



# NETWORK SECURITY FUNDAMENTALS

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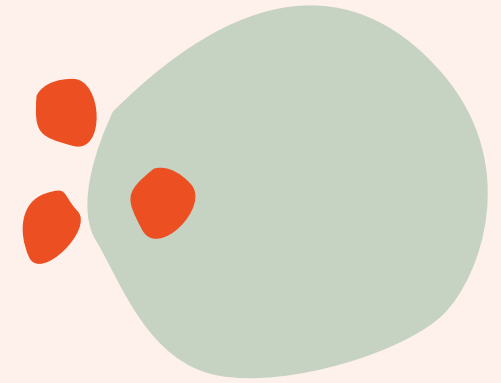
