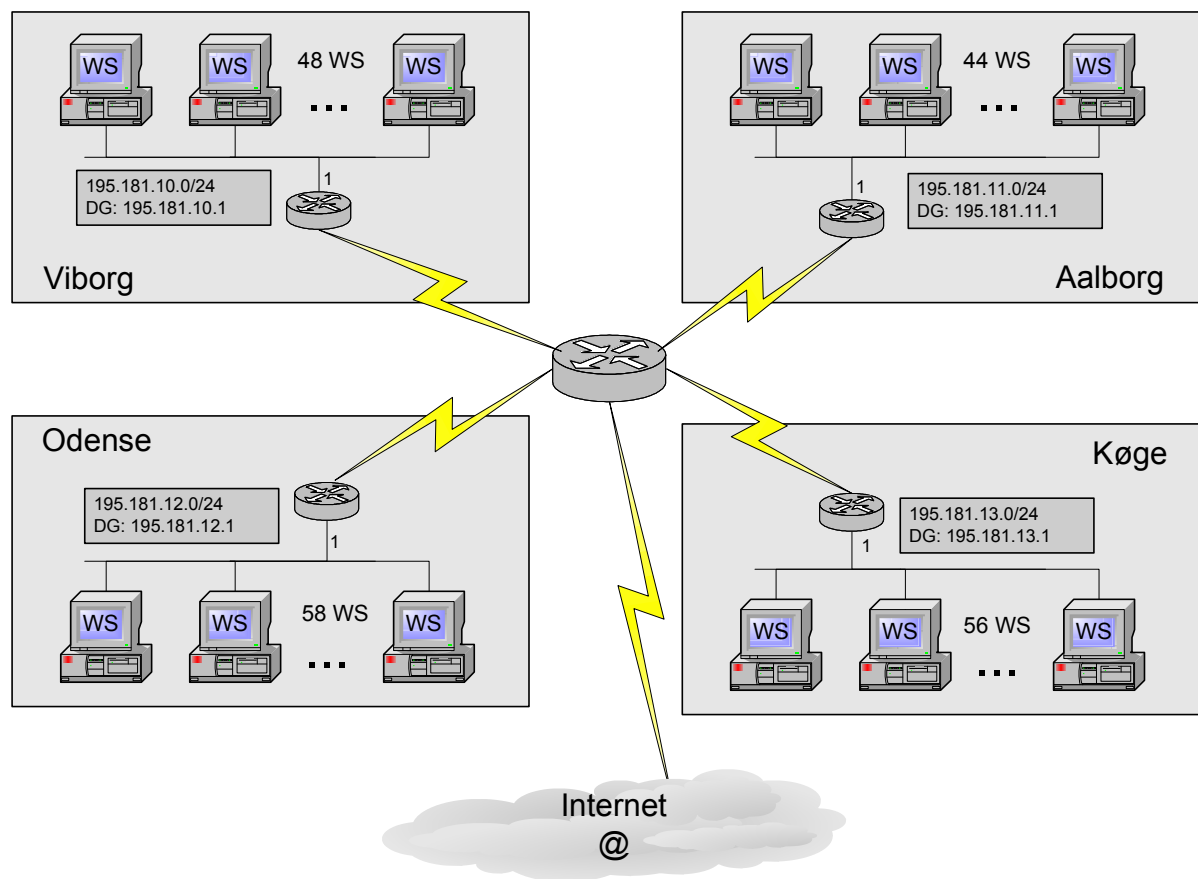


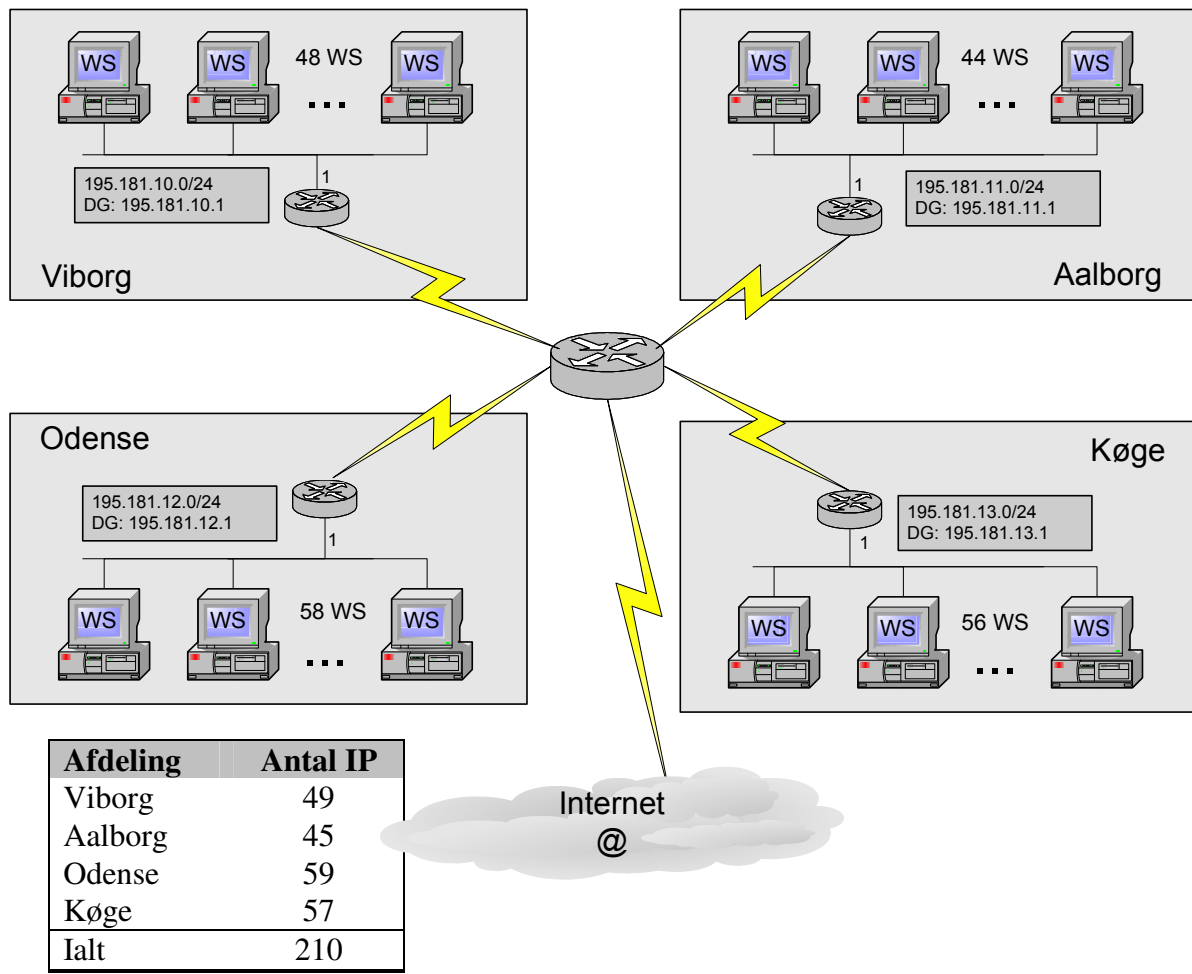
# Subnetting

## Et eksempel



## Subnetting

En virksomhed har fire afdelinger med hvert sit klasse C net.



Virksomheden anvender i alt 210 IP adresser til arbejdsstationer samt en enkelt IP adresse i hver afdeling til Routeren. Virksomheden har i dag fire klasse C net. I alt 1016 IP adresser. ( 4 \* 254 ).

Dette Subnet eksempel viser hvorledes virksomheden kan klare sig med et klasse C net.

### Netnavn og Broadcast navn:

Alle logiske net har to reservede IP adresser som ikke kan anvendes til udstyr men har speciel betydning. IP adressen hvor alle Host bit er *nul* er netværksnavn. IP adressen hvor alle Host bit er *et* er broadcast adresse for nettet.

Eksempel:

Netnavnet: 195.181.54.0/24 har broadcast adressen 195.181.54.255

**Klasse C nettet 195.181.54.0/24**

Netnavn: 195.181.54.0/24

Broadcast: 195.181.54.255

Antal IP: 254

Subnet mask /24:

