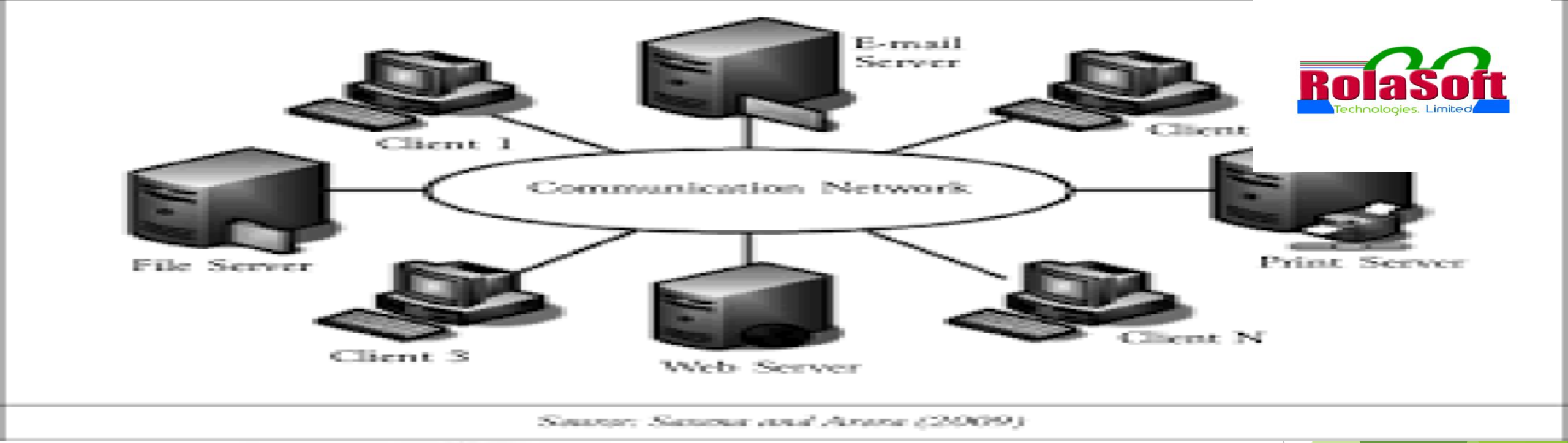

ROLASOFT PROFESSIONAL COMPUTER & IT COURSES VERSION 2.0 LATEST

Computer Network (Top-Up)

Become a job-ready Computer Network in two (2) years!

Benefits of Studying Computer Networking with RolaSoft

✅ **1. Industry-Relevant Curriculum**

Stay ahead with a syllabus designed by industry experts, focused on real-world scenario.

✅ **2. Hands-On Training**

Learn by doing — build real-time projects, develop applications, and gain practical networking experience.

✅ **3. Experienced Instructors**

Gain insights from certified professionals and senior networking engineers with years of teaching and industry experience.

✅ **4. Placement Assistance**

Access job support services including resume building, mock interviews, and direct placement opportunities with partner companies.

✅ **5. Flexible Learning Modes**

Choose between: **Online**, **Offline (at our center)**, or **Hybrid Classes**

Benefits of Studying Computer Networking with RolaSoft

✅ **6. Mini & Major Projects**

Work on individual and group projects to strengthen your portfolio and impress future employers.

✅ **7. Certification Upon Completion**

Earn a **Professional Diploma** from RolaSoft Technologies, recognized by IT recruiters and employers.

✅ **8. Small Batch Size**

Personalized attention and better interaction in small groups for an enhanced learning experience.

✅ **9. Affordable Fees & Installment Plans**

Top-tier training at a reasonable cost, with flexible payment options.

✅ **10. Career-Oriented Skills You'll Gain at RolaSoft Technologies**

RolaSoft ensures you're job-ready with the right tech stack and practical knowledge.

