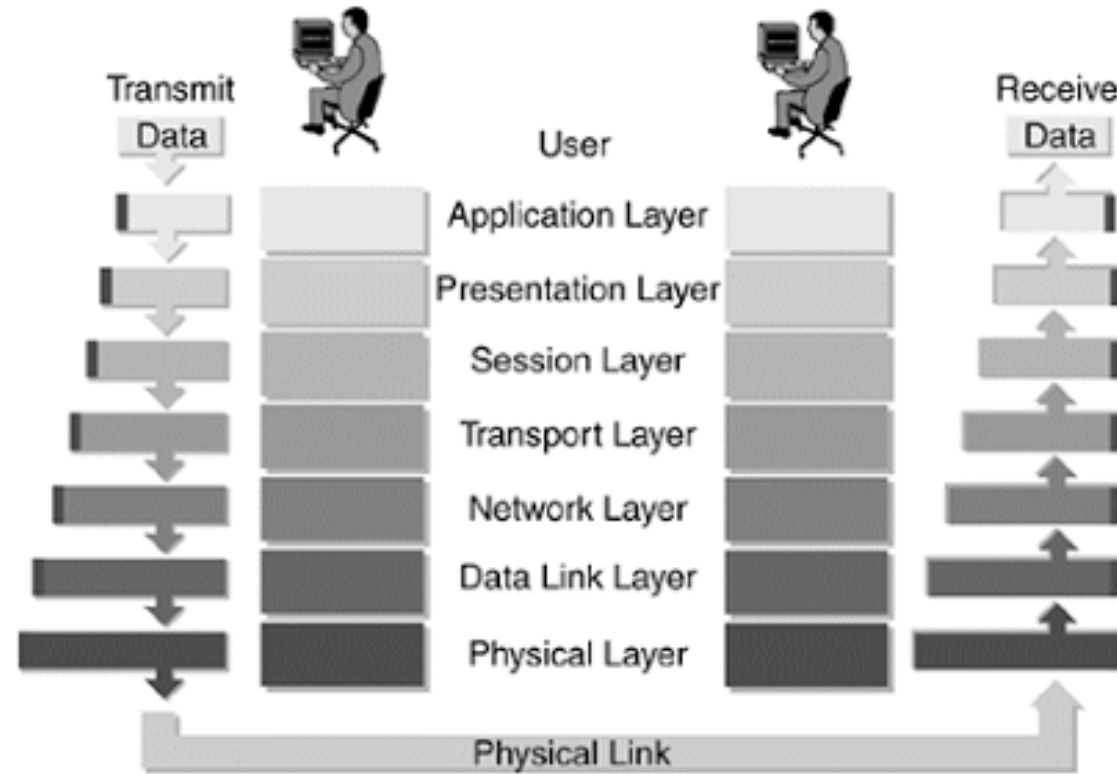


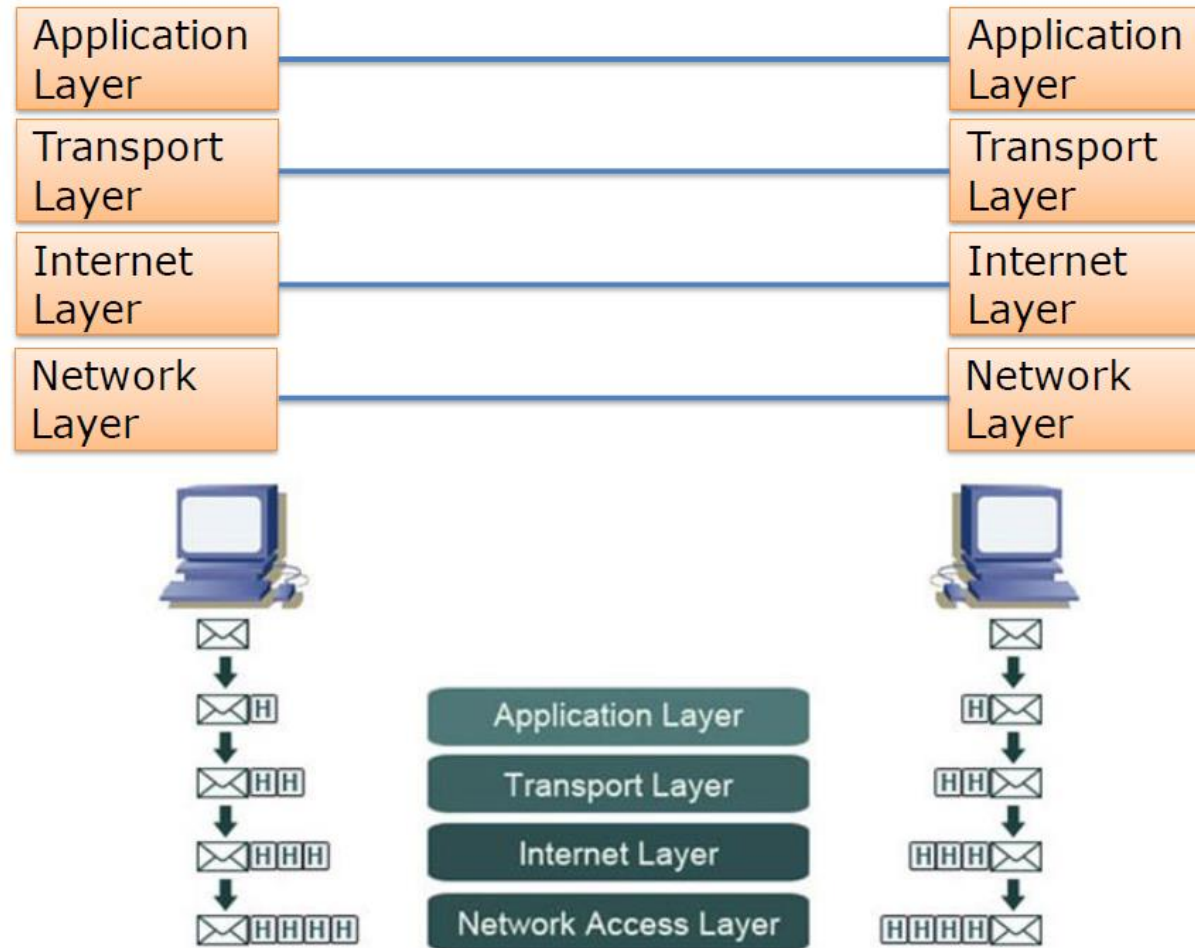
# NETWORK

INTERNET / HTTP / SECURITY / HTTPS / SERVER

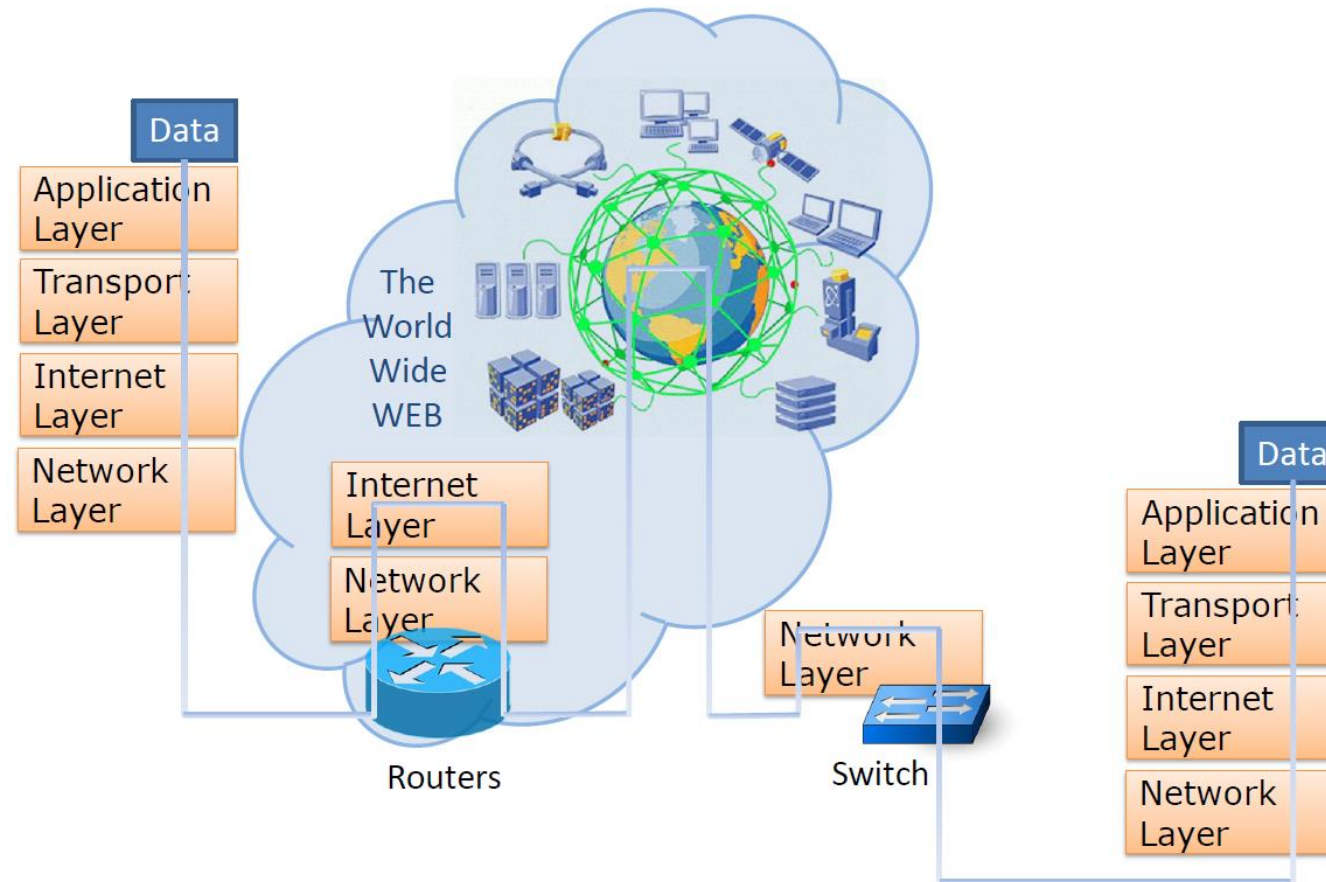
# OSI Model



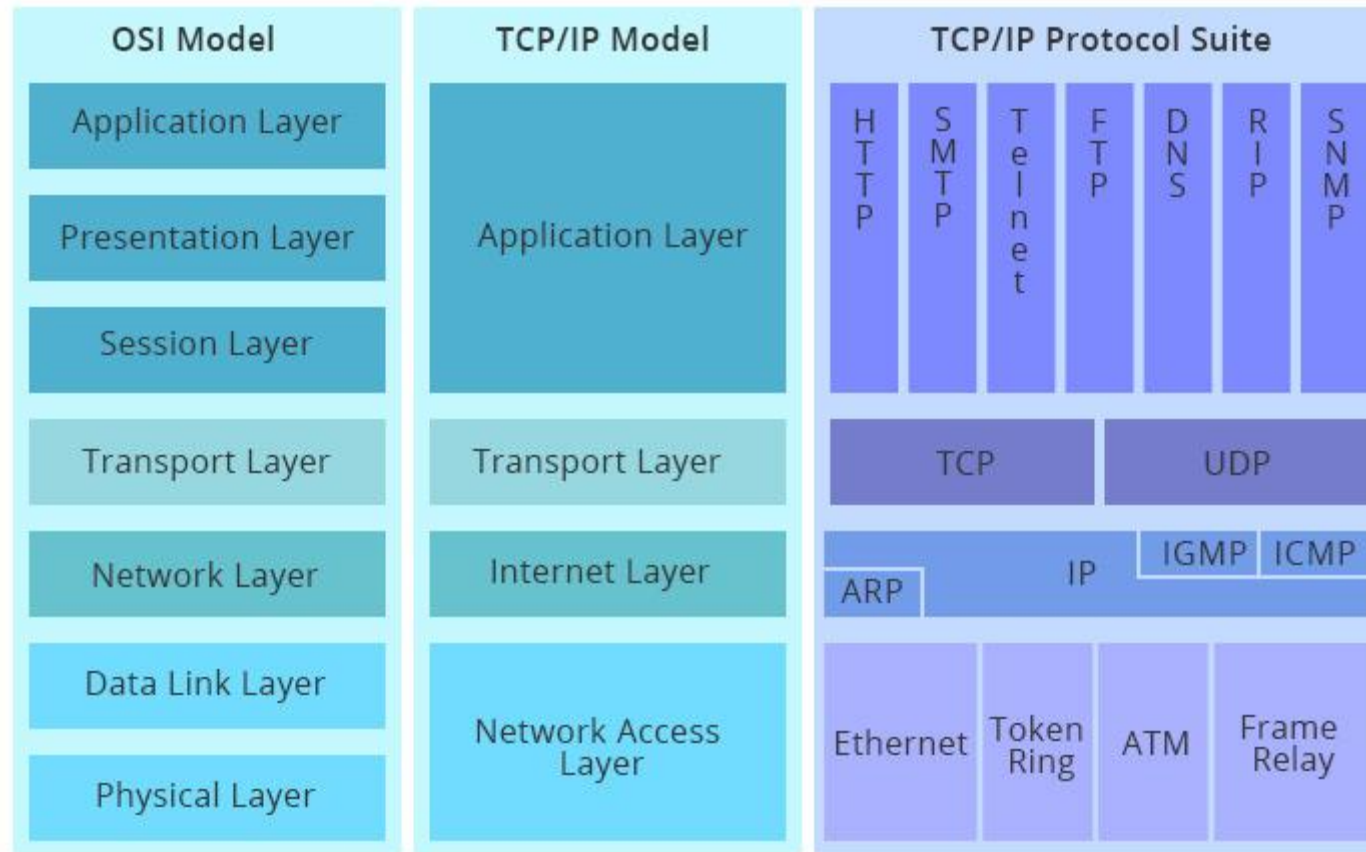