11111111.11111111.11111111.00000000 = 255.255.255.0

		Net del	Host del	
195.181.54.0	=	11000011.10110101.00001010	.00000000	} 195.181.54.0/24
195.181.54.1	=	11000011.10110101.00001010	.00000001	
195.181.54.2	=	11000011.10110101.00001010	.00000010	
.		.	.	
.		.	.	
195.181.54.62	=	11000011.10110101.00001010	.00111110	
195.181.54.63	=	11000011.10110101.00001010	.00111111	
195.181.54.64	=	11000011.10110101.00001010	.01000000	
195.181.54.65	=	11000011.10110101.00001010	.01000001	
.		.	.	
.		.	.	
195.181.54.126	=	11000011.10110101.00001010	.01111110	
195.181.54.127	=	11000011.10110101.00001010	.01111111	
195.181.54.128	=	11000011.10110101.00001010	.10000000	
195.181.54.129	=	11000011.10110101.00001010	.10000001	
.		.	.	
.		.	.	
195.181.54.190	=	11000011.10110101.00001010	.10111110	
195.181.54.191	=	11000011.10110101.00001010	.10111111	
195.181.54.192	=	11000011.10110101.00001010	.11000000	
195.181.54.193	=	11000011.10110101.00001010	.11000001	
.		.	.	
.		.	.	
195.181.54.254	=	11000011.10110101.00001010	.11111110	
195.181.54.255	=	11000011.10110101.00001010	.11111111	

**Figur 1 - Klasse C nettet 195.181.54,0/24**

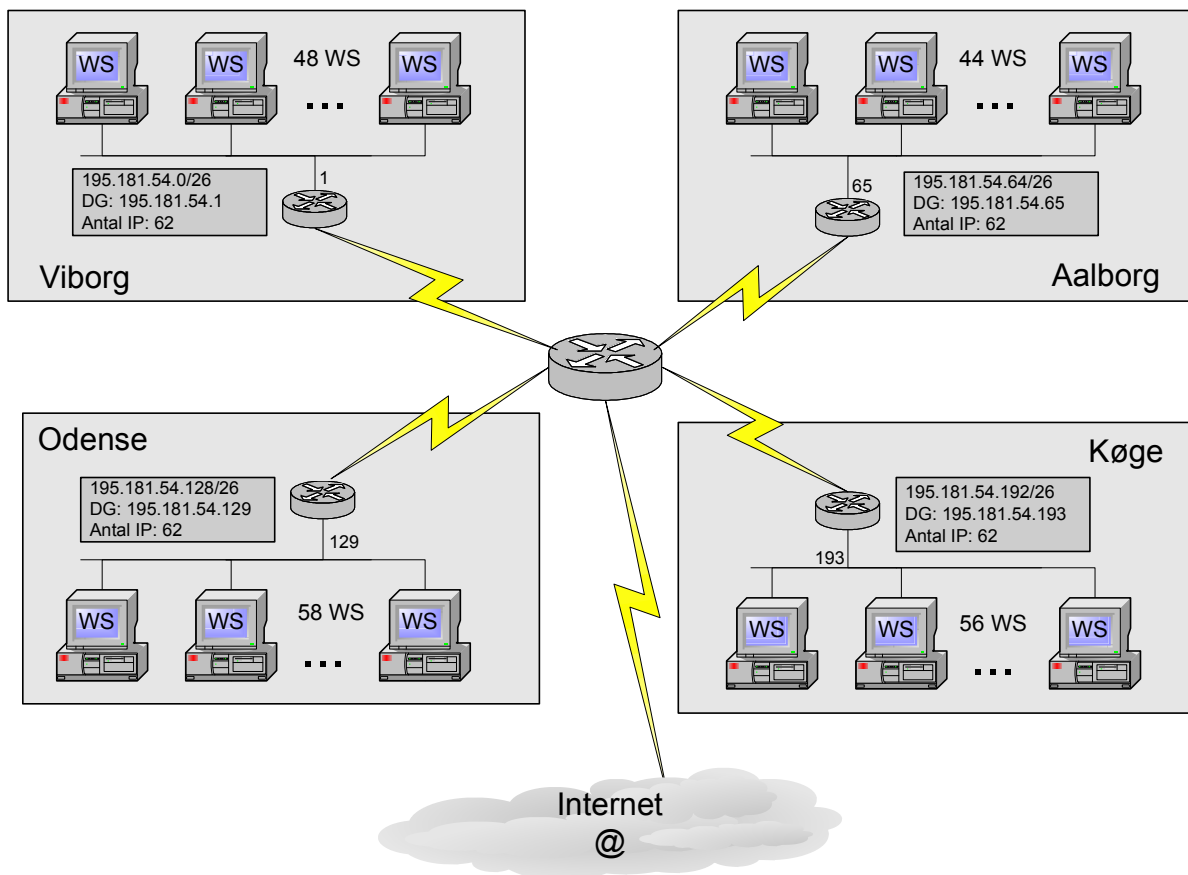
**Klasse C nettet 195.181.54.0/24 subnettet med 2 bit**

Subnet mask /26:

11111111.11111111.11111111.11000000 = 255.255.255.192

Ved at Subnete et klasse C net med 2 bit, kan følgende logiske net laves.

