

DHCP Server Configuration in Cisco

DHCP is a network management protocol used in networks to dynamically assign IP addresses and

[MERN Classroom Program](#)[Trending Now](#)[Data Structures](#)[Algorithms](#)[Foundational Courses](#)[Data Science](#)[Practice Problem](#)[Explore Our Geeks Community](#)[Read](#)[Discuss](#)[Write an Interview Experience](#)[Share Your Campus Experience](#)[Implementation of Ring Topology in Cisco](#)[Implementation of FLISM in Cisco](#)[Implementation of RIP Routing in Cisco For Connecting Two Routers](#)[EIGRP Implementation in Cisco](#)[Basic Firewall Configuration in Cisco Packet Tracer](#)[Implementation of VLSM in Cisco](#)[Implementation of Bus Topology in Cisco](#)

In this article, we will know about DHCP server configuration using Cisco Packet Tracer.

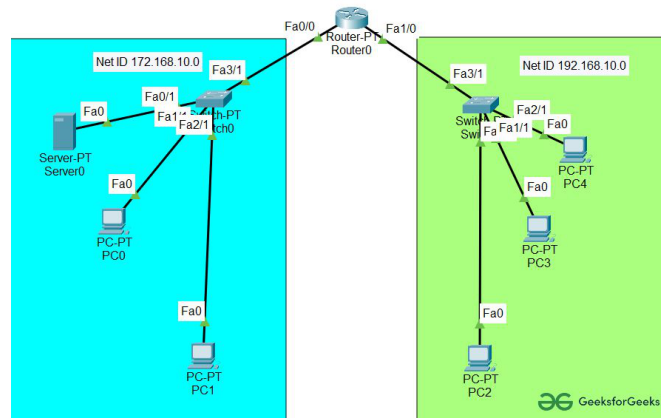
Steps to Configure and Verify DHCP Server in Cisco Packet Tracer:

Step 1: First, open the cisco packet tracer desktop and select the devices given below:

S.NO	Device	Model-Name	Unit
1.	PC	PC	5
2.	Switch	PT-Switch	2
3.	Router	PT-Router	1
4.	Server	Server-PT	1

Now create a network topology as shown below the image.

Use an Automatic connecting cable to connect the devices with others.



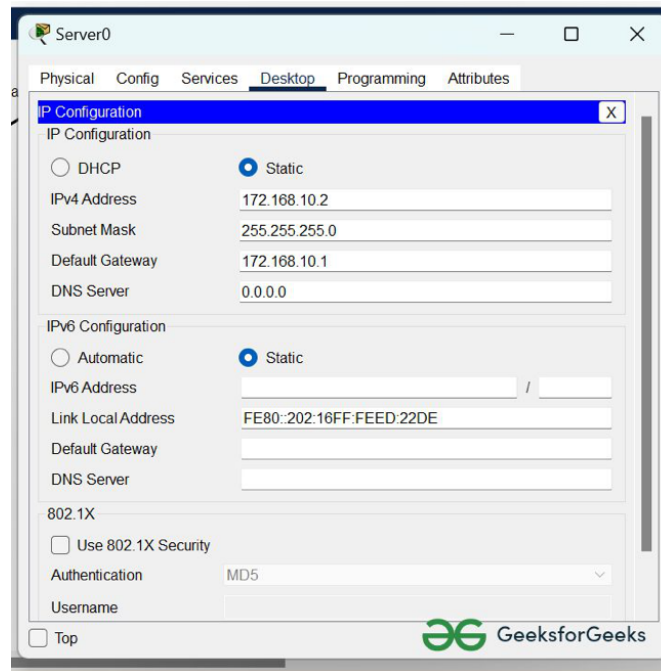
Step 2: Configure the Server with IPv4 address and Subnet Mask according to the Data given above.

To assign an IP address in Server, click on Server-PT.

Then, go to desktop and IP configuration and there you will find IPv4 configuration.