Computer Networking (Top-Up) Course Details

- **Duration**
  Two (2) Years (6 Semesters-4 Months Per Semester) - Full-Time Program

- **Schedule**
  Weekdays / Weekends

- **Learning Modes**
  Online, Offline (at our center), or Hybrid Classes

- **Start Date**
  January, April, July and October — enroll now!

- **Eligibility**
  No prior experience required

Computer Networking (Top-Up) Prerequisites

- ✅ Basic knowledge of mathematics and logical reasoning
- ✅ No prior programming experience is required, but familiarity with computers is helpful

Two-Year Computer Networking Program – Program Details

Program Overview

The **Computer Networking** course at ***Rolasoft Technologies*** is a comprehensive 2-year program aimed at providing students with in-depth knowledge of network architectures, protocols, and technologies. The course covers a broad spectrum of networking topics, from basic principles to advanced concepts like network security, routing, and switching.

Students will learn how to design, implement, manage, and troubleshoot networks using industry-standard technologies and best practices. Hands-on practical sessions are an integral part of the course, allowing students to gain real-world experience in building and managing complex network infrastructures. By the end of the course, students will be fully prepared for roles in network administration, network engineering, and cybersecurity.

Who Should Take This Computer Networking Program(Top-Up)?

Who Should Take This Computer Networking Program?

✅ **Students** seeking a career in network administration or network engineering

✅ **IT professionals** looking to specialize in computer networking

✅ **Network administrators** and **network engineers** interested in enhancing their skills

✅ **Cybersecurity enthusiasts** looking to understand network security principles

✅ **Anyone interested** in pursuing certifications like **CCNA**, **CCNP**, and **CompTIA Network+**

Year 1 Curriculum : Computer Networking

Semester 1: Introduction to Networking and Basic Concepts

✅ **Introduction to Networking**
(What is a computer network?, Types of networks: LAN, WAN, MAN, and WLAN, Network topologies: Star, Ring, Bus, Mesh, Basic networking devices: Routers, switches, hubs, bridges, Overview of the OSI model and TCP/IP model, Introduction to IP addressing and subnetting, Basics of IPv4 and IPv6 addressing)

✅ **Networking Protocols**
(What are network protocols?,TCP/IP suite and OSI layers, Common protocols: IP, TCP, UDP, HTTP, FTP, DNS, DHCP, ICMP, Introduction to DNS and DHCP, Network addressing concepts and subnetting, Understanding ARP (Address Resolution Protocol) and NAT (Network Address Translation))

✅ **Hands-On:** Setting up a basic LAN using switches, routers, and a small number of computers, and testing connectivity with ping and traceroute

✅ **Qualification Awarded : Certificate in Computer Network (Level 1)**

Year 1 Curriculum : Computer Networking

Semester 2: Networking Devices and Configuration

✅ **Routing and Switching Fundamentals**
(Introduction to routing and switching, Routing algorithms: RIP, OSPF, BGP, Basic concepts of VLANs (Virtual LANs) and subnets, Introduction to Cisco and other network devices, Router and switch configuration basics (CLI, IOS), Network Address Translation (NAT) and Port Address Translation (PAT), Basic router security practices)

✅ **Introduction to Wireless Networking**
(Types of wireless networks: Wi-Fi, Bluetooth, Zigbee, Understanding wireless standards (802.11, 802.15), Configuring a wireless router and setting up a wireless network, Wireless security protocols: WEP, WPA, WPA2, WPA3, Configuring and troubleshooting wireless networks)

✅ **Hands-On:** Configure a basic router and switch setup, assign IP addresses, create VLANs, and establish a wireless network

✅ **Qualification Awarded : Certificate in Computer Network (Level 2)**

Year 1 Curriculum : Computer Networking

Semester 3: Advanced Routing, Security, and Network Services

✅ **Advanced Routing Techniques**

(Routing protocols in detail: RIP, OSPF, EIGRP, BGP, Route redistribution and policy-based routing, Configuring advanced routing features on routers and switches, Redundant routing using HSRP (Hot Standby Router Protocol) and VRRP (Virtual Router Redundancy Protocol))