# TCP/IP Model



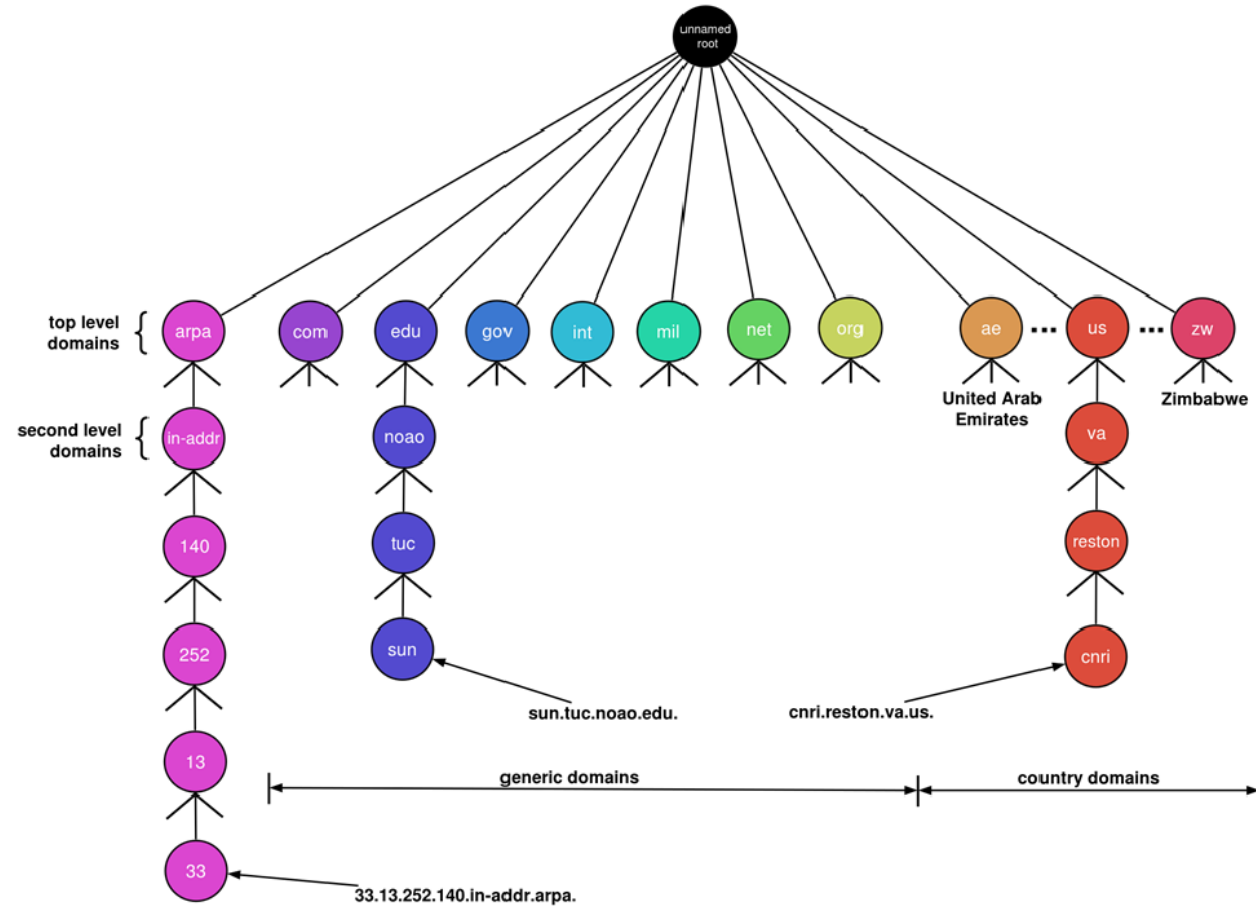
# TCP/IP Model



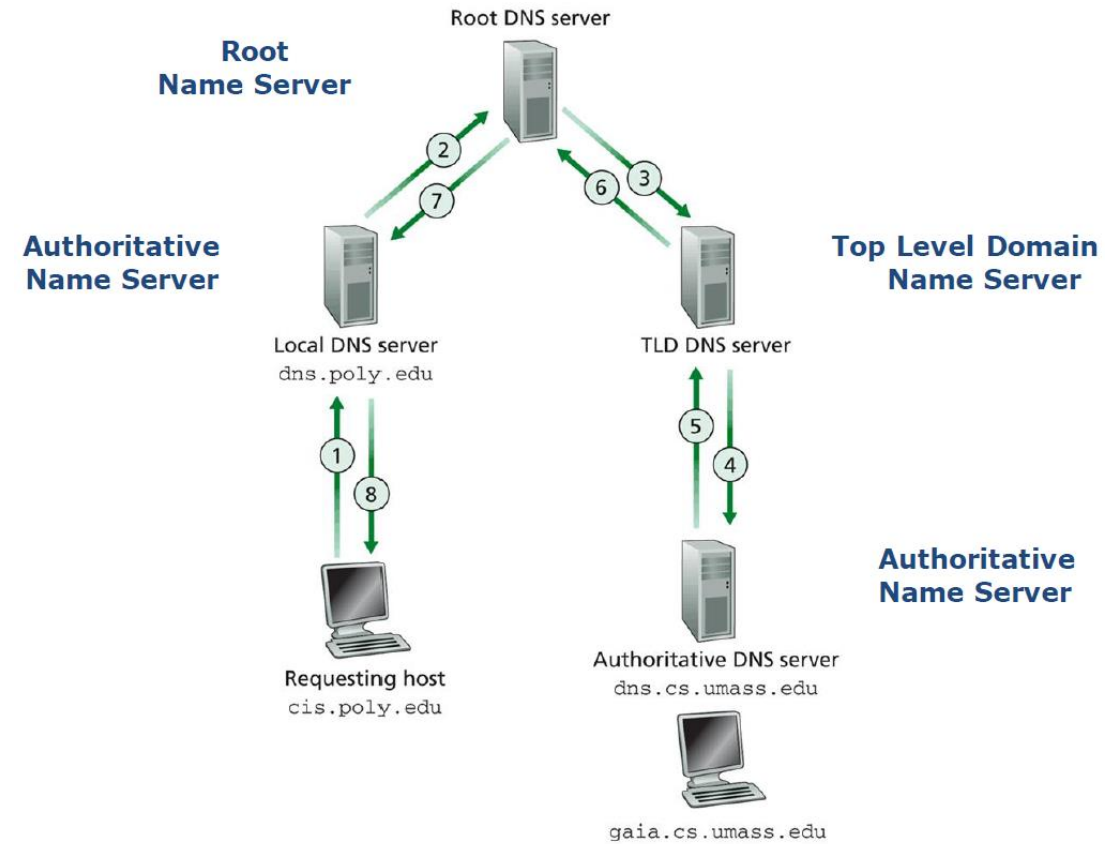
# OSI <-> TCP/IP



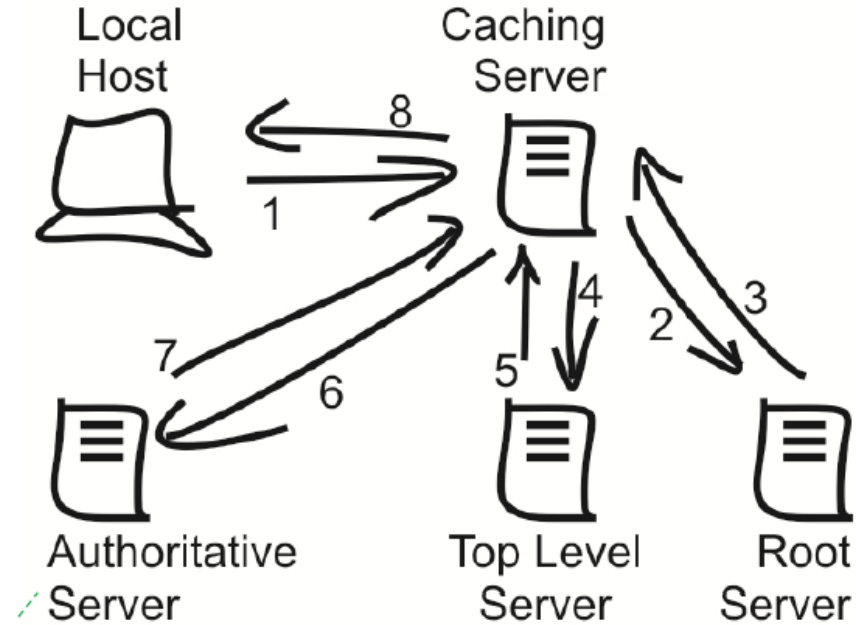
# DNS



# DNS



# DNS



- 1: Request caching server for domain name
- 2: Request not found in cache, request root server for top level server
- 3: Return top level server
- 4: Request top level server for authoritative server
- 5: Return authoritative server
- 6: Request authoritative server for IP address
- 7: Return and cache IP address
- 8: Return IP address



