IPv4 ADDRESSING SCHEME – MODULES 1 to 5

Figure 1 below displays the addressing plan to be used for Modules 1 to 5. The plan itself is explained in the notes accompanying the workshop Modules.
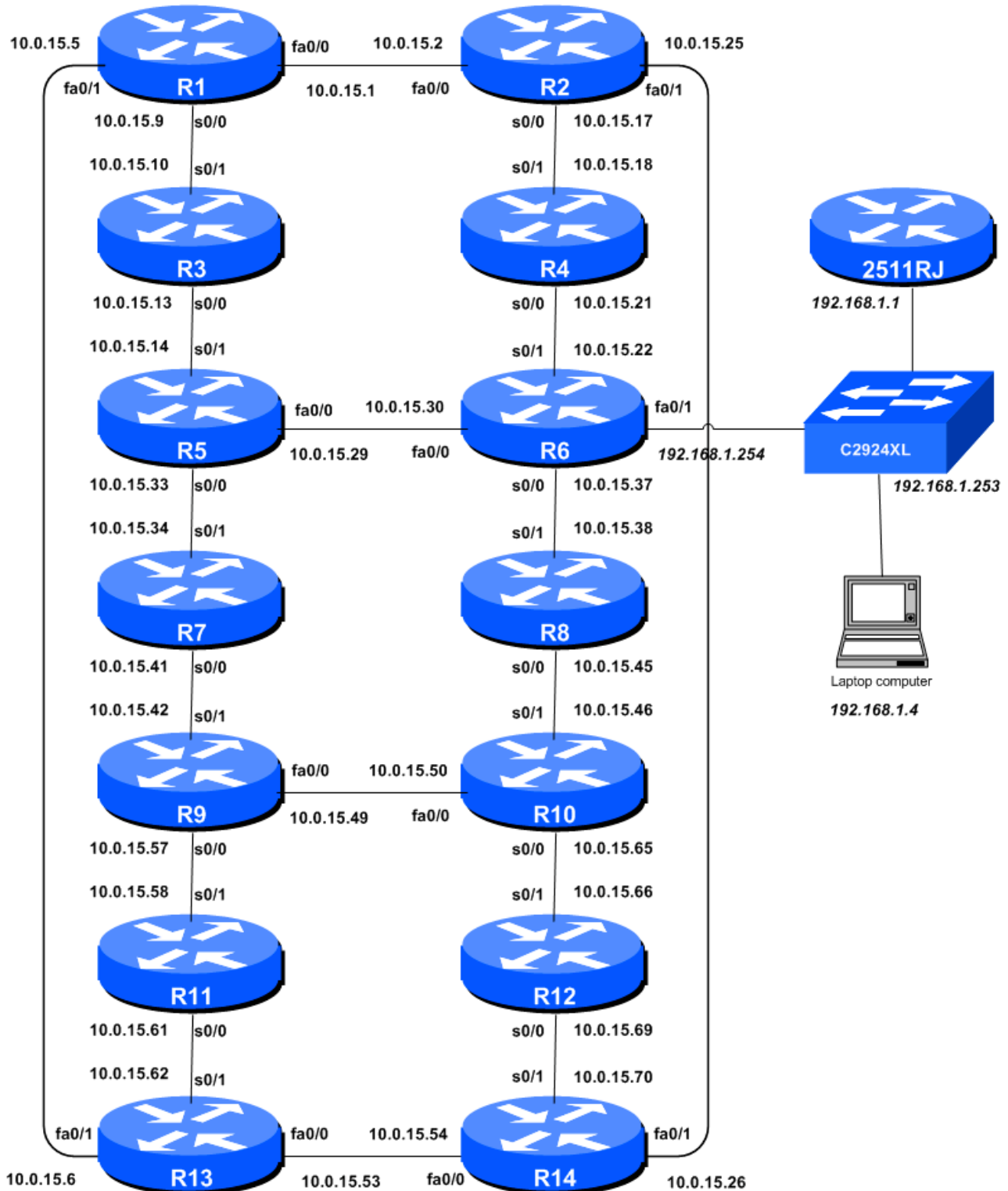

