

A

Seminar Report On

CLIENT SERVER MANAGEMENT SYSTEM

Under the company "TECHOCTANET SERVICES PVT LTD"
submitted in partial fulfilment of the requirement for the award of

**BACHELOR OF TECHNOLOGY
IN
COMPUTER SCIENCE & ENGINEERING**

Submitted by:

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Submitted to:

Mr. Vaibhav Kant Singh

Assistant Professor

(Department of Computer Science & Engineering)

Guru Ghasidas Vishwavidyalaya.



**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
SCHOOL OF STUDIES IN ENGINEERING & TECHNOLOGY
GURU GHASIDAS VISHWAVIDYALAYA**

(A Central University)

BILASPUR, CHHATTISGARH

2024-2025

INTERNSHIP COMPLETION CERTIFICATE



TECHOCTANET SERVICES PVT LTD
IT SERVICES & CONSULTING

Date: - 10/07/2024

To whom it may concern,

This is to certify that Ayush Singh, B.Tech. in Computer Science & Engineering, student of Guru Ghasidas University, has successfully completed his summer internship with Techoctanet Services during the period 16/05/2024-30/06/2024.

During the period, he had worked with various teams where majorly he was working on handling and designing systems based on client necessities.

During the course of internship, Ayush Singh has shown great amount of responsibility, sincerity and a genuine willingness to learn and zeal to take on new assignments & challenges. In particular, his coordination skills and communication skills are par excellence and his attention to details is impressive.

We extend our best wishes to Ayush for a prosperous and rewarding future.

Sincerely,

Vaishnav Anand
Director of Operations
Techoctanet Services Pvt Ltd.



ABSTRACT

In this project, we developed a Virtual Private Network (VPN) tunnelling system to facilitate secure and private communication between clients and servers over public networks. The VPN tunnel encrypts data transmitted between the client and server, ensuring confidentiality and integrity even when the data traverses untrusted networks. This approach is critical for protecting sensitive information from potential eavesdroppers and attackers.

The project involves the implementation of secure communication protocols, including IPsec and SSL/TLS, to establish encrypted tunnels. These protocols provide robust encryption and authentication mechanisms, ensuring that only authorized users can access the VPN. Additionally, the project includes the configuration of client-server communication models where the client connects to the server via the VPN tunnel, enabling secure data exchange and remote access to resources.

Various VPN tunnelling techniques were also implemented and tested, such as split tunnelling and full tunnelling, to balance security and performance.

In summary, this project highlights the significance of VPN tunnelling in enhancing the security of client-server communications, especially in environments where data privacy is paramount. By leveraging advanced encryption protocols and secure tunnelling techniques, the project ensures that data remains protected from unauthorized access and tampering. The implementation of various tunnelling methods also demonstrates the flexibility of VPNs in balancing security needs with network performance, making it a versatile solution for a wide range of applications in today's interconnected world.