

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.

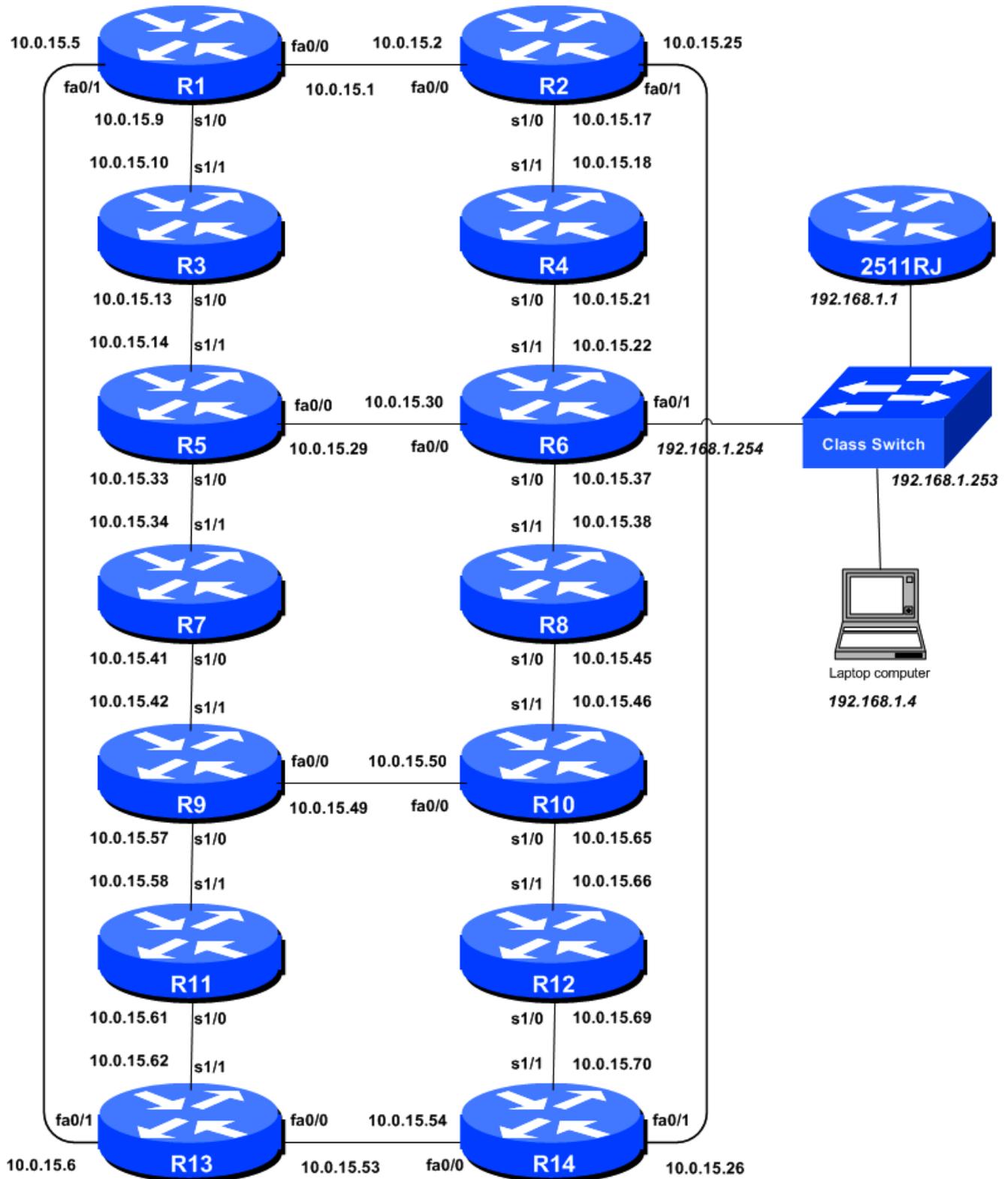


Figure 1 – Addressing Scheme for Modules 1 to 5

IPv4 Addresses – Modules 1 to 5

Router	Loopback Address
R1	10.0.15.241
R2	10.0.15.242
R3	10.0.15.243
R4	10.0.15.244
R5	10.0.15.245
R6	10.0.15.246
R7	10.0.15.247

Router	Loopback Address
R8	10.0.15.248
R9	10.0.15.249
R10	10.0.15.250
R11	10.0.15.251
R12	10.0.15.252
R13	10.0.15.253
R14	10.0.15.254

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

Router	“Customer” Address
R1	10.0.0.0/26
R2	10.0.0.64/26
R3	10.0.0.128/26
R4	10.0.0.192/26
R5	10.0.1.0/26
R6	10.0.1.64/26
R7	10.0.1.128/26

Router	“Customer” Address
R8	10.0.1.192/26
R9	10.0.2.0/26
R10	10.0.2.64/26
R11	10.0.2.128/26
R12	10.0.2.192/26
R13	10.0.3.0/26
R14	10.0.3.64/26

Table 2 – IPv4 “Customer” Addresses assigned to each Router in Modules 1 to 5

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

Table 3 – IPv4 Subnets

Subnet Mask

Wild-Card Mask

Network Bits

Host Bits

Prefix

The subnet mask of the CIDR block.

Wild-Card Mask used in OSPF and packet filters

The number of bits in the network part of the mask

The number of bits in the host part of the mask

Short hand syntax of the CIDR block.