Figure 1 – Addressing Scheme for Modules 1 to 5

IPv4 ADDRESSING SCHEME – MODULES 6 to 9

Figure 2 below displays the addressing plan to be used for Modules 6 through 9. The plan itself is explained in the notes accompanying the workshop Modules.
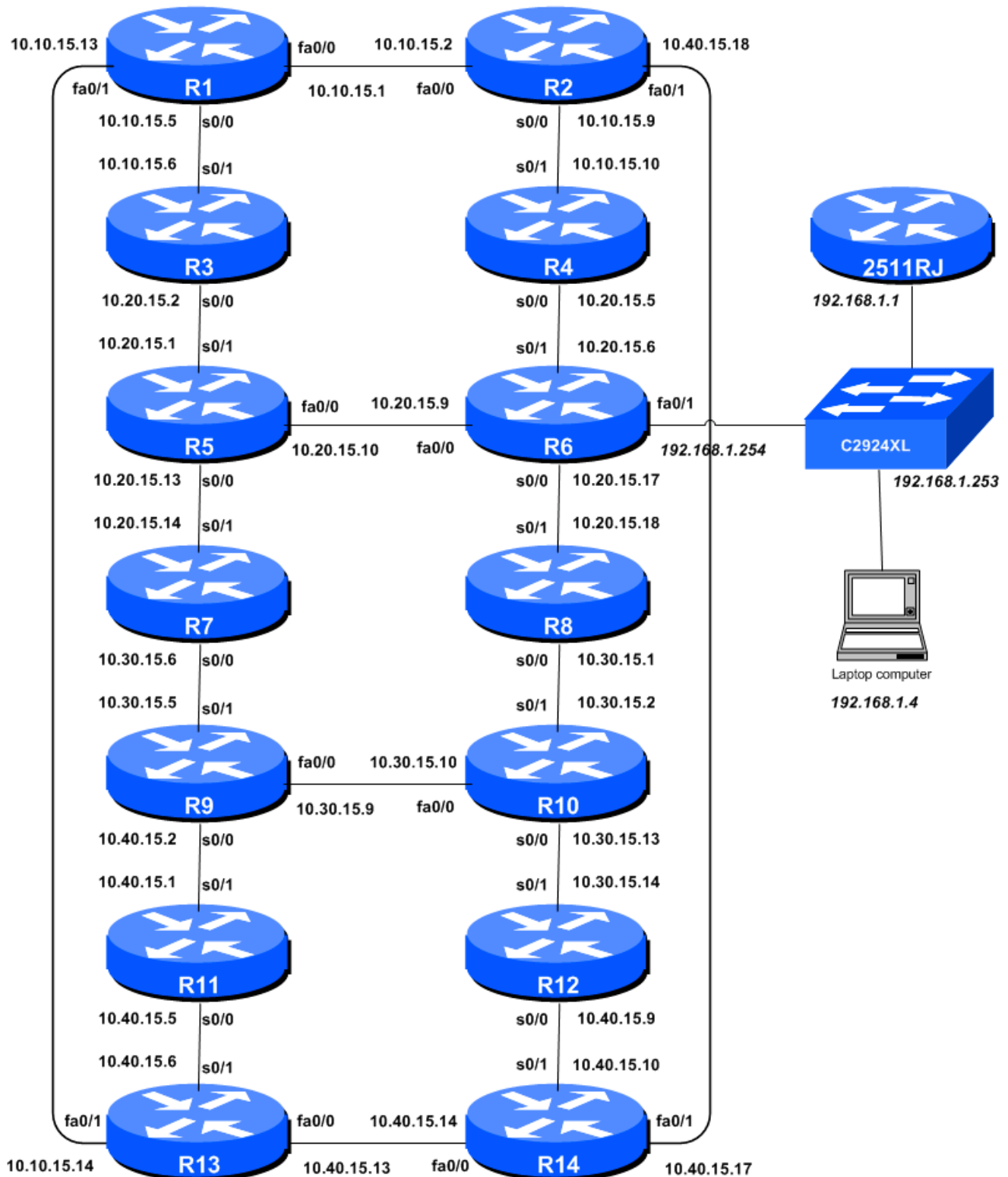

