# Computer Networking Project - Packet Tracer

## Project Overview

Welcome to the "Computer Networking Project" repository! This project was developed using Packet Tracer version 8.2.1, showcasing a comprehensive network setup. The architecture comprises 8 routers, 8 switches, 6 PCs, and various servers, including DHCP, FTP, TFTP, Email, and SYSLOG. The network is secured by a Firewall ASA 5506, managed through a Wireless LAN Controller, and features a printer, tunnel connections, and VTP connections.

## Key Components

- \*\*Router Configuration\*\*: Eight routers have been strategically configured to ensure seamless communication within the network.

- \*\*Switch Network\*\*: With eight switches, the project emphasizes efficient network switching and management.

- \*\*PC Integration\*\*: Six PCs have been integrated into the network, each playing a unique role in the overall system.

- \*\*Server Variety\*\*: Utilizing DHCP, FTP, TFTP, Email server, and SYSLOG, this project simulates real-world server scenarios.

- \*\*Firewall Protection\*\*: The inclusion of ASA 5506 ensures a robust security layer for the entire network.

- \*\*Wireless Connectivity\*\*: Managed through a Wireless LAN Controller, the network embraces modern wireless technologies.

- \*\*Peripheral Devices\*\*: A printer adds a practical touch to the network setup.

- \*\*Specialized Connections\*\*: The project includes tunnel connections to link different networks, VTP connections, and basic configurations to enhance network functionality.

- \*\*Dynamic Host Configuration Protocol (DHCP)\*\*: Enabled on routers to automate IP address assignment.

- \*\*VLAN InterRouting\*\*: Implementation of VLANs and inter-routing enhances network segmentation and performance.

- \*\*Visualized Network Structure\*\*: The project provides a visual representation of the network setup, aiding in understanding and analysis.

## Getting Started

To explore and simulate this network on your own, follow these steps:

1. Download and install Packet Tracer version 8.2.1 from the official Cisco Networking Academy website.

2. Clone or download this repository to your local machine.

3. Open the project file in Packet Tracer.

4. Explore the network components, configurations, and connections.

## Contributions

Contributions and improvements to this project are welcome! Feel free to fork the repository, make changes, and submit pull requests.

## Acknowledgments

A special thanks to Cisco Packet Tracer for providing a robust platform for network simulation and learning.

Enjoy exploring the intricacies of this Computer Networking Project! Happy coding!