Add IPv4 address, subnet mask, and Default Gateway.

Parameters	Address value
IPv4 Address	172.168.10.2
Subnet Mask	255.255.255.0
Default-Gateway	172.168.10.1



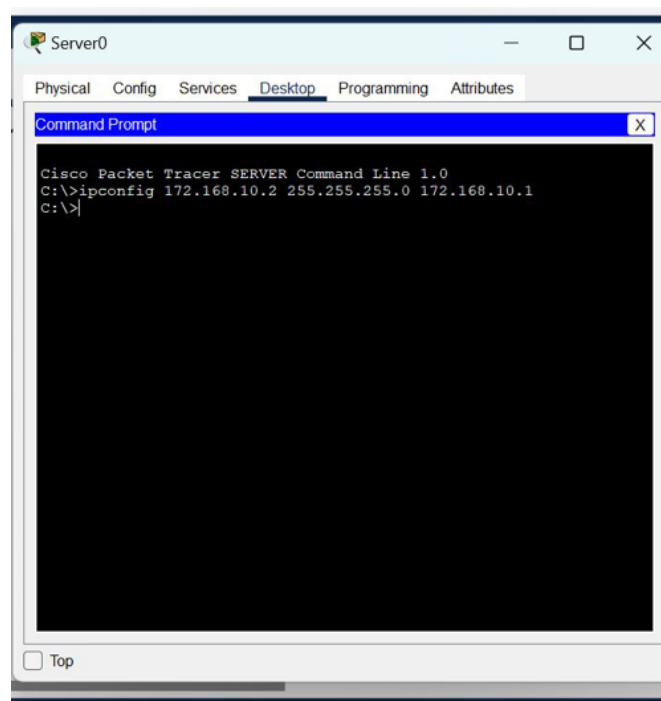
2. Assigning IP address using the ipconfig command.

We can also assign an IP address with the help of a command.

Go to the command prompt of the server

Then, type `ipconfig <IPv4 address><subnet mask><default gateway>`(if needed)

example: `ipconfig 172.168.10.2
255.255.255.0 172.168.10.1`



Step 3: Configuring the DHCP server.

To configure the DHCP server first,

Click on Server then, Go to services.

Click on DHCP and turn on the services and, configure the DHCP server with the help of the data given below.

Delete the default values of Start IP Address and subnet Mask then save the info.

Create two new pools.

POOL1 and POOL2 and fill the data as shown in the images below.

Server0

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DHCP

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: Pool2

Default Gateway: 192.168.10.1

DNS Server: 0.0.0.0

Start IP Addr: 192.168.10.11

Subnet Mask: 255.255.255.0

Maximum Number of Users: 255

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Add Save Remove

Server0

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DHCP

Interface: FastEthernet0 Service: ☒ On ☐ Off

Pool Name: Pool2

Default Gateway: 192.168.10.1

DNS Server: 0.0.0.0

Start IP Addr: 192.168.10.11

Subnet Mask: 255.255.255.0

Maximum Number of Users: 255

TFTP Server: 0.0.0.0

WLC Address: 0.0.0.0

Add Save Remove

Step 4: Configuring Router with IPv4 Address and Subnet Mask.

IP Addressing Table for Router:

S.NO	Device	Interface	IPv4
------	--------	-----------	------

			Address
1.	router0	FastEthernet0/0	172.168.10.1
		FastEthernet0/1	192.168.10.1

To assign an IP address in router0, click on router0.

Then, go to config and then Interfaces, and make sure to turn on the ports.

Then, configure the IP address in FastEthernet according to IP addressing Table.

Fill IPv4 address and subnet mask.