<b>Viborg:</b>	Netnavn:	195.181.54.0/26
	Broadcast:	195.181.54.63
	Antal IP:	62
<b>Aalborg:</b>	Netnavn:	195.181.54.64/26
	Broadcast:	195.181.54.127
	Antal IP:	62
<b>Odense:</b>	Netnavn:	195.181.54.128/26
	Broadcast:	195.181.54.191
	Antal IP:	62
<b>Køge:</b>	Netnavn:	195.181.54.192/26
	Broadcast:	195.181.54.255
	Antal IP:	62



	Net del	Host del	
195.181.54.0	= 11000011.10110101.00001010.00	0000000	}
195.181.54.1	= 11000011.10110101.00001010.00	0000001	
195.181.54.2	= 11000011.10110101.00001010.00	0000010	
.	.	.	}
.	.	.	
.	.	.	
195.181.54.62	= 11000011.10110101.00001010.00	1111110	}
195.181.54.63	= 11000011.10110101.00001010.00	1111111	
195.181.54.64	= 11000011.10110101.00001010.01	0000000	
195.181.54.65	= 11000011.10110101.00001010.01	0000001	}
.	.	.	
.	.	.	
195.181.54.126	= 11000011.10110101.00001010.01	1111110	}
195.181.54.127	= 11000011.10110101.00001010.01	1111111	
195.181.54.128	= 11000011.10110101.00001010.10	0000000	
195.181.54.129	= 11000011.10110101.00001010.10	0000001	}
.	.	.	
.	.	.	
195.181.54.190	= 11000011.10110101.00001010.10	1111110	}
195.181.54.191	= 11000011.10110101.00001010.10	1111111	
195.181.54.192	= 11000011.10110101.00001010.11	0000000	
195.181.54.193	= 11000011.10110101.00001010.11	0000001	}
.	.	.	
.	.	.	
195.181.54.254	= 11000011.10110101.00001010.11	1111110	}
195.181.54.255	= 11000011.10110101.00001010.11	1111111	

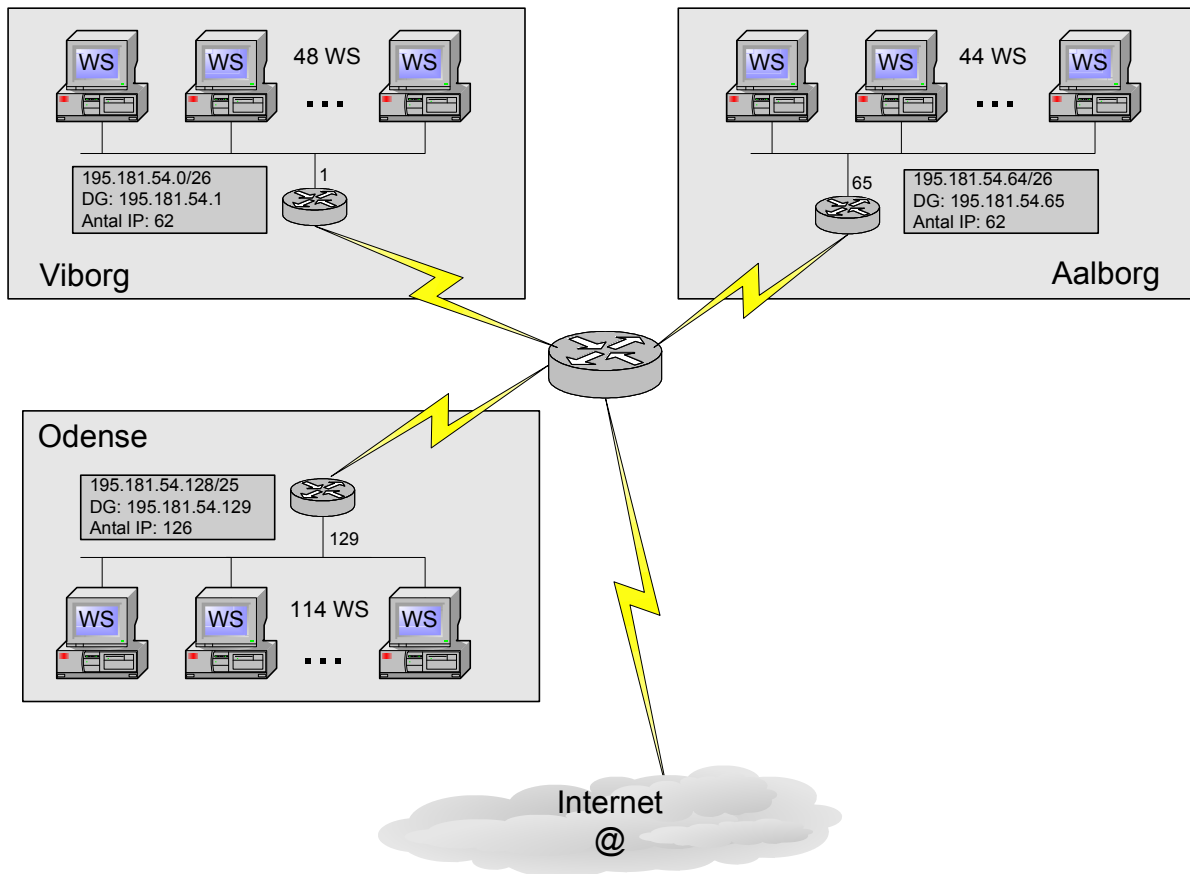
Figur 2 - 195.181.54.0 subnettet med 2 bit