✅ **Network Security Basics**

(Introduction to network security principles, Security threats: DoS (Denial of Service), DDoS (Distributed Denial of Service), and MitM (Man-in-the-Middle) attacks, Firewalls, VPNs (Virtual Private Networks), and IPSec, Authentication and encryption protocols: RADIUS, TACACS+, Securing routers, switches, and network devices, Introduction to intrusion detection systems (IDS) and intrusion prevention systems (IPS))

Year 1 Curriculum : Computer Networking

✅ **Network Services and Management**
(DNS, DHCP, and NTP (Network Time Protocol), Configuring and managing DNS and DHCP servers, SNMP (Simple Network Management Protocol) for network monitoring, Network performance monitoring and troubleshooting using tools like Wireshark, PRTG, and SolarWinds)

✅ **Hands-On:** Configure advanced routing protocols, setup network security using firewalls and VPNs, and monitor network traffic with Wireshark

✅ **Qualification Awarded : Ordinary Diploma in Computer Network**

Year 2 Curriculum : Computer Networking

Semester 4: Network Design, Virtualization, and Cloud Computing

✅ **Network Design and Planning**

(Network design methodologies and best practices, LAN and WAN design considerations, Network capacity planning and scalability, Designing a secure network architecture for large organizations, Using network simulation software like Packet Tracer or GNS3 for network design)

✅ **Network Virtualization**

(Introduction to network virtualization concepts, Software-Defined Networking (SDN), Virtual LANs (VLANs) and VXLANs, Network Function Virtualization (NFV), Implementing virtual networks using VMware, Hyper-V, or KVM)

Year 2 Curriculum : Computer Networking

✅ **Cloud Networking**

(Introduction to cloud computing and networking, Cloud services: IaaS, PaaS, and SaaS, Cloud service providers: AWS, Microsoft Azure, Google Cloud, Virtual private cloud (VPC), security groups, and cloud routing, Designing and implementing cloud-based networks)

✅ **Hands-On:** Design and implement a secure cloud network architecture using AWS or Azure

✅ **Qualification Awarded : Advanced Diploma in Computer Network**

Year 2 Curriculum : Computer Networking

Semester 5: Troubleshooting, Network Automation, and Career Preparation

✅ **Network Troubleshooting and Optimization**

(Troubleshooting network issues using tools like ping, traceroute, NetFlow, Wireshark, Analyzing routing problems and resolving network performance issues, Quality of Service (QoS) concepts for optimizing network traffic, Troubleshooting DNS, DHCP, and IP addressing issues, Layer 1, Layer 2, and Layer 3 network troubleshooting)

✅ **Network Automation and Scripting**

(Introduction to network automation and scripting, Automating network tasks using Python and Ansible, Implementing and managing configuration management tools, Introduction to Cisco DNA Center and SD-WAN)

Year 2 Curriculum : Computer Networking

✅ **Career Preparation**

(Building a professional portfolio with network configurations, designs, and troubleshooting projects, Interview preparation and resume building for network engineering roles, Overview of certifications: CCNA, CCNP, CompTIA Network+, CompTIA Security+, Networking career paths: Network engineer, network administrator, network architect, cloud network engineer)

✅ **Hands-On:** Write Python scripts for network automation and configure automation tools like Ansible for network tasks

✅ **Qualification Awarded : Professional Diploma in Computer Network**

Year 2 Curriculum : Computer Networking

Semester 6: Capstone Project and Final Exam Preparation

✅ **Capstone Project**

(Students will work on a comprehensive networking project that involves designing, implementing, and securing a network infrastructure, The project will incorporate all the concepts learned, including network design, routing, security, and cloud services)