# INTERNET

## Commands

Ipconfig / Ifconfig

Ping

Tracert / Traceroute

Pathping

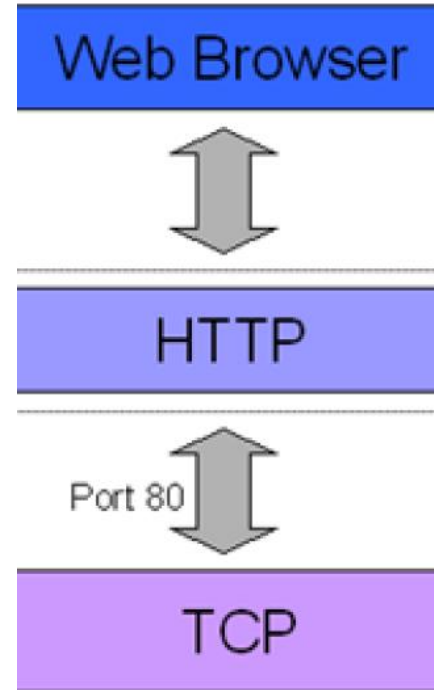
Netstat

Nslookup

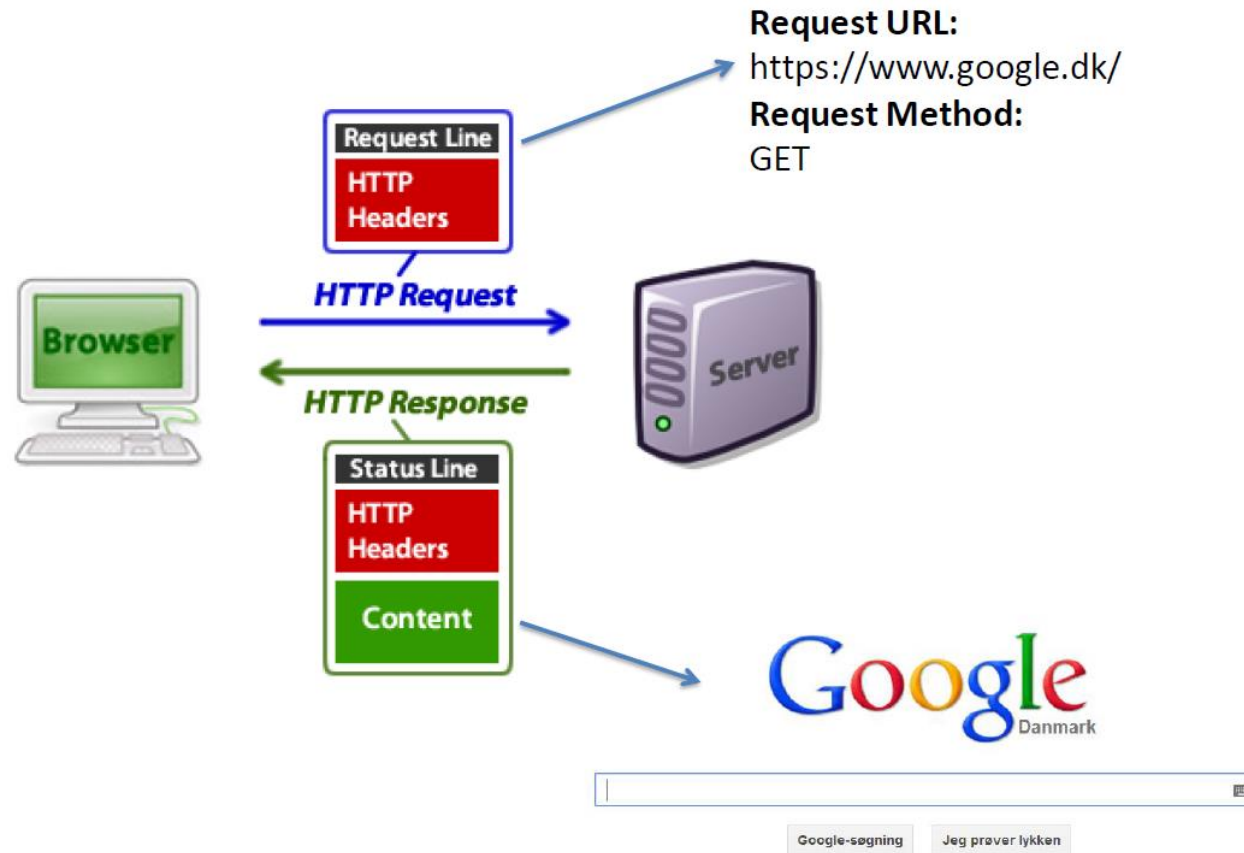
Whois.com

Whatismyip.com

# HTTP

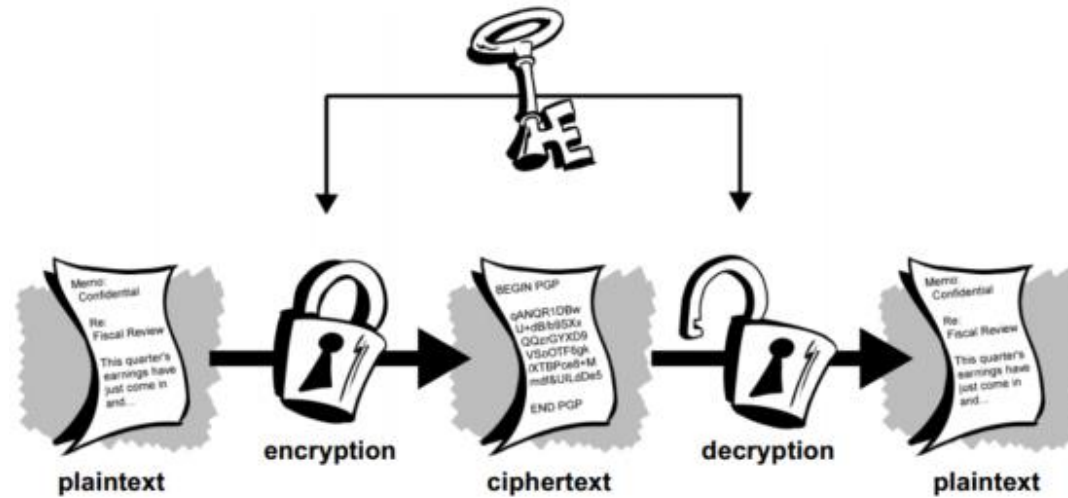


