Total

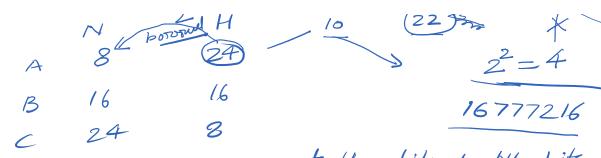
65536×16584

SUBNETTING

subnetting in a process of dividing a single network into smaller subnets.

N/W Id (Subneta) ~ H/w Id (Subnets)

Process of subnething



& Borrow host bits & convert then bits to Mw bits.

Example: An organisation niced to setup a network of (40)
hosts in its office. ISP provide the aclan C
network having N/W Id 192.168.10.0/24. Organisation wants only the produce thoru and
sufficient to satify its nee negative meet.

1SP decided to provide a subnet to N/W to this
Ongonisation. You have help the ISP to divide the N/W
into a subnet that satisfy the negative must of the
Ongonisation? There should be high wantages of 1P
Address.

Class C 192.168.10.0 256 - 40 = 216

Step-1: - Identify the originated number of Host bits to

Support the original ment of to (minimus) system

in the n/w. DH=24 DH=8

Host(n) 0 1 2 3 4 5 6 7 Hosts(2) 1 2 4 8 16 32 64 128

Required number of Host bits H = 6

Step-2:- Find the number of host bits borowerd & converted to the network both.

N=DH-H= 8-6=2

Step-3:- Find the total number of Network Losts

TN = DN + N = 24 + 2 = 26

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TN = DN + N = 24 + 2 = 261129 Step-4:- Calculate the Suboret Mask of each submet. 128 1111111 - 11111111-11000000 64 192 255 - 255 - 255 - 192 Step-5: Total number of subnet = 2"=2=4 Step-6: Total number of Hosts/submet = 2" = 26 = 64 Step-7:- Range of subnets. 13/c Id Gend IP Start IP N/W Jd Suhnet 192.168.16.63 192.168.16.1 192.168.10.62 192-168-10.0 1 192.168.10.127 192.168.10.126 192.168.10.65 192.168.10.64 192.168.10.190 192.168.10.191 2 192.168.10.129 192.168.10.128 192.168.10.254 192.168.10.255 3 192.168.10.193 192.168.10.192 next subnet * To calculate the H/WId of 256-192=64 255.255.255.0 DSM 255.255.255.192 CSM