

Tutorial (TD) – CIDR Addressing

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1.0 2025/2026



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I Tutorial Overview

This tutorial focuses on CIDR (Classless Inter-Domain Routing). Students must use CIDR notation and show all calculation steps (subnet mask, block size, network and broadcast addresses).

II Exercise 1 : CIDR Prefix Interpretation

For each CIDR prefix below, give:

- The subnet mask in dotted-decimal format
- The number of usable hosts
 - a) /25
 - b) /26
 - c) /27
 - d) /28

III Exercise 2 : CIDR Subnet Analysis

Given the network 192.168.1.0/26:

- a) Give the subnet mask.
- b) Determine the block size.
- c) List all subnet network addresses.
- d) Give the broadcast address of the second subnet.

IV Exercise 3 : Host Range Calculation

Given the subnet 192.168.10.64/27:

- a) Identify the subnet mask.
- b) Identify the network address.
- c) Identify the broadcast address.
- d) Give the usable host range.

V Exercise 4 : CIDR on Class B Network

Given the network 172.16.0.0/20:

- a) Give the subnet mask.
- b) Determine the block size.
- c) List the first four subnet network addresses.

VI Exercise 5 : Route Aggregation (Supernetting)

The following networks are advertised separately:

- 192.168.4.0/24
- 192.168.5.0/24
 - a) Can these networks be aggregated?
 - b) If yes, give the summarized CIDR route.
 - c) Explain the benefit of route aggregation.

VII Exercise 6 : Real-World CIDR Scenario

An organization is assigned the address block 10.0.0.0/22.

- a) Give the subnet mask.
- b) How many total IP addresses are available?
- c) How many usable host addresses are available?
- d) Give the network and broadcast addresses.

Mentions légales

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