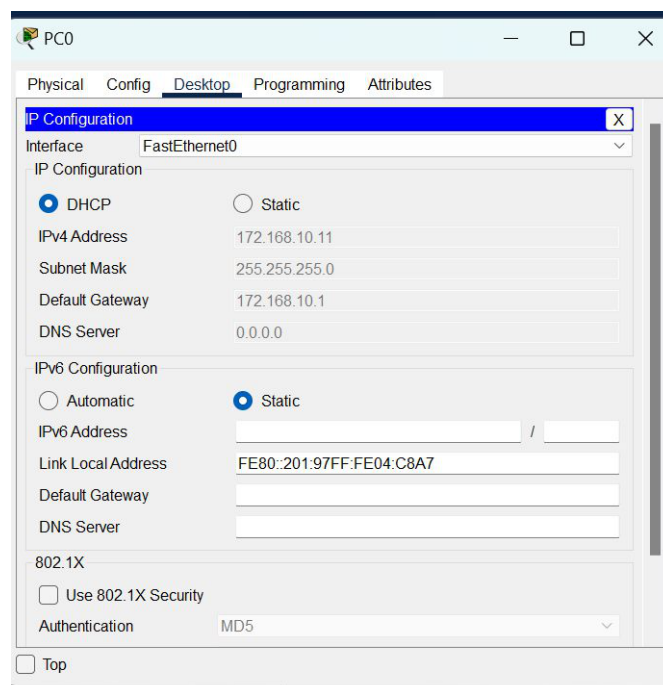
Step 5: Configuring the PCs and changing the IP configuration.

To assign an IP address in PC0, click on PC0.

Then, go to desktop and IP configuration and there you will find IPv4 configuration.

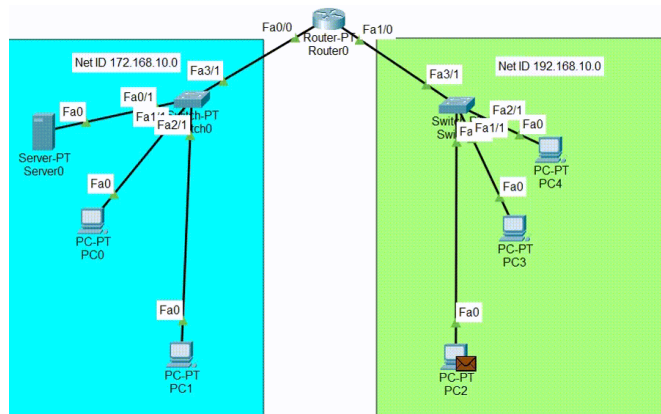
Change its state from static to DHCP.

It will automatically fetch the data and configure itself.



Repeat the same procedure with other PCs to configure them thoroughly.

Output:











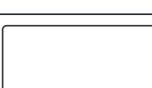
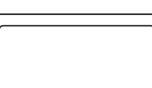
You can also refer to the articles [DHCP server](#) and [Working of Dynamic Host Configuration Protocol](#) for more details.

Whether you're preparing for your first job interview or aiming to upskill in this ever-evolving tech landscape, [GeeksforGeeks Courses](#) are your key to success. We provide top-quality content at affordable prices, all geared towards accelerating your growth in a time-bound manner. Join the millions we've already empowered, and we're here to do the same for you. Don't miss out - [check it out now!](#)

Last Updated : 22 Jun, 2022

2

Similar Reads

 Configuring DHCP and Web Server	 Steps Involves in Cisco Router
 Basic Switch Configurat in Cisco	 Basic Firewall Configurat
 RIP Routing Configurat Using 3	 Static NAT Configurat in Cisco
 Dynamic NAT Configurat in Cisco	 Uses of Configurat Register in
 How To Delete Configurat	 Cisco Interview Experience

[Previous](#)[Next](#)

[Subnetting
Implementation in
Cisco Packet Tracer](#)

[What is IPv6 Stateless
Address
Autoconfiguration ?](#)

Article Contributed By :



shadit13064

shadit13064

Vote for difficulty

Current difficulty : [Medium](#)

[Easy](#)[Normal](#)[Medium](#)[Hard](#)[Expert](#)

