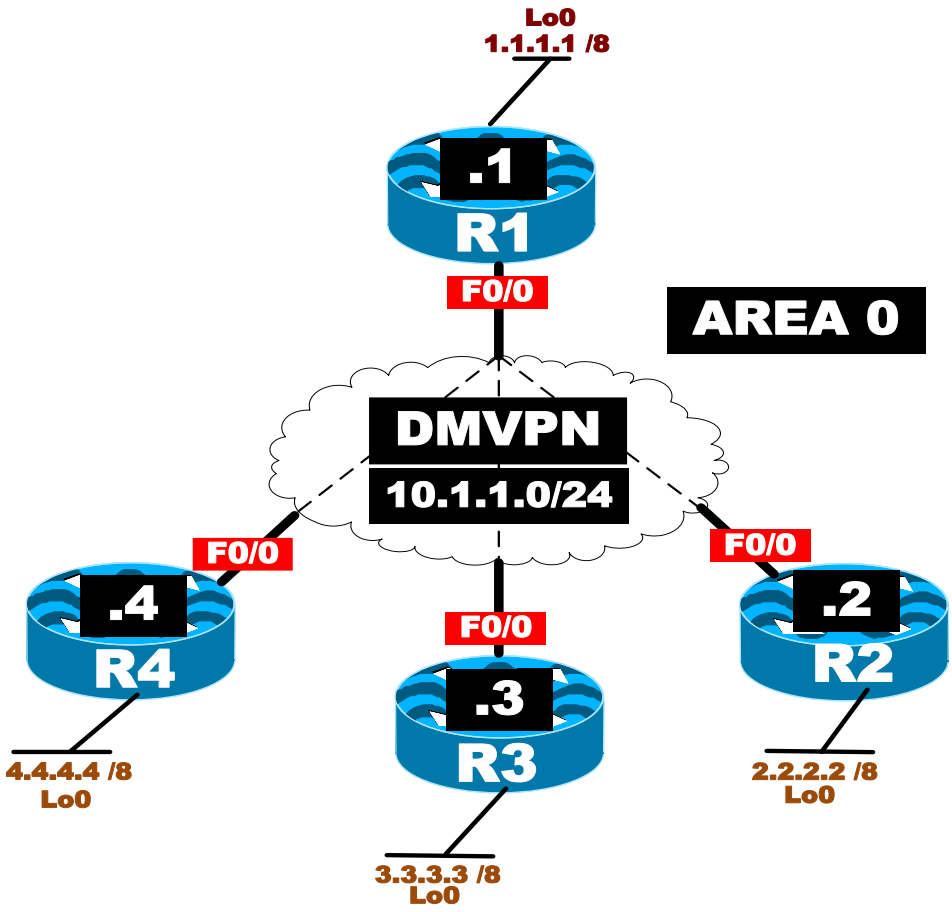
Lab 3 – OSPF Broadcast Networks



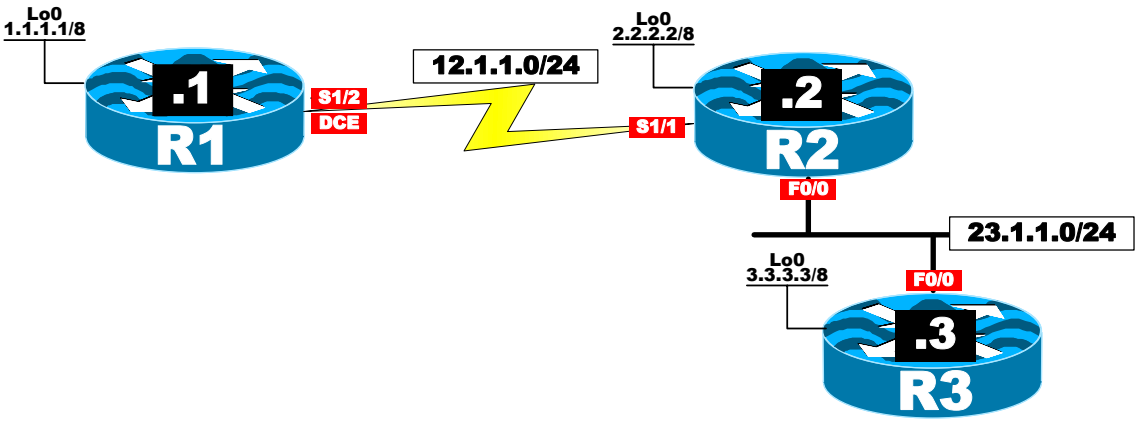
Task 2



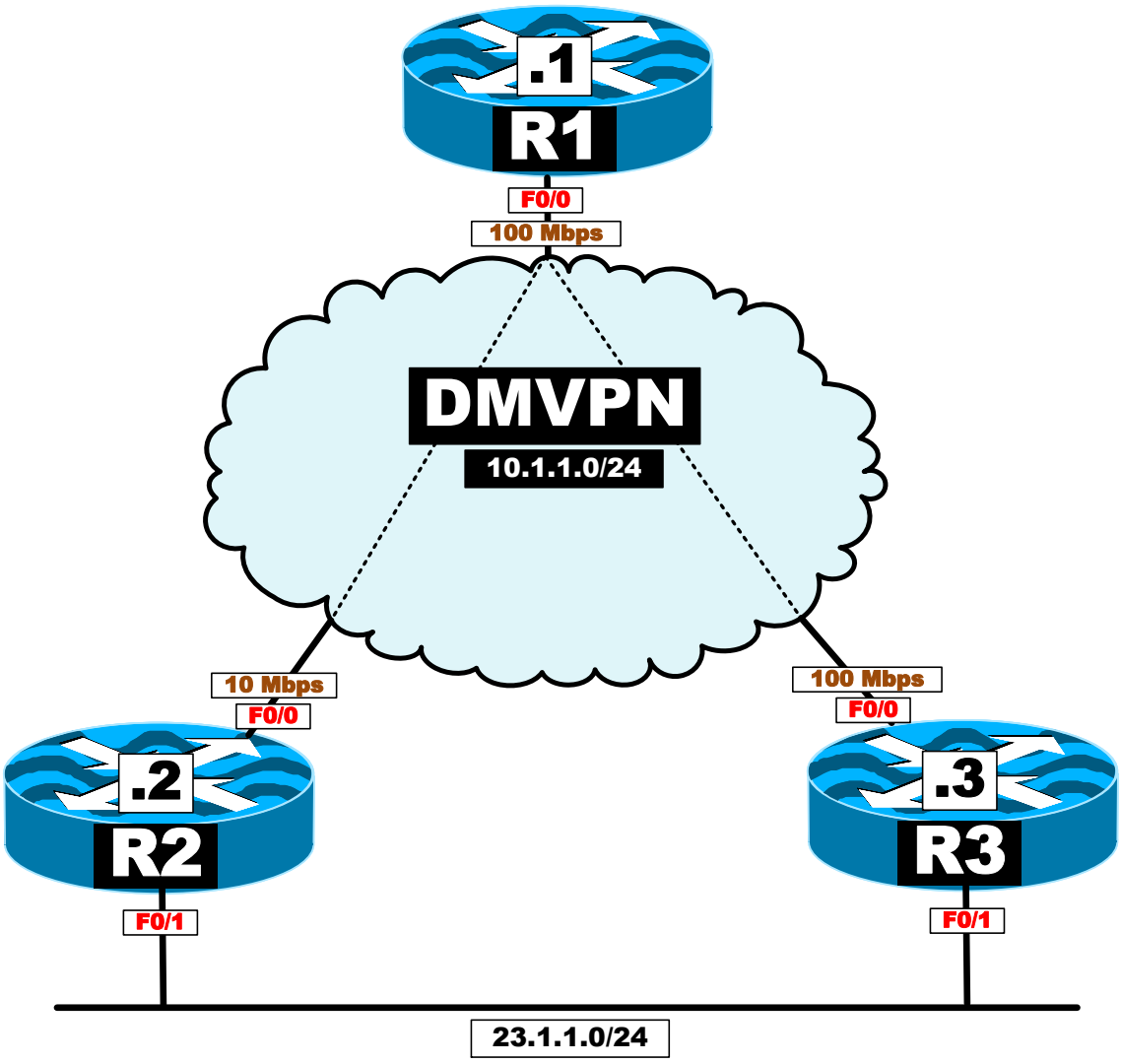
Lab 4 – OSPF Non-Broadcast Networks



