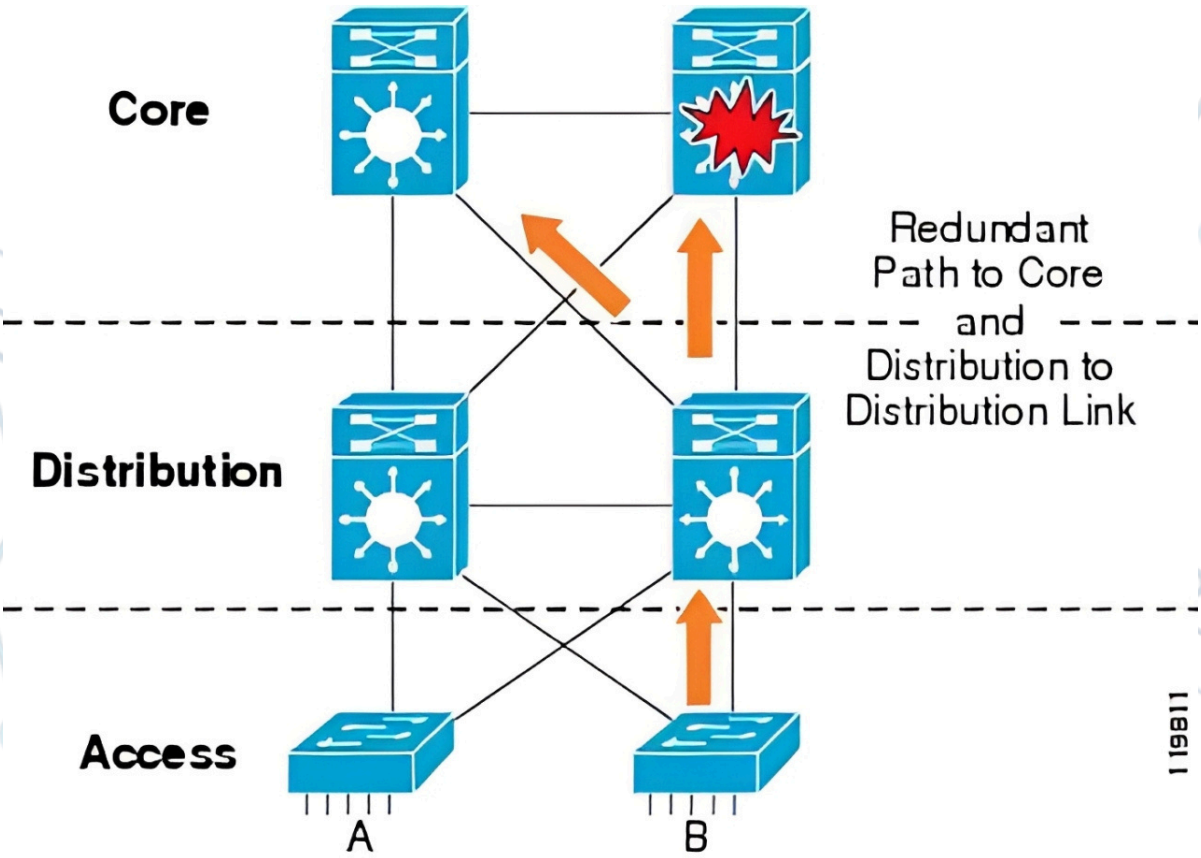
DESIGN BY FATHIN NAUFAL
NETWORK ENGINEER

SWITCHING CISCO



CISCO PACKET TRACER

INTRODUCTION

What Is Cisco Switch

- **Core Switch :** is the primary backbone of a large network. This device serves as a very high-speed traffic aggregation center that connects various network segments or distribution switches. Its main focus is on maximum reliability and speed, so the core switch must be able to forward data packets as quickly as possible without performing complex processing such as intensive packet filtering or policy enforcement. A failure at this layer would be catastrophic for the entire network; therefore, core switches typically have redundant components and are designed for high availability.
- **Distribution Switch :** acts as an intelligent bridge between the access layer (users) and the core layer (backbone). Its function is to gather traffic from all access switches and apply network policies before forwarding it to the core. This is where processes such as inter-VLAN routing, packet filtering using Access Control Lists (ACLs), and traffic prioritization (Quality of Service/QoS) occur. The distribution switch effectively separates local traffic from traffic that needs to cross the backbone, thereby increasing network efficiency and security.
- **Access Switch :** is the layer closest to the end-user. This device is responsible for connecting devices such as computers, laptops, printers, and IP phones to the network. Its primary function is to provide network connectivity to individual ports and control network access at a basic level. It is at this layer that features like port security, segmentation through VLANs, and simple loop prevention are implemented to manage and secure connections.

INSTALL CISCO PACKET TRACER

How To Install Cisco Packet Tracer

- **Please access the following link:** https://www.netacad.com/resources/lab-downloads?courseLang=en-US. If the link is inaccessible, please download it via Nesaba Media using this link instead: https://www.nesabamedia.com/download-cisco-packet-tracer/

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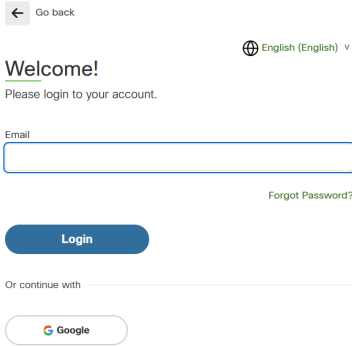
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