

Allocated address
192.168.10.0/24

Perth needs 60 hosts
Use 6 bits -> $2^6 - 2 = 64 - 2 = 62$ hosts
which leaves 2 bits for networks

Subnetworks		Network address	
192.168.10.0 000000/26	192.168.10.0/26	192.168.10.0 000000/26	192.168.10.0/26
192.168.10.01 000000/26	192.168.10.64/26	192.168.10.00 000001/26	192.168.10.1/26
192.168.10.10 000000/26	192.168.10.128/26	192.168.10.00 000010/26	192.168.10.2/26
192.168.10.11 000000/26	192.168.10.192/26	192.168.10.00 000011/26	192.168.10.3/26
		192.168.10.00 000100/26	192.168.10.4/26
		thru	thru
		192.168.10.00 111101/26	192.168.10.61/26
		192.168.10.00 111110/26	192.168.10.62/26
		192.168.10.00 111111/26	192.168.10.63/26 BC

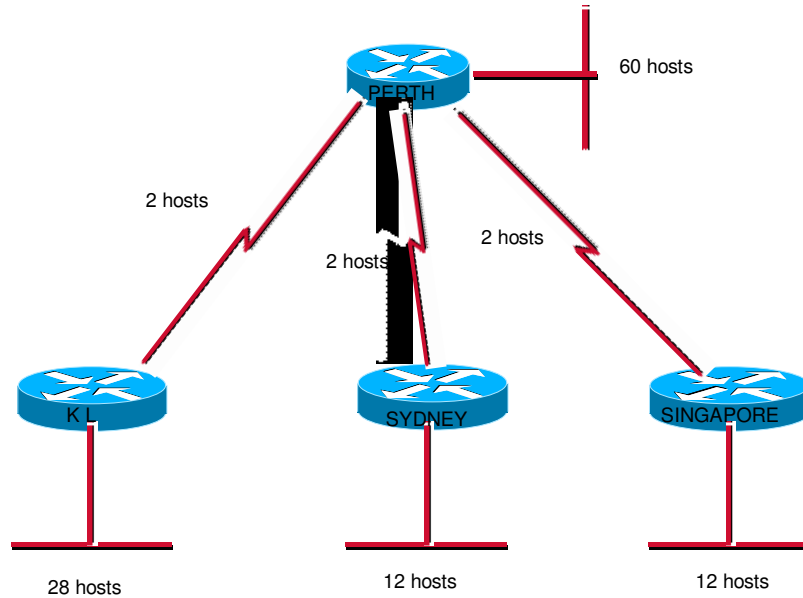
OBS! ip subnet zero

192.168.10.64/26

This is the next available
subnet. Kuala Lumpur needs
28 hosts.
Use 5 bits -> $2^5 - 2 = 30$
which leaves 3 bits for nets.

192.168.10.010 00000/27	192.168.10.64/27
192.168.10.011 00000/27	192.168.10.96/27
192.168.10.100 00000/27	192.168.10.128/27
192.168.10.101 00000/27	192.168.10.160/27
192.168.10.110 00000/27	192.168.10.192/27

192.168.10.011|00000/27 192.168.10.96/27



192.168.10.010 00000/27	192.168.10.64/27	Network Address
192.168.10.010 00001/27	192.168.10.65/27	
192.168.10.010 00010/27	192.168.10.66/27	
192.168.10.010 00011/27	192.168.10.67/27	
thru	thru	
192.168.10.010 11101/27	192.168.10.93/27	
192.168.10.010 11110/27	192.168.10.94/27	
192.168.10.010 11111/27	192.168.10.95/27	BC

This is the next available subnet. Sydney and Singapore need 12 hosts each. Use 4 bits -> 24-2=14 which leaves 4 bits for nets.

192.168.10.0110 0000/28	192.168.10.96/28	192.168.10.0110 0001/28	192.168.10.96/28	Network Address
192.168.10.0111 0000/28	192.168.10.112/28	192.168.10.0110 0010/28	192.168.10.97/28	
192.168.10.1000 0000/28	192.168.10.128/28	192.168.10.0110 0011/28	192.168.10.98/28	
192.168.10.1001 0000/28	192.168.10.144/28	192.168.10.0110 0100/28	192.168.10.99/28	
192.168.10.1010 0000/28	192.168.10.160/28		thru	
192.168.10.1011 0000/28	192.168.10.176/28	192.168.10.0110 1101/28	192.168.10.109/28	
192.168.10.1100 0000/28	192.168.10.192/28	192.168.10.0110 1110/28	192.168.10.110/28	
192.168.10.1101 0000/28	192.168.10.208/28	192.168.10.0110 1111/28	192.168.10.111/28	BC
192.168.10.1110 0000/28	192.168.10.224/28			
192.168.10.1111 0000/28	192.168.10.240/28			

192.168.10.0111 0000/28	192.168.10.112/28	192.168.10.0111 0000/28	192.168.10.112/28	Network Address
		192.168.10.0111 0001/28	192.168.10.113/28	
		192.168.10.0111 0010/28	192.168.10.114/28	
		192.168.10.0111 0011/28	192.168.10.115/28	
			thru	
		192.168.10.0111 1101/28	192.168.10.125/28	
		192.168.10.0111 1110/28	192.168.10.126/28	
		192.168.10.0111 1111/28	192.168.10.127/28	BC

192.168.10.1000|0000/28

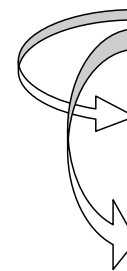
192.168.10.128/28

Serial lines need two hosts each. Use 2 bits -> 22-2=2 which leaves 6 bits for nets

192.168.10.100000 00/30	192.168.10.128/30
192.168.10.100001 00/30	192.168.10.132/30
192.168.10.100010 00/30	192.168.10.136/30

192.168.10.100001 00/30	192.168.10.132/30
-------------------------	-------------------

192.168.10.100010 00/30	192.168.10.136/30
-------------------------	-------------------



192.168.10.100000 00/30	192.168.10.128/30	Network Address
192.168.10.100000 01/30	192.168.10.129/30	
192.168.10.100000 10/30	192.168.10.130/30	
192.168.10.100000 11/30	192.168.10.131/30	BC

192.168.10.100001 00/30	192.168.10.132/30	Network Address
192.168.10.100001 01/30	192.168.10.133/30	
192.168.10.100001 10/30	192.168.10.134/30	
192.168.10.100001 11/30	192.168.10.135/30	BC

192.168.10.100010 00/30	192.168.10.136/30	Network Address
192.168.10.100010 01/30	192.168.10.137/30	
192.168.10.100010 10/30	192.168.10.138/30	
192.168.10.100010 11/30	192.168.10.136/30	BC