Figure 2 - Addressing Scheme for Modules 6 to 9

IPv4 Address Loopbacks – Modules 1 to 5

Router	Loopback Address	Router	Loopback Address
R1	10.0.15.241	R8	10.0.15.248
R2	10.0.15.242	R9	10.0.15.249
R3	10.0.15.243	R10	10.0.15.250
R4	10.0.15.244	R11	10.0.15.251
R5	10.0.15.245	R12	10.0.15.252
R6	10.0.15.246	R13	10.0.15.253
R7	10.0.15.247	R14	10.0.15.254

Chart 1 – IPv4 Loopback Address assigned to each Router in Modules 1 to 5

IPv4 Addresses – Modules 6 to 9

ASN	Address Block	Router	Address Block
10	10.10.0.0/20	30	10.30.0.0/20
20	10.20.0.0/20	40	10.40.0.0/20

Chart 2 – IPv4 Address Blocks assigned to each ASN, Modules 6 to 9

Router	Loopback Address	Router	Loopback Address
R1	10.10.15.224	R8	10.30.15.224
R2	10.10.15.225	R9	10.30.15.225
R3	10.10.15.226	R10	10.30.15.226
R4	10.20.15.224	R11	10.40.15.224
R5	10.20.15.225	R12	10.40.15.225
R6	10.20.15.226	R13	10.40.15.226
R7	10.20.15.227	R14	10.40.15.227

Chart 3 – IPv4 Loopback Address assigned to each Router, Modules 6 to 9

IPv4 Netmask Table

Subnet Mask	Wild-Card Mask	Network Bits	Host Bits	Prefix
0.0.0.0	255.255.255.255	0	32	/0
128.0.0.0	127.255.255.255	1	31	/1
192.0.0.0	63.255.255.255	2	30	/2
224.0.0.0	31.255.255.255	3	29	/3
240.0.0.0	15.255.255.255	4	28	/4
248.0.0.0	7.255.255.255	5	27	/5
252.0.0.0	3.255.255.255	6	26	/6
254.0.0.0	1.255.255.255	7	25	/7
255.0.0.0	0.255.255.255	8	24	/8
255.128.0.0	0.127.255.255	9	23	/9
255.192.0.0	0.63.255.255	10	22	/10
255.224.0.0	0.31.255.255	11	21	/11
255.240.0.0	0.15.255.255	12	20	/12
255.248.0.0	0.7.255.255	13	19	/13
255.252.0.0	0.3.255.255	14	18	/14
255.254.0.0	0.1.255.255	15	17	/15
255.255.0.0	0.0.255.255	16	16	/16
255.255.128.0	0.0.127.255	17	15	/17
255.255.192.0	0.0.63.255	18	14	/18
255.255.224.0	0.0.31.255	19	13	/19
255.255.240.0	0.0.15.255	20	12	/20
255.255.248.0	0.0.7.255	21	11	/21
255.255.252.0	0.0.3.255	22	10	/22
255.255.254.0	0.0.1.255	23	9	/23
255.255.255.0	0.0.0.255	24	8	/24
255.255.255.128	0.0.0.127	25	7	/25
255.255.255.192	0.0.0.63	26	6	/26
255.255.255.224	0.0.0.31	27	5	/27
255.255.255.240	0.0.0.15	28	4	/28
255.255.255.248	0.0.0.7	29	3	/29
255.255.255.252	0.0.0.3	30	2	/30
255.255.255.254	0.0.0.1	31	1	/31
255.255.255.255	0.0.0.0	32	0	/32

Chart 4 – IPv4 Subnets

Subnet Mask	The subnet mask of the CIDR block.
Wild-Card Mask	Wild-Card Mask used in OSPF and packet filters
Network Bits	The number of bits in the network part of the mask
Host Bits	The number of bits in the host part of the mask
Prefix	Short hand syntax of the CIDR block.

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4