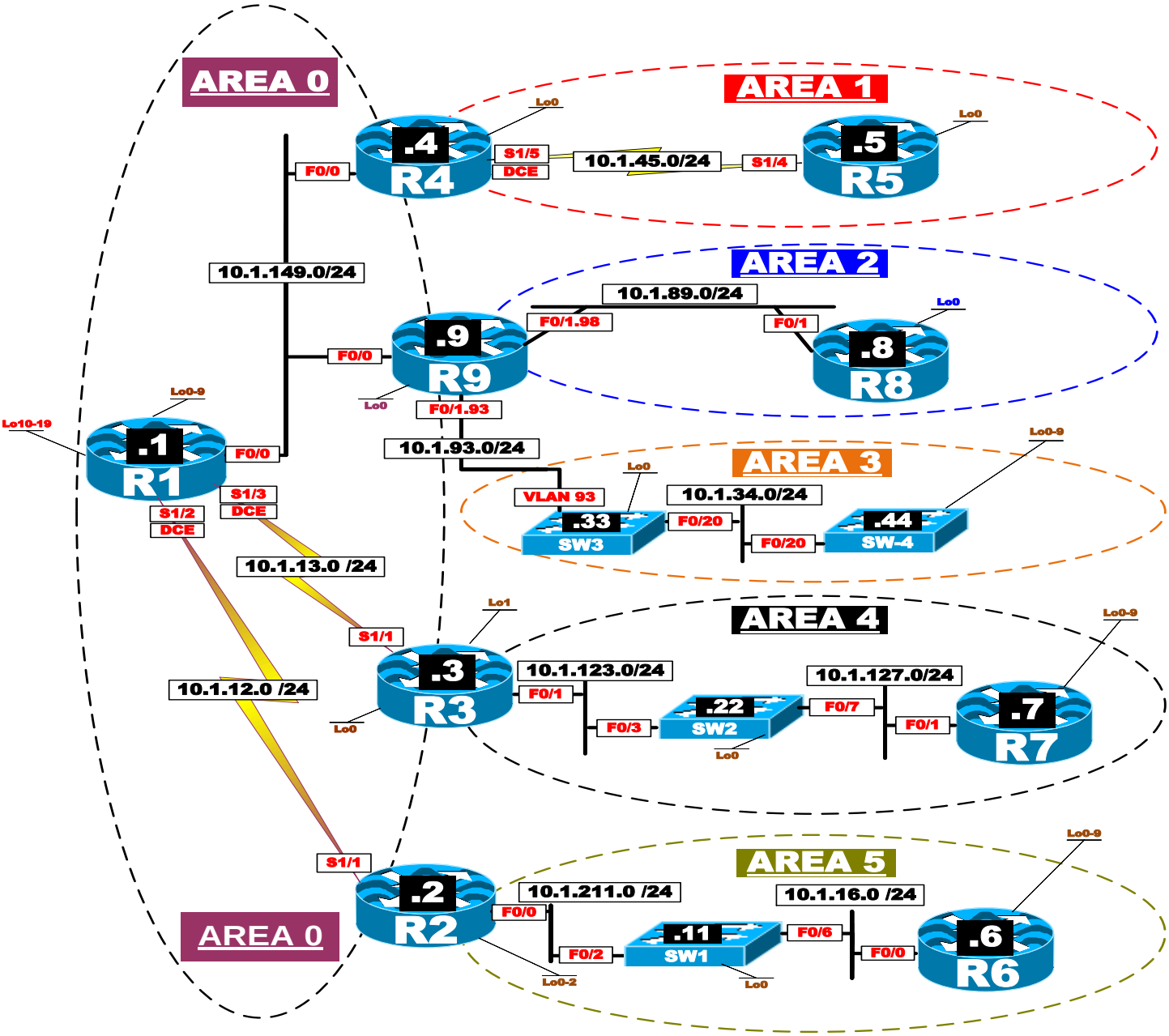
Lab 5 – OSPF Point-to-Point Networks



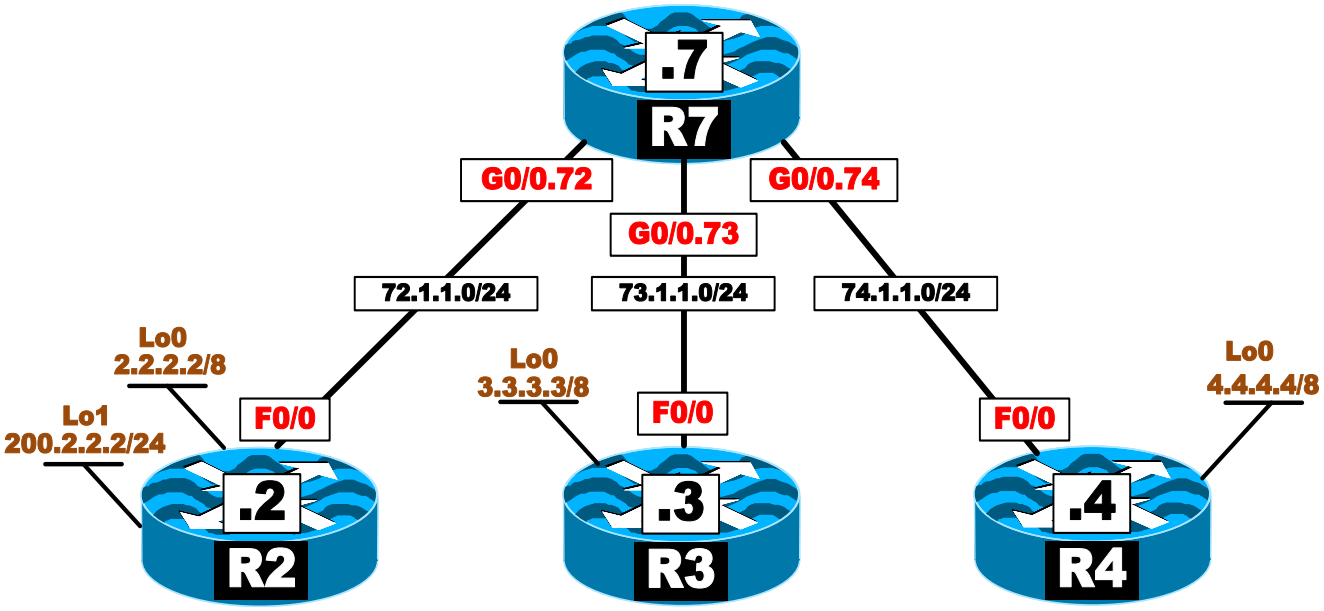
Lab 6 – OSPF "Point-to-Multipoint" & "Point-to-Multipoint Non-Broadcast" Networks