✅ **Exam Preparation**

(Review and practice sample questions from the CCNA and CompTIA Network+ exams, Final project presentation and feedback)

✅ **Career Placement Assistance**

(Resume writing, interview preparation, and job search strategies, Job placement assistance with leading tech firms and organizations)

✅ **Qualification Awarded : Higher Diploma in Computer Network**

Tools & Technologies Used

Tools & Technologies Used for Computer Networking Course are:

- ✅ **Networking Tools:** Wireshark, Nmap, Cisco Packet Tracer, GNS3
- ✅ **Operating Systems:** Windows Server, Linux (Ubuntu/CentOS), VMware, Hyper-V
- ✅ **Cloud Platforms:** AWS, Microsoft Azure, Google Cloud
- ✅ **Network Devices:** Routers, Switches, Firewalls, Wireless Access Points
- ✅ **Network Security Tools:** Metasploit, Nessus, Kali Linux, Snort
- ✅ **Automation Tools:** Ansible, Python, Cisco DNA Center, SD-WAN

Final Capstone Project (End of Year 2)

Students will complete an **industry-level project** in Computer Networking:

✅ The project will incorporate all the concepts learned, including network design, routing, security, and cloud services.

Computer Networking Learning Outcomes

By the end of this course, students will be able to:

- ✅ Understand and apply networking protocols, models, and architectures
- ✅ Design, implement, and troubleshoot complex computer networks
- ✅ Configure and manage routing and switching technologies
- ✅ Implement network security measures to protect against various threats
- ✅ Work with cloud-based networking services and automation tools
- ✅ Gain industry-recognized certifications (CCNA, CompTIA Network+, etc.)
- ✅ Pursue careers as **Network Engineers**, **Network Administrators**, **Network Architects**, **Cloud Network Engineers**, and more

Certifications Obtain

Upon successful completion, students will receive a **Professional Diploma in Computer Networking** from Rolasoft Technologies.

Higher Diploma in Computer Networking

The program also prepares students for industry certifications such as:

- ✅ CompTIA Network+
- ✅ Microsoft Certified: Azure Fundamentals (AZ-900)
- ✅ Cisco Certified Network Associate (CCNA)
- ✅ CompTIA Security+
- ✅ Juniper Networks Certified Associate – Junos (JNCIA-Junos)
- ✅ Certified Information Systems Security Professional

Java Programming Career Opportunities

Graduates can pursue careers as:

- ✅ Network Engineer / Network Administrator
- ✅ System Administrator / IT Support Specialist
- ✅ Cloud Network Engineer / Cloud Security Analyst
- ✅ Cybersecurity Analyst / Ethical Hacker
- ✅ Wireless Network Engineer / IoT Network Specialist

Rolasoft Technologies Services

Rolasoft Technologies – Services Offered

✅ **SOFTWARE DEVELOPMENT COMPANY**
(MOBILE APPLICATION, WEB APPLICATION, DESKTOP APPLICATION, CUSTOMIZED APPLICATION, E-COMMERCE WEBSITE)

✅ **PROFESSIONAL COMPUTER AND IT EDUCATION**
(TOP-UP PROGRAMS, DIPLOMA PROGRAMS, CERTIFICATE PROGRAMS, TECH @ SCHOOL, CORPORATE PROGRAMS, SIWES PROGRAMS, CUSTOMIZED PROGRAMS)

✅ **DIGITAL ADVERTISING AND BUSINESS BRANDING**
(SOCIAL MEDIA MARKETING, EMAIL MARKETING, CONTENT MARKETING, WEBSITE SEO, BRANDED CLOTHING, STICKERS AND TAG, CUSTOM BRANDING, AND MANY MORE)

✅ **INTERNATIONAL UNIVERSITY ADMISSION PROCESSING**
(AMERICA, UK, CANADA, EUROPE, AFRICA, AND MANY MORE)

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Enroll Today & Start Your Computer Networking Journey!

Code your future with Computer Networking.