# HTTP



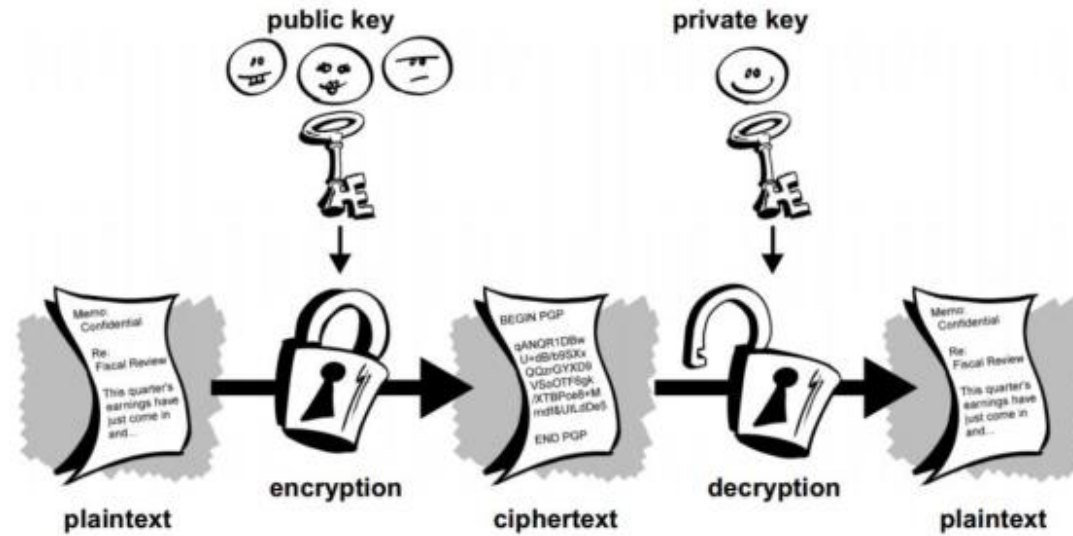
# SECURITY

## Symmetric key cryptography



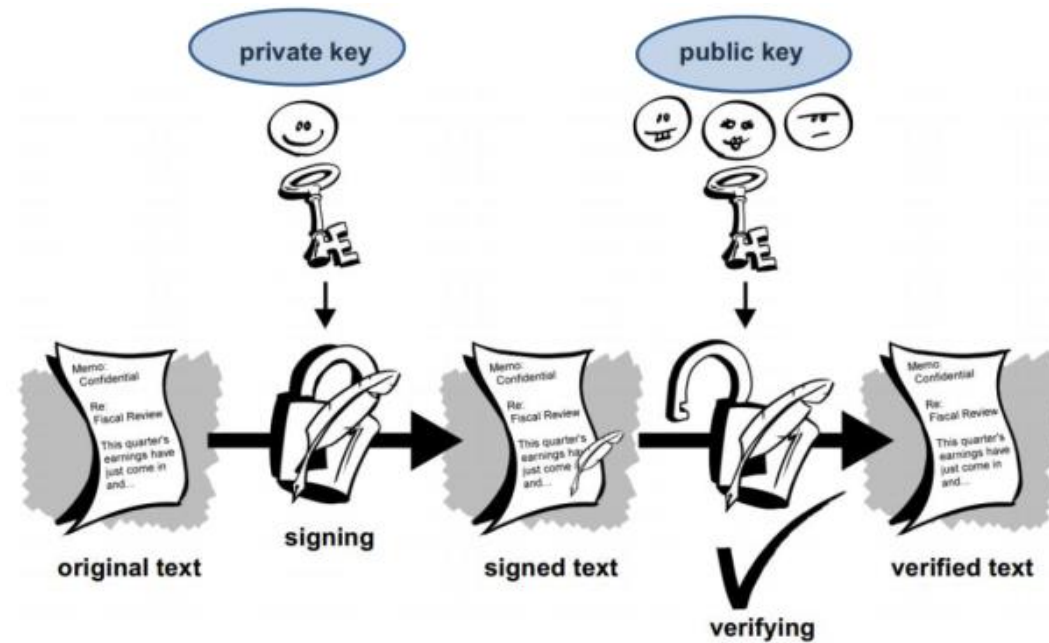
# SECURITY

## Asymmetric key cryptography



# SECURITY

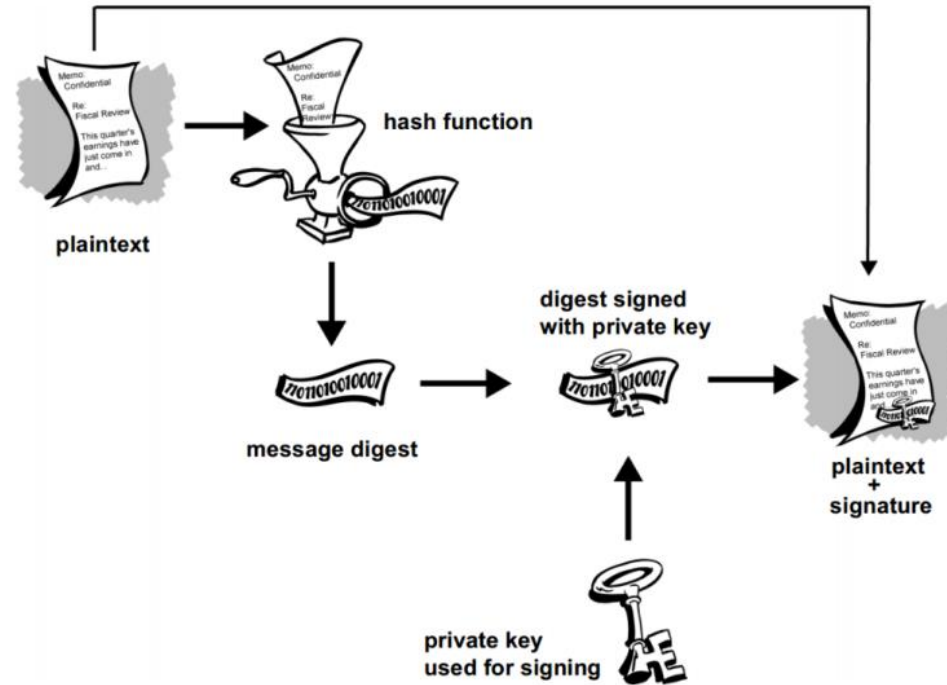
## Digital signature



Signing whole document