Article Tags : [CCNA Networking Fundamentals](#) , [Cisco](#) ,
[CCNA](#)

Practice Tags : [Cisco](#)

[Improve Article](#)[Report Issue](#)

A-143, 9th Floor, Sovereign
Corporate Tower, Sector-136,
Noida, Uttar Pradesh -
201305

feedback@geeksforgeeks.org

Company

[About Us](#)[Legal](#)[Terms &](#)[Conditions](#)[Careers](#)[In Media](#)[Contact Us](#)[Advertise](#)

Explore

[Job-A-Thon](#)[Hiring](#)[Challenge](#)[Hack-A-Thon](#)[GfG Weekly](#)[Contest](#)[Offline](#)[Classes](#)[\(Delhi/NCR\)](#)

Languages

[Python](#)[Java](#)[C++](#)[PHP](#)[GoLang](#)[SQL](#)[R Language](#)[Android](#)

DSA

Concepts

[Data](#)[Structures](#)[Arrays](#)[Strings](#)[Linked List](#)[Algorithms](#)[Searching](#)

DSA

Roadmaps

[DSA for](#)[Beginners](#)[Basic DSA](#)[Coding](#)[Problems](#)[DSA](#)[Roadmap by](#)[Sandeep](#)

Web

Developmen

[HTML](#)[CSS](#)[JavaScript](#)[Bootstrap](#)[ReactJS](#)[AngularJS](#)[NodeJS](#)

with us	DSA in	Tutorial	Sorting	Jain	Express.js
GFG	JAVA/C++		Mathematical	DSA with	Lodash
Corporate	Master		Dynamic	JavaScript	Web Design
Solution	System		Programming	Top 100 DSA	
Placement	Design			Interview	
Training	Master CP			Problems	
Program	GeeksforGeeks			All Cheat	
Apply for	Videos			Sheets	
Mentor					

Computer Science

GATE CS Notes
Operating Systems
Computer Network
Database Management System
Software Engineering
Digital Logic Design
Engineering Maths

Python

Python Programming Examples
Django Tutorial
Python Projects
Python Tkinter
OpenCV
Python Tutorial
Python Interview Question

Data Science & ML

Data Science With Python
Data Science For Beginner
Machine Learning Tutorial
Maths For Machine Learning
Pandas Tutorial
NumPy Tutorial
NLP Tutorial
Deep Learning Tutorial

DevOps

Git
AWS
Docker
Kubernetes
Azure
GCP

Competitive ProgrammingDesign

Top DSA for CP
Top 50 Tree Problems
Top 50 Graph Problems
Top 50 Array Problems
Top 50 String Problems
Top 50 DP Problems
Top 15 Websites for CP
What is System Design
Monolithic and Distributed SD
Scalability in SD
Databases in SD
High Level Design or HLD
Low Level Design or LLD
Crack System Design Round
System Design Interview Questions

Interview Corner	GfG School	Commerce	UPSC	SSC/ BANKING	Write & Earn
Company Wise Preparation for SDE	CBSE Notes for Class 8	Accountancy	Polity Notes	SSC CGL Syllabus	Write an Article
Experienced Interviews	CBSE Notes for Class 9	Business Studies	Geography Notes	SBI PO Syllabus	Improve an Article
Internship Interviews	CBSE Notes for Class 10	Economics	History Notes	SBI Clerk Syllabus	Pick Topics to Write
Competitive Programming	CBSE Notes for Class 11	Human Resource Management (HRM)	Science and Technology Notes	IBPS PO Syllabus	Share your Experiences
Aptitude Preparation	CBSE Notes for Class 12	Management	Economics Notes	IBPS Clerk Syllabus	Internships
Puzzles	English Grammar	Income Tax Finance	Important Topics in Ethics	Aptitude Questions	
		Statistics for Economics	UPSC Previous Year Papers	SSC CGL Practice Papers	

@GeeksforGeeks, Sanchhaya Education Private Limited, All rights reserved

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Got It !