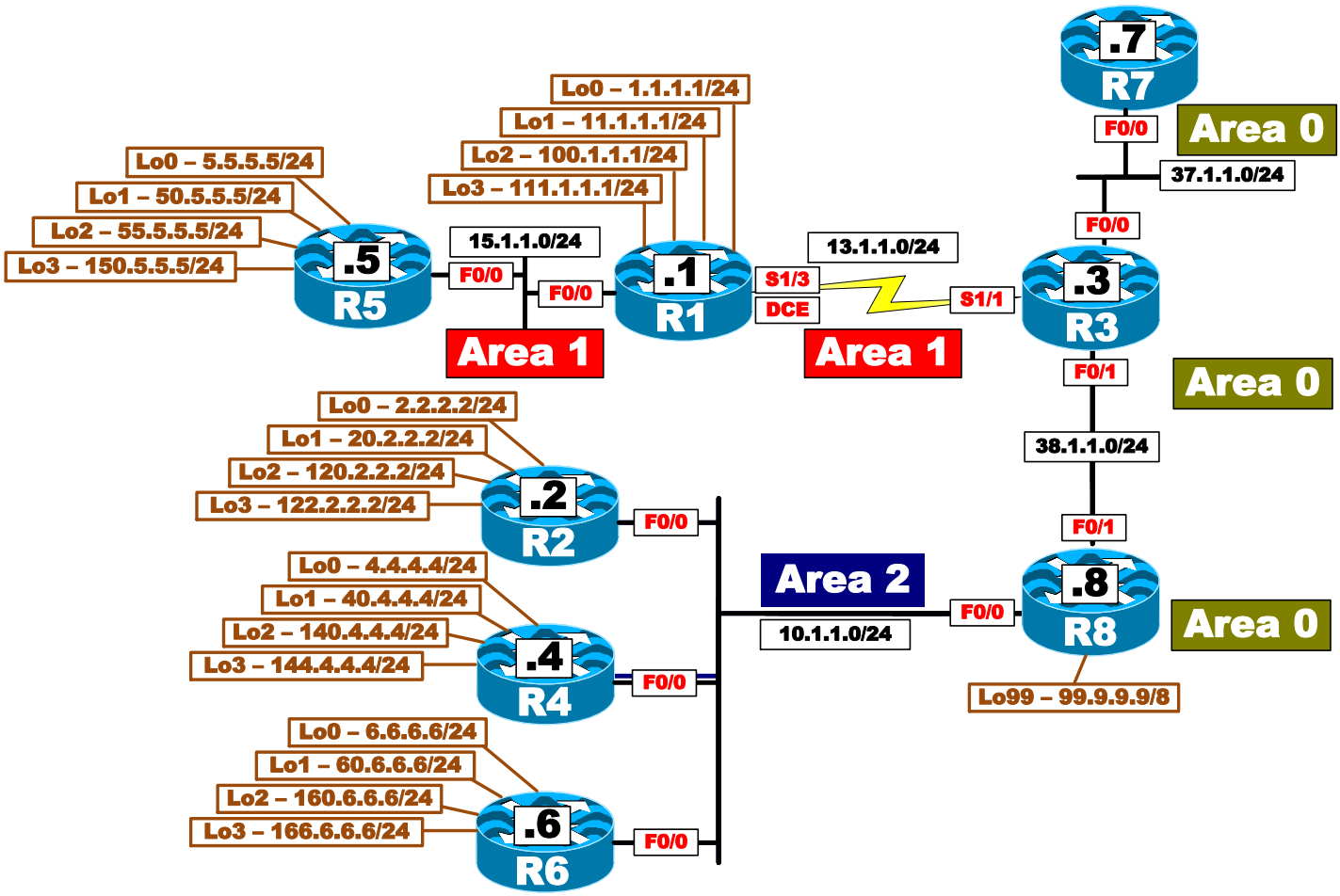
Lab 7 – OSPF Area Types



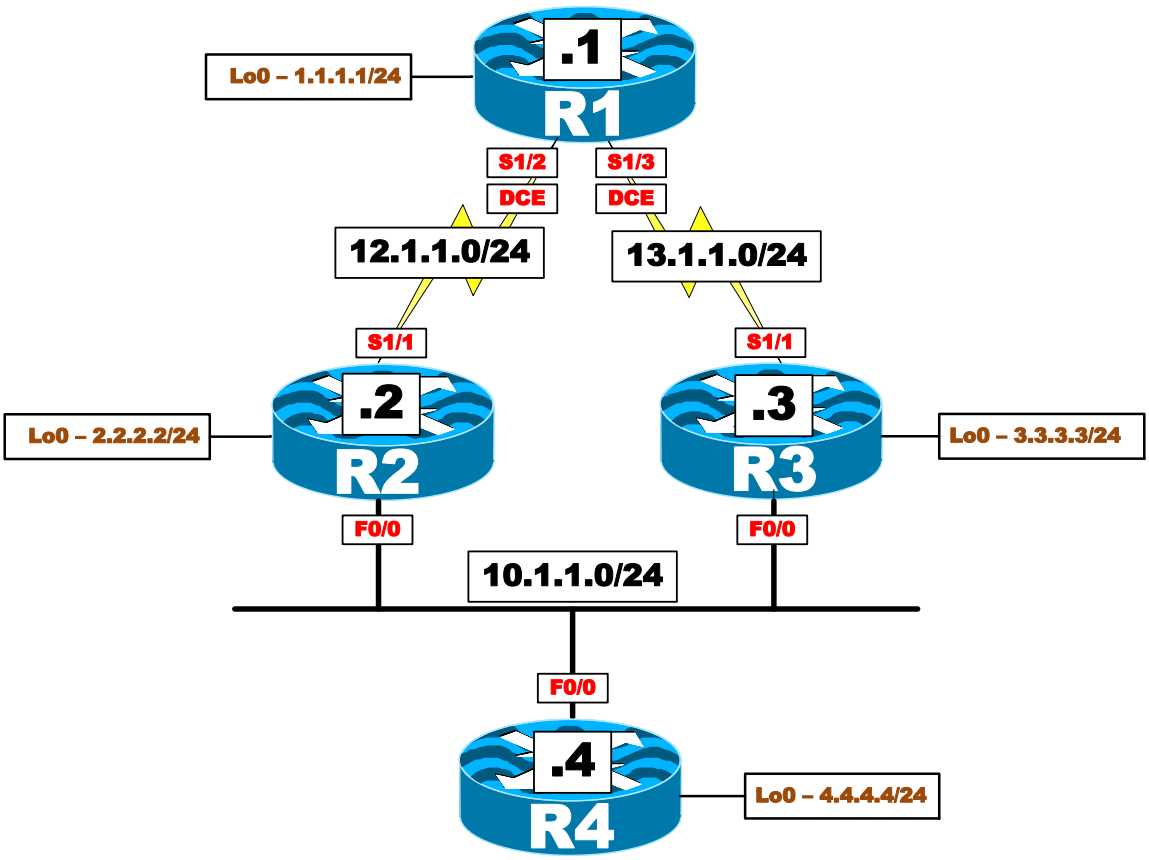
Lab 8 - OSPF Filtering -I