# SECURITY

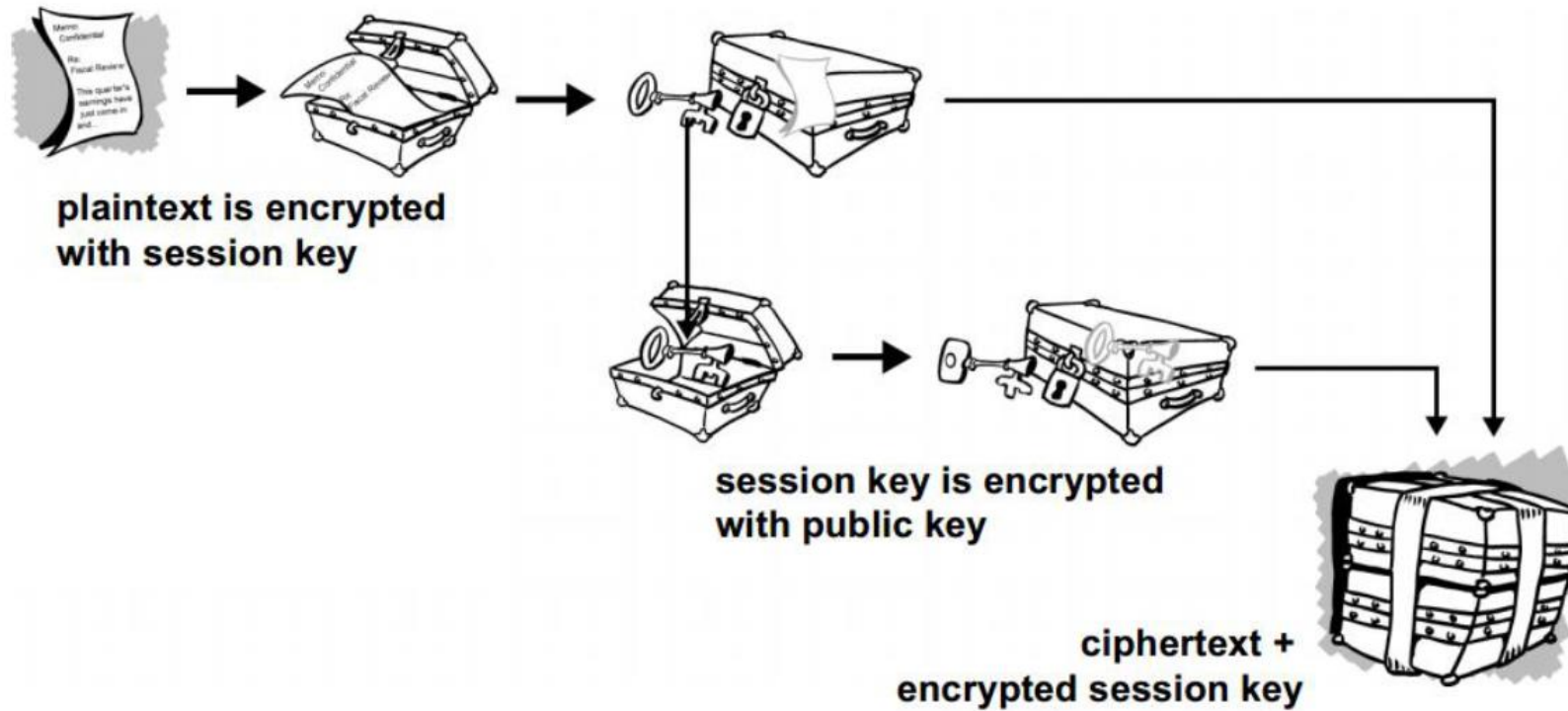
## Digital signature



## Signing a digest

# SECURITY

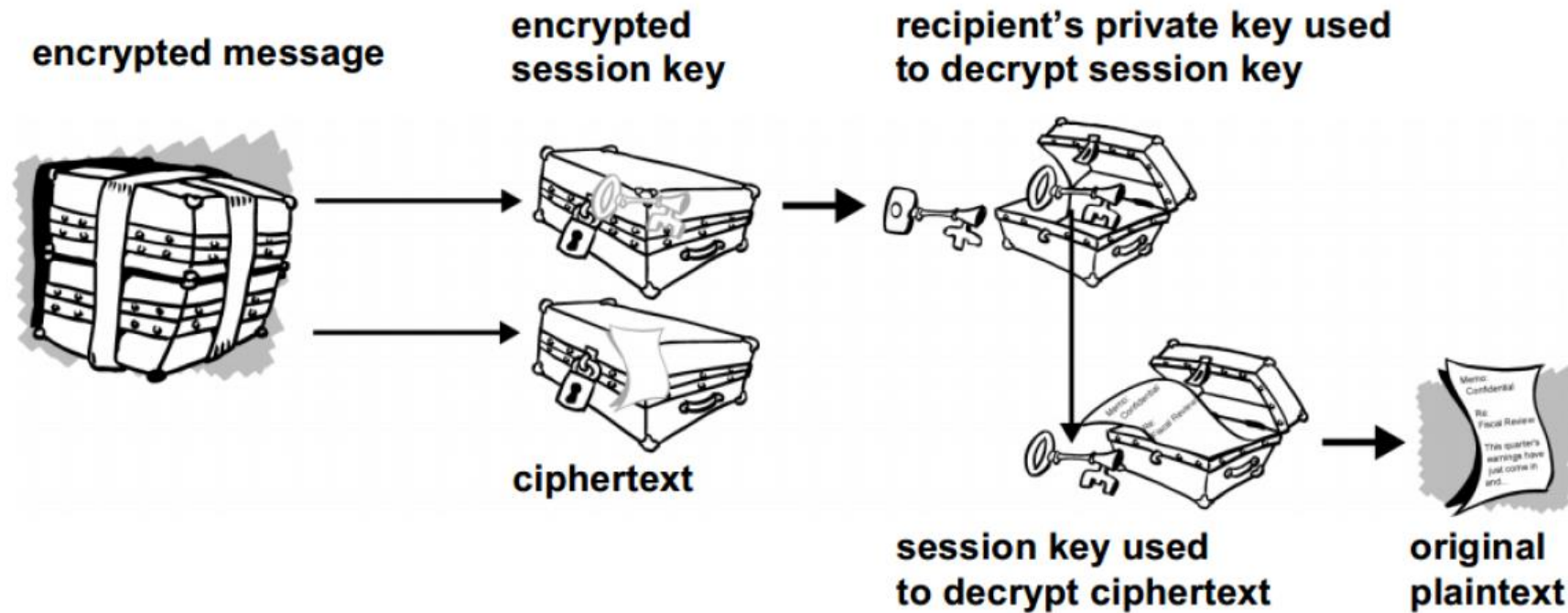
## PGP encryption





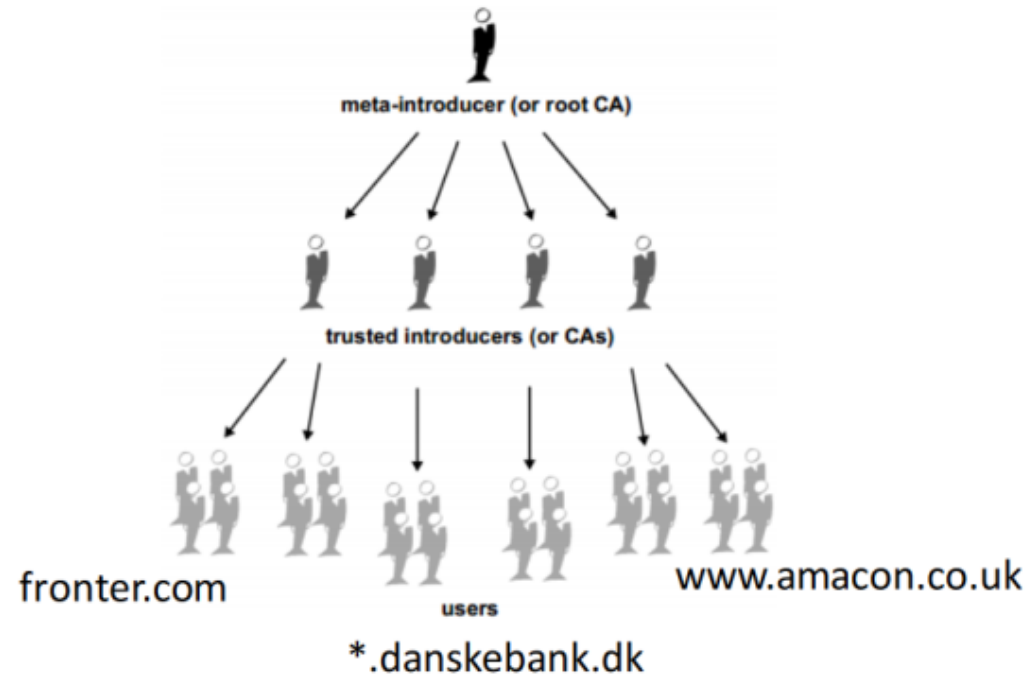
# SECURITY

## PGP decryption



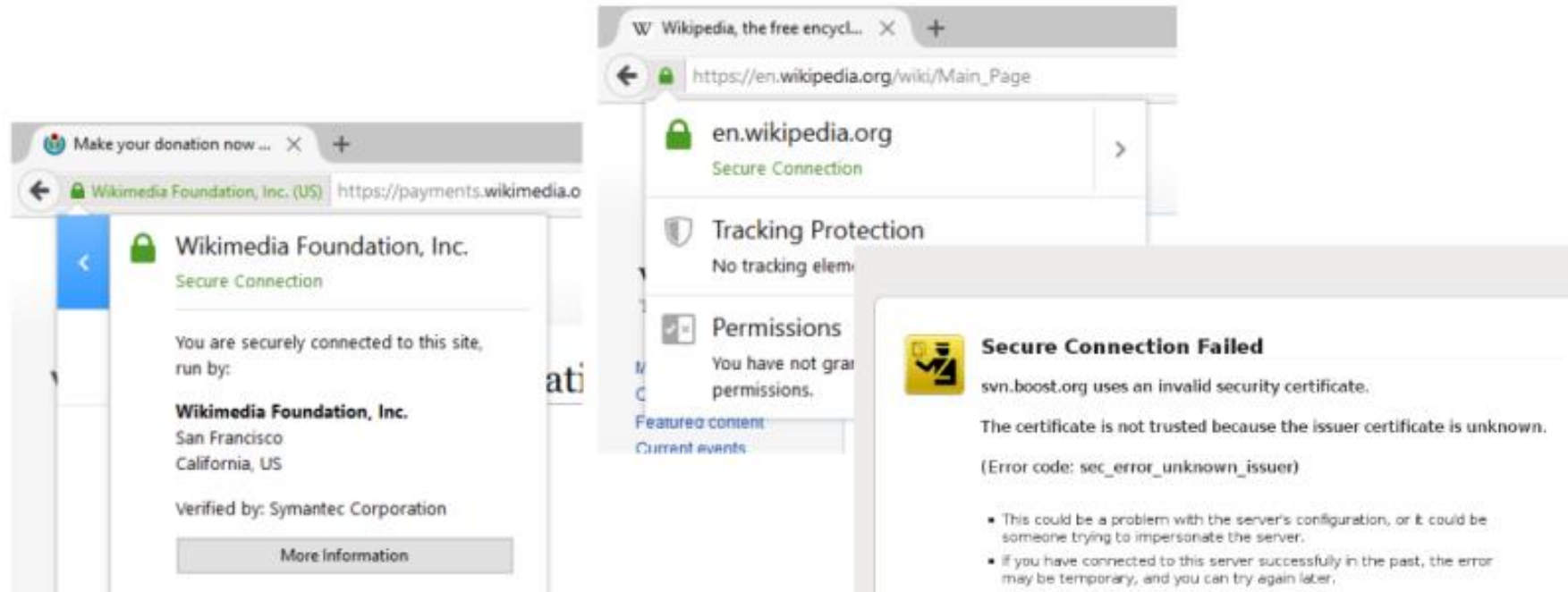
