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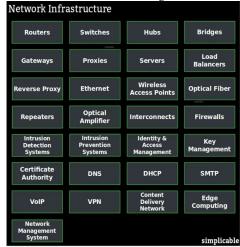
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What is Network Infrastructure?

John Spacey, March 28, 2018



Network infrastructure is a category of <u>information technology</u> that is used to provide network services that allow devices to connect and communicate. This includes foundational <u>networking</u> hardware, software, services and facilities. The following are common examples of network infrastructure.



Routers

Routers connect devices and networks together by forwarding traffic. This is how traffic gets from one place to another on a <u>network</u> such as the <u>internet</u>.

Switches

Switches connect devices to a network by forwarding traffic. For example, the computers in an office might be connected to switches as a means of creating a <u>local area network</u>.

Hubs

A simple type of switch that forwards all traffic to every connected device.

Bridges

Network bridges create a single network from multiple networks.

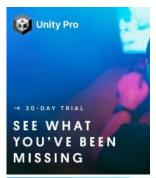
Gateways

Devices that provide an interface between different types of networks. Essentially translates between different types of signal and/or protocol.

Proxies

Devices that make requests on behalf of clients. Often used to monitor, filter and log traffic on a corporate network

Servers













Load Balancers

web pages to client devices.

Devices that distribute work to <u>servers</u> to allow services to <u>horizontally scale</u>.

Reverse Proxy

A service that appears to <u>clients</u> to be a <u>server</u> that is really forwarding requests to servers. A reverse proxy may perform services such as <u>load balancing</u>, <u>encryption</u> and security.

A server is a computer that provides a service to other computers. For example, a web server that provides

Ethernet

A family of standards for networking that include various cable technologies and compatible computing devices, switches, hubs and routers.

Wireless Access Points

Hardware that allows wireless devices to connect to a wired network. Typically provides a wifi service.

Optical Fiber

<u>High capacity cables</u> that are used to create large networks including <u>internet backbones</u>, global area networks, <u>wide area networks</u>, metropolitan area networks and <u>campus area networks</u>. It is also common for network endpoints to be connected with <u>optical fiber</u>.

Repeaters

A device that receives a signal and retransmits it. Often required to transmit data great distances.

Optical Amplifier

A device that is similar to a repeater for <u>fiber optics</u>. Increases the strength of an optical signal directly without converting to an electrical signal.

Interconnects

<u>Facilities</u> where <u>networks</u> connect to each other to exchange traffic.

Firewalls

A firewall controls network traffic based on a set of rules. A basic tool for network security.

Intrusion Detection Systems

Services that monitor network traffic for malicious activity or policy violations.

Intrusion Prevention Systems

Services that monitor network traffic to detect and prevent vulnerability exploits.

Identity & Access Management

Platforms for managing authorization and authentication.

Key Management

Tools for managing encryption keys.

Certificate Authority

Services that publish certificates that describe organizations and their <u>public encryption keys</u>. Basic infrastructure for encryption on the internet such as SSL and TLS.

DNS

The domain name system, or DNS, is a global distributed system for translating domain names to IP addresses.

DHCP

Dynamic host configuration protocol, or DHCP, is a service that automatically assigns IP addresses to devices.



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SMTP

Simple mail transfer protocol, or SMTP, is a type of service that delivers email.

VoIP

Technologies for voice communications over internet protocol. For example, software that allows you to make long distance phone calls using an internet connection.

VPN

Virtual private network, or VPN, are services for securely connecting to a private network over an untrusted network such as the internet. For example, VPN software that allows an employee to connect to an office local area network from home.

Content Delivery Network

Services that allow publishers to serve content such as images and videos from a data center that is close to each user to reduce latency.

Edge Computing

Services that allow you to compute in different geographical locations to achieve scale and to compute more efficiently by processing data geographically close to clients and/or data sources.

Network Management System

Tools for operating, managing and deploying network devices.

etwork Infrast

Type Networking

A category of information technology that is used to provide network services that allow Definition

devices to connect and communicate.

Networking w

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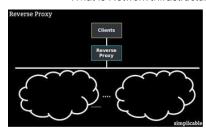
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