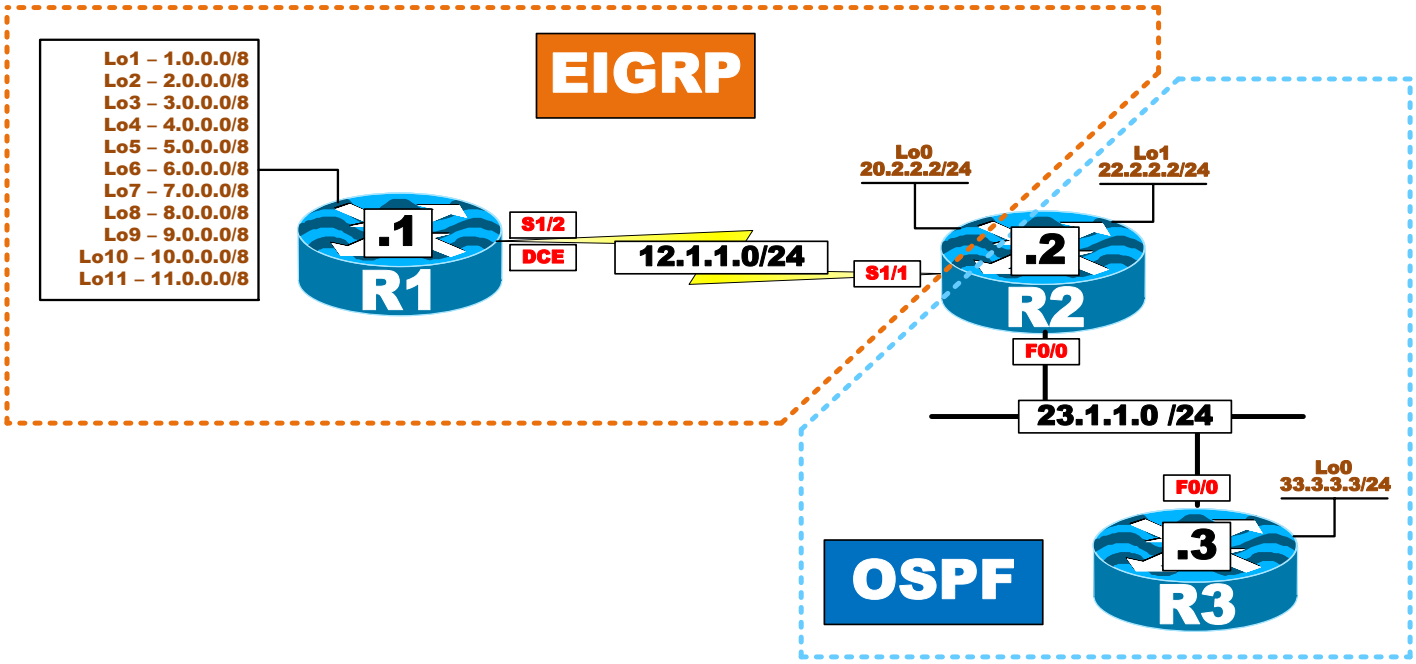
Lab 9 – OSPF Filtering - II



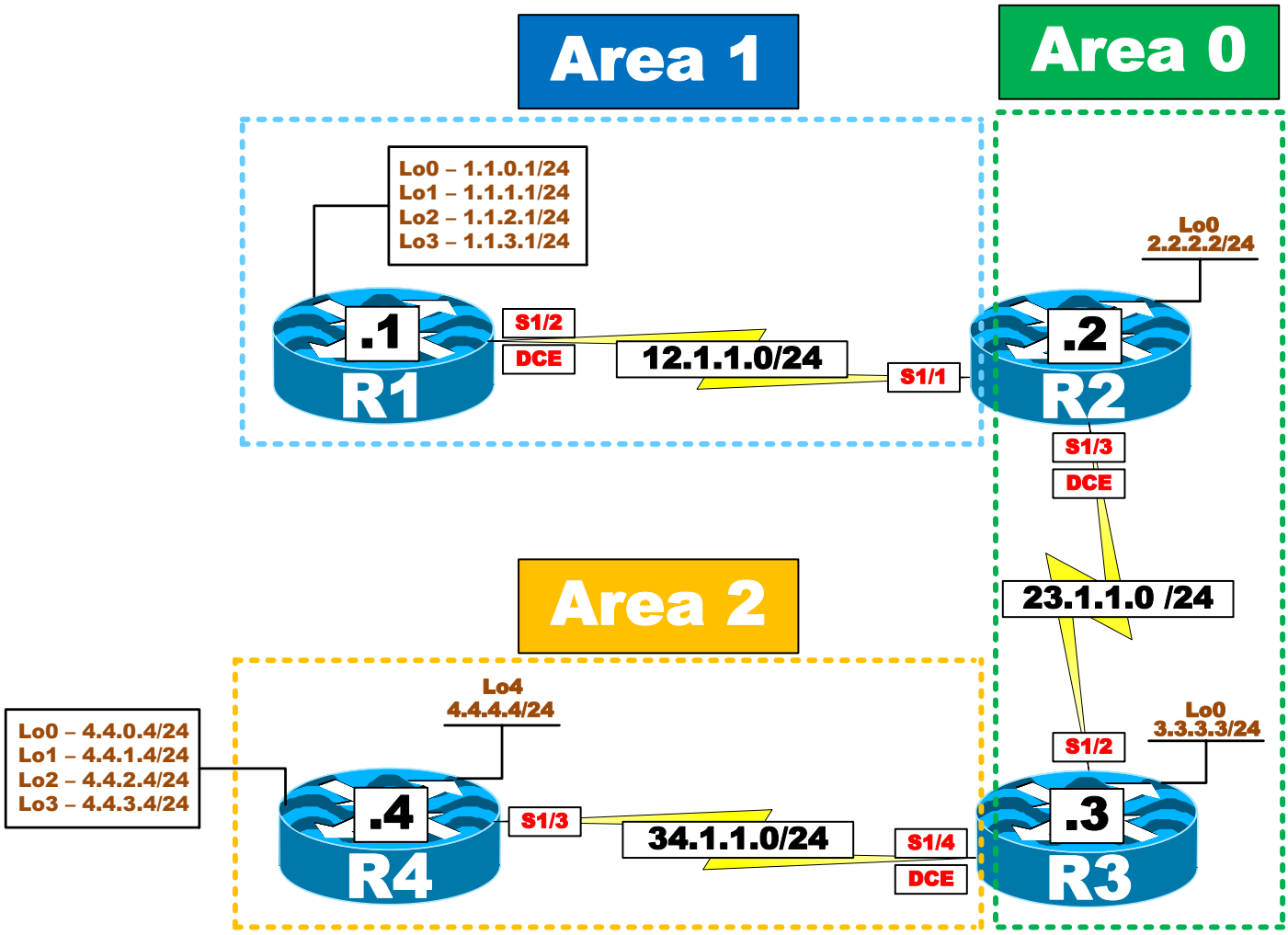
Lab 10
Redirecting Traffic in OSPF