# SECURITY

## Digital certificates



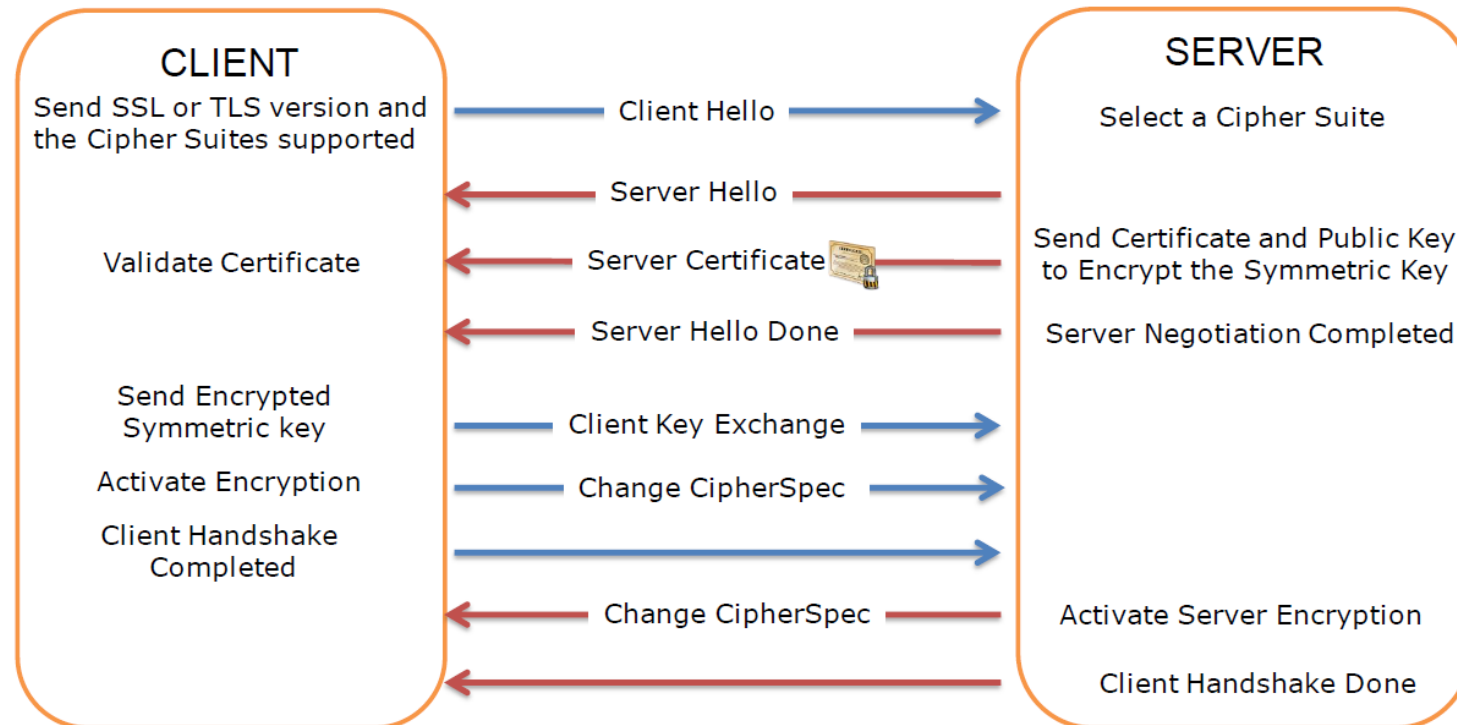
# SECURITY

## Digital certificates



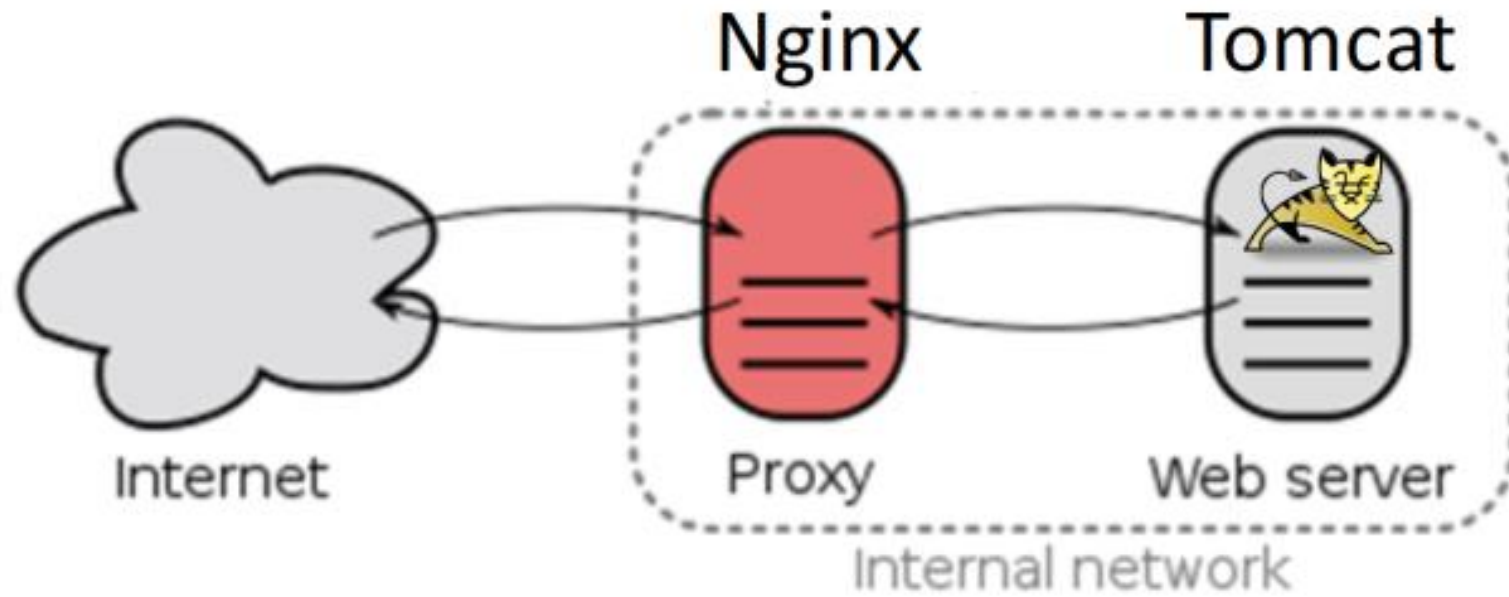
# SECURITY

## TLS/SSL



# SERVER

Reverse proxy



# SERVER

## Server architectures

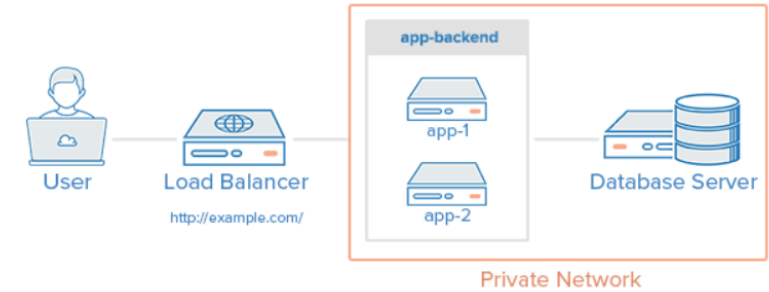
### Single Server



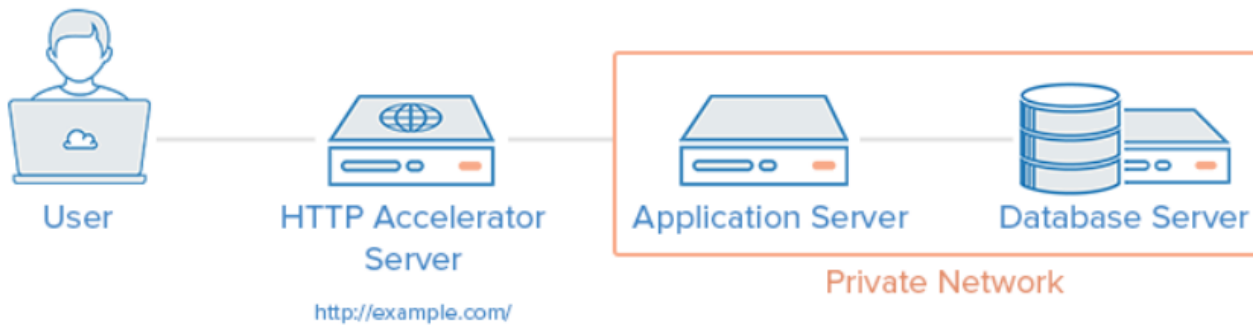
### Separate Database Server



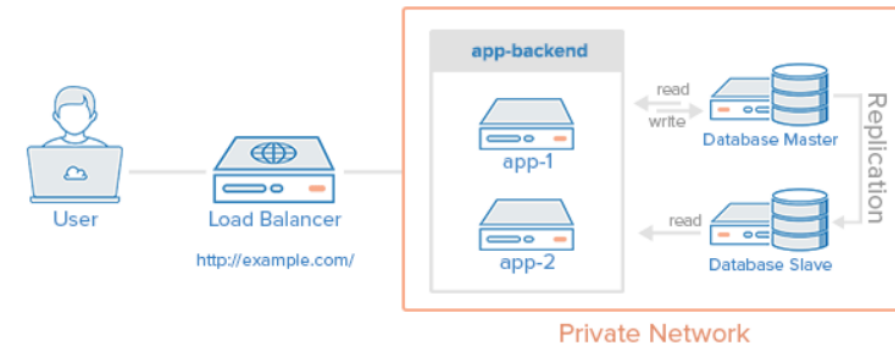
### Load Balancer



### HTTP Accelerator



### Master-Slave Database Replication



# SERVER

## Server architectures