**Afdelingen i Køge lukkes og Odense udvides.**

**Viborg:** Netnavn: 195.181.54.0/26  
Subnet mask: 255.255.255.192  
Broadcast: 195.181.54.63  
Antal IP: 62

**Aalborg:** Netnavn: 195.181.54.64/26  
Subnet mask: 255.255.255.192  
Broadcast: 195.181.54.127  
Antal IP: 62

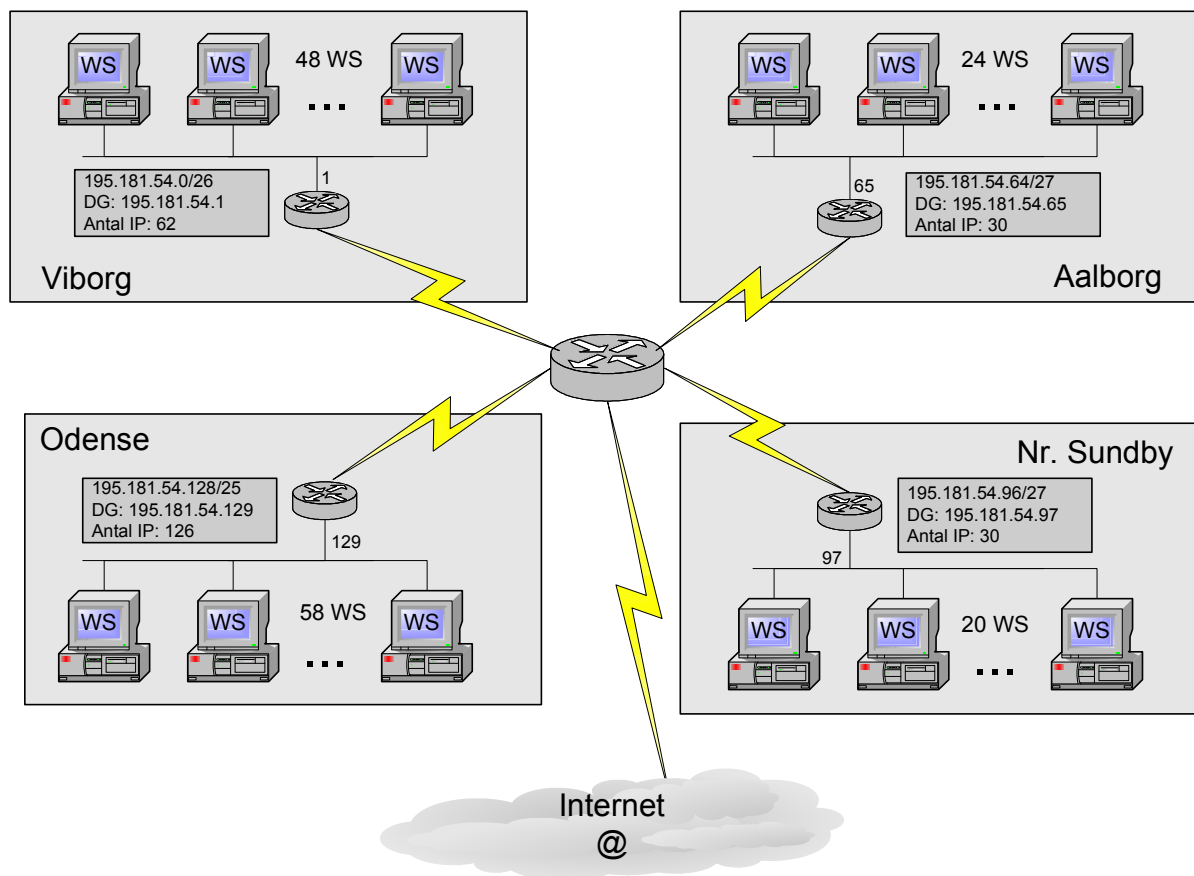
**Odense:** Netnavn: 195.181.54.128/25  
Subnet mask: 255.255.255.128  
Broadcast: 195.181.54.255  
Antal IP: **126**