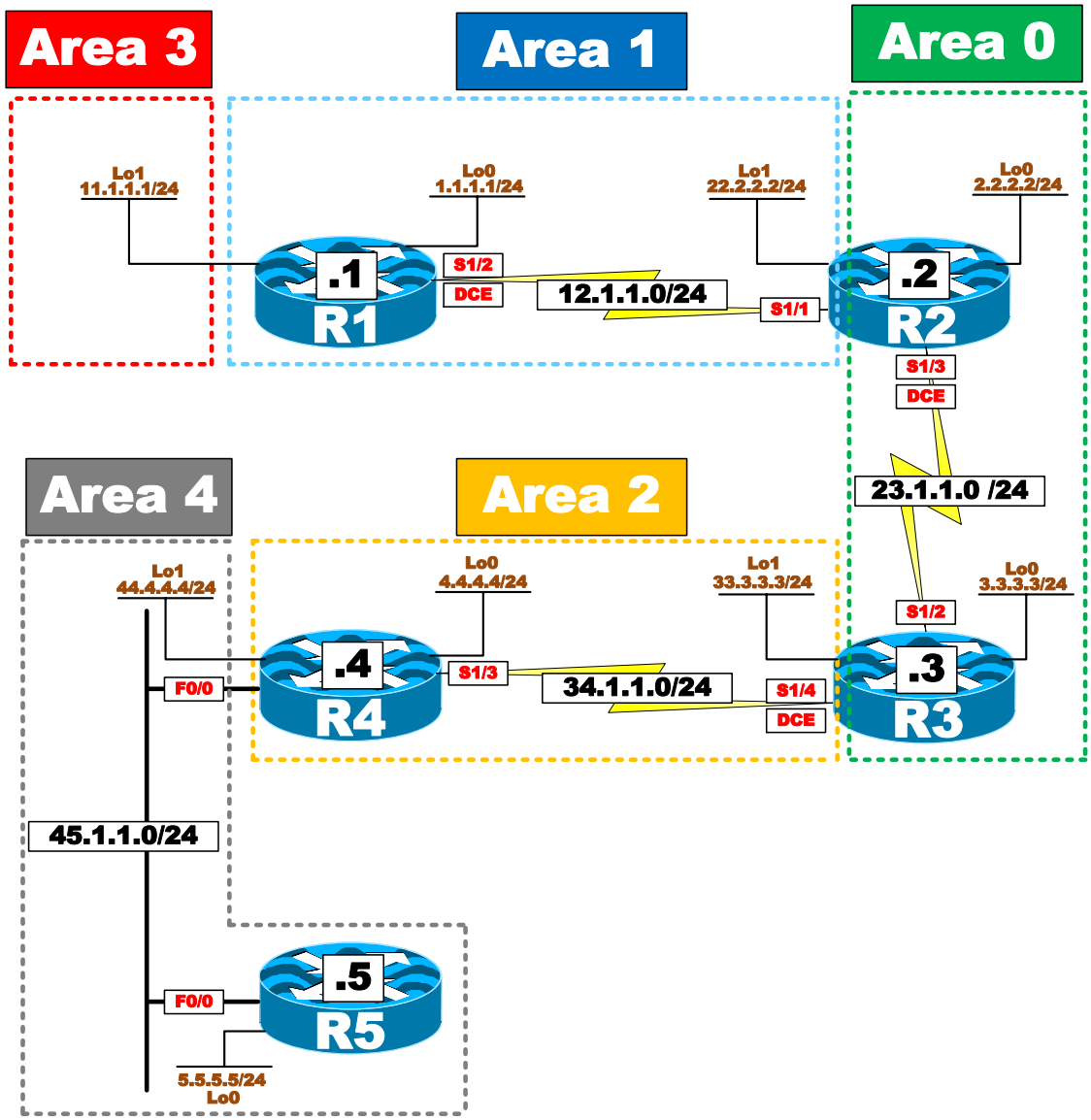
Lab 11
Database Overload Protection



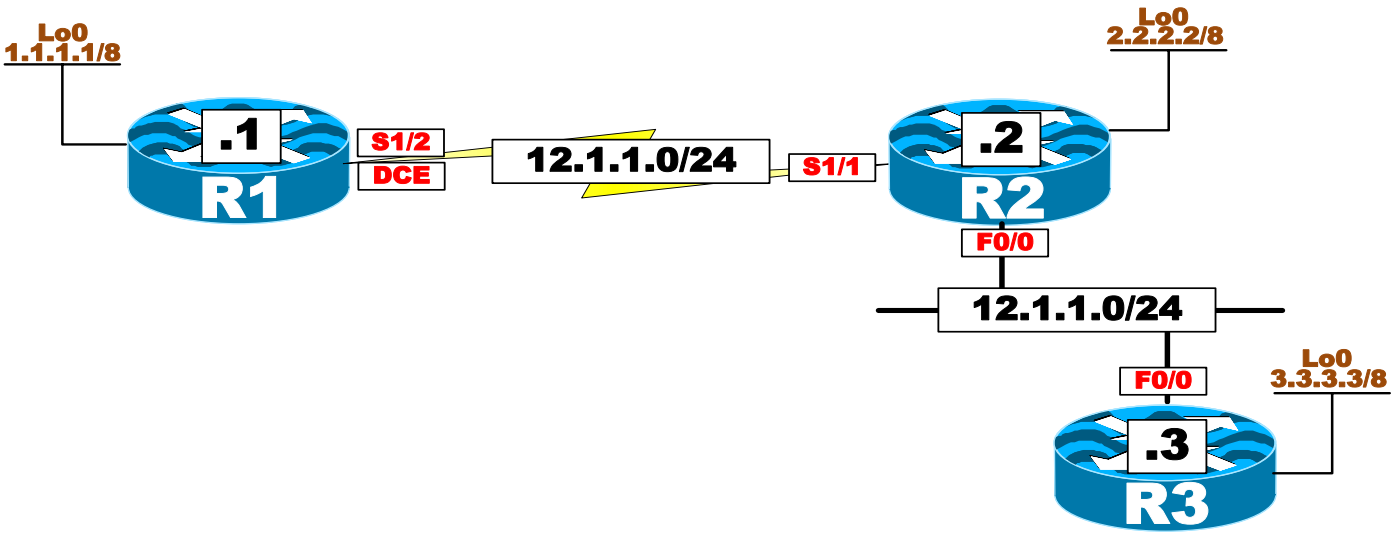
Lab 12
OSPF Summarization



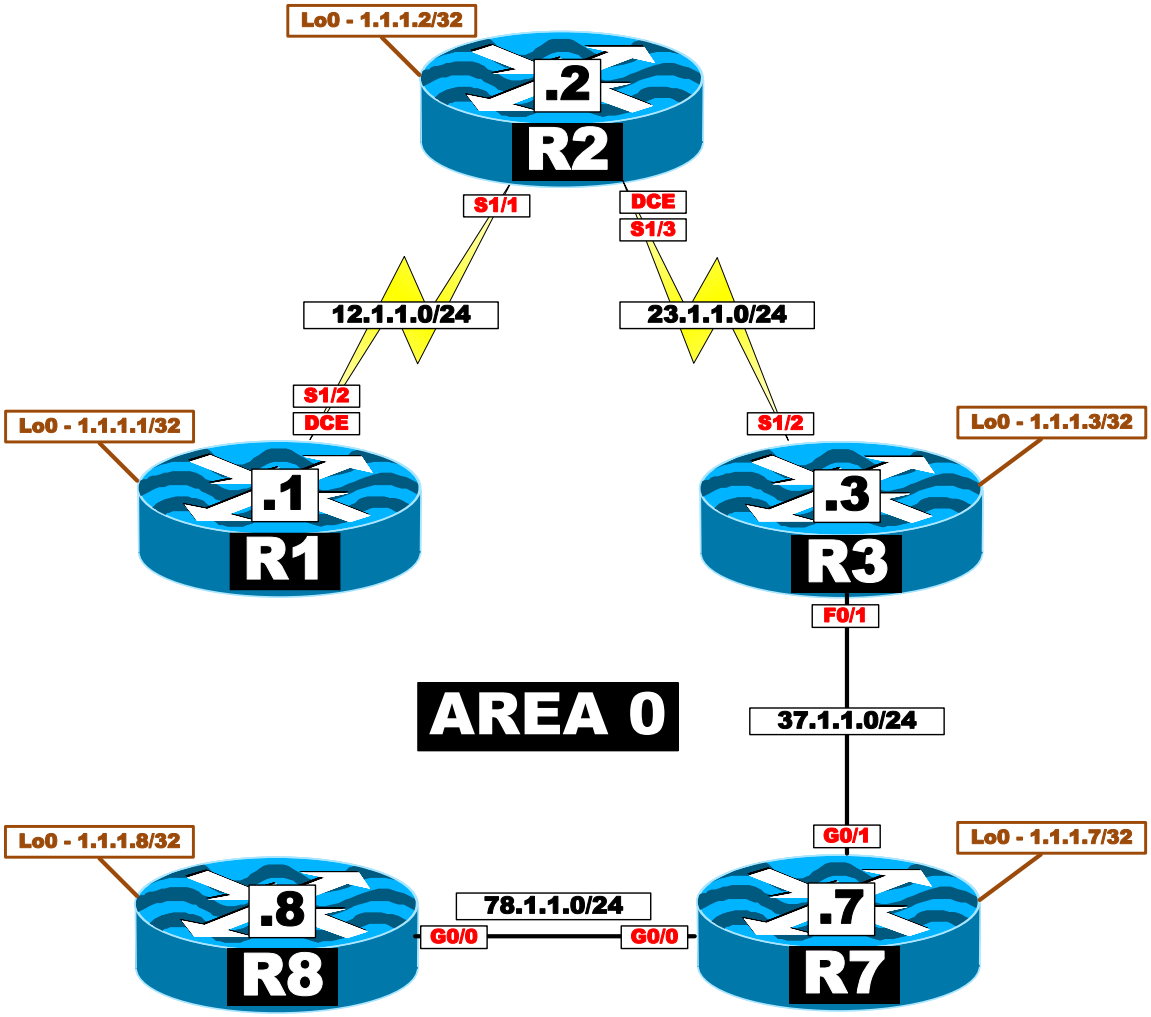
Lab 13
Virtual-Links and GRE Tunnels



Lab 14
OSPF Cost



Lab 15 – OSPF Authentication



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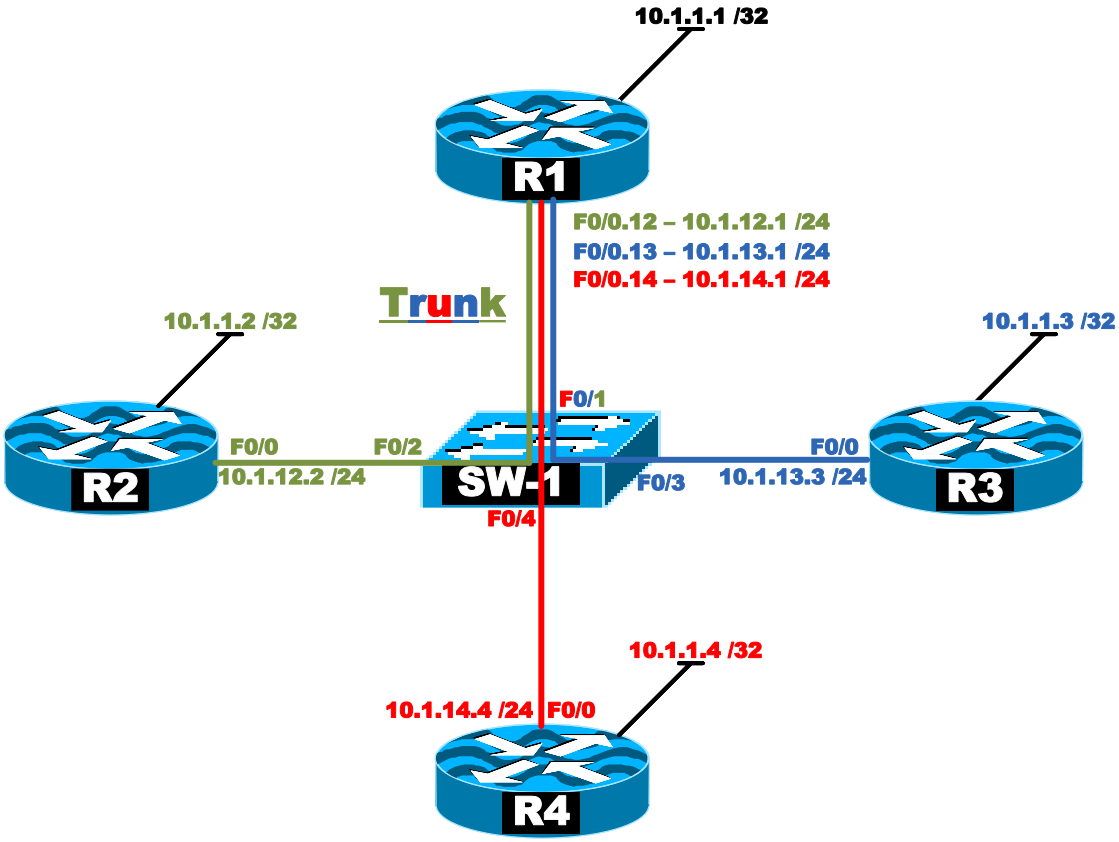
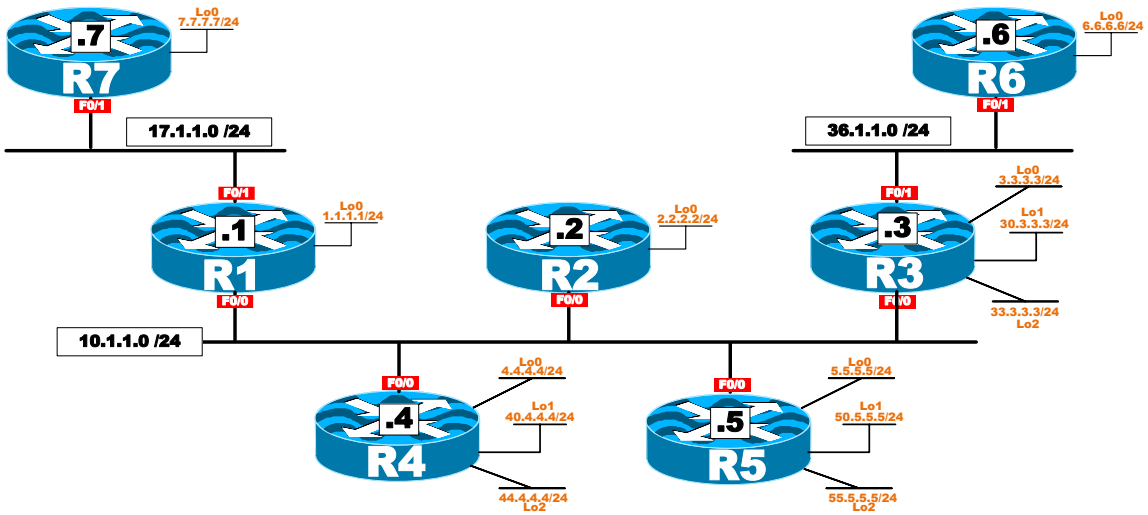
Redistribution

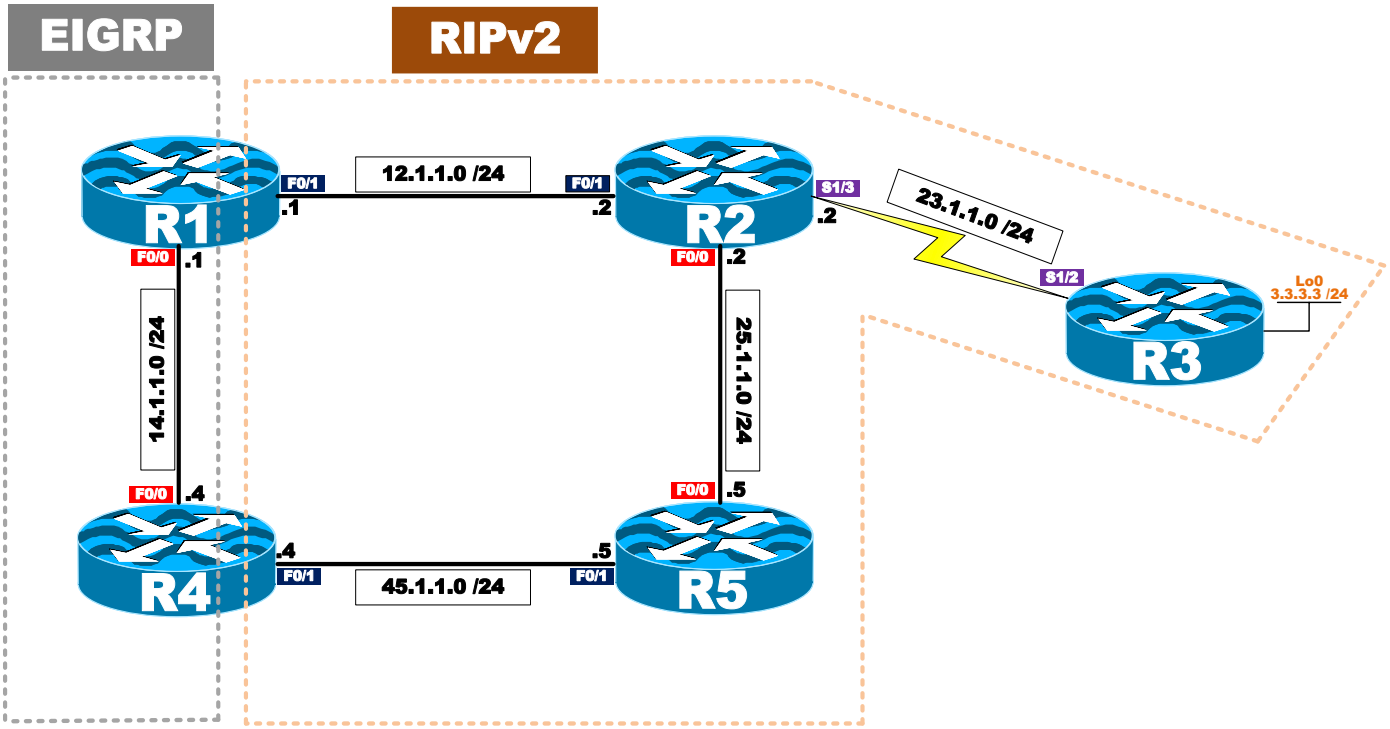
Lab 1 – Basics of Redistribution



Lab 2 – Basics of Redistribution-II



Lab 3
Redistribution – RIPv2 & Eigrp



Lab 4
Redistribution – RIPv2 & OSPF