	Net del	Host del	
195.181.54.0	= 11000011.10110101.00001010.00000000		195.181.54.0/26
195.181.54.1	= 11000011.10110101.00001010.00000001		
195.181.54.2	= 11000011.10110101.00001010.00000010		
.	.	.	
195.181.54.62	= 11000011.10110101.00001010.00111110		195.181.54.64/26
195.181.54.63	= 11000011.10110101.00001010.00111111		
195.181.54.64	= 11000011.10110101.00001010.01000000		
195.181.54.65	= 11000011.10110101.00001010.01000001		
.	.	.	
195.181.54.126	= 11000011.10110101.00001010.01111110		195.181.54.128/25
195.181.54.127	= 11000011.10110101.00001010.01111111		
195.181.54.128	= 11000011.10110101.00001010.10000000		
195.181.54.129	= 11000011.10110101.00001010.10000001		
.	.	.	
.	.	.	
.	.	.	
.	.	.	
.	.	.	
.	.	.	
195.181.54.254	= 11000011.10110101.00001010.11111110		195.181.54.128/25
195.181.54.255	= 11000011.10110101.00001010.11111111		

**Afdelingen i Aalborg flytter 20 maskiner til Nørre Sundby**

<b>Viborg:</b>	Netnavn:	195.181.54.0/26
	Subnet mask:	255.255.255.192
	Broadcast:	195.181.54.63
	Antal IP:	62
<b>Aalborg:</b>	Netnavn:	195.181.54.64/27
	Subnet mask:	255.255.255.224
	Broadcast:	195.181.54.95
	Antal IP:	30
<b>Nr Sund.:</b>	Netnavn:	195.181.54.96/27
	Subnet mask:	255.255.255.224
	Broadcast:	195.181.54.127
	Antal IP:	30
<b>Odense:</b>	Netnavn:	195.181.54.128/25
	Subnet mask:	255.255.255.128
	Broadcast:	195.181.54.255
	Antal IP:	<b>126</b>





	Net del	Host del	
195.181.54.0	= 11000011.10110101.00001010.00000000	00000000	} 195.181.54.0/26
195.181.54.1	= 11000011.10110101.00001010.00000001	00000001	
195.181.54.2	= 11000011.10110101.00001010.00000010	00000010	
.	.	.	
195.181.54.62	= 11000011.10110101.00001010.00111110	11111110	} 195.181.54.64/27
195.181.54.63	= 11000011.10110101.00001010.00111111	11111111	
195.181.54.64	= 11000011.10110101.00001010.01000000	00000000	} 195.181.54.64/27
195.181.54.65	= 11000011.10110101.00001010.01000001	00000001	
.	.	.	
195.181.54.94	= 11000011.10110101.00001010.01011110	11111110	} 195.181.54.96/27
195.181.54.95	= 11000011.10110101.00001010.01011111	11111111	
195.181.54.96	= 11000011.10110101.00001010.01100000	00000000	} 195.181.54.96/27
195.181.54.97	= 11000011.10110101.00001010.01100001	00000001	
.	.	.	
195.181.54.126	= 11000011.10110101.00001010.01111110	11111110	} 195.181.54.128/25
195.181.54.127	= 11000011.10110101.00001010.01111111	11111111	
195.181.54.128	= 11000011.10110101.00001010.10000000	00000000	} 195.181.54.128/25
195.181.54.129	= 11000011.10110101.00001010.10000001	00000001	
.	.	.	
.	.	.	
.	.	.	
195.181.54.254	= 11000011.10110101.00001010.11111110	11111110	} 195.181.54.128/25
195.181.54.255	= 11000011.10110101.00001010.11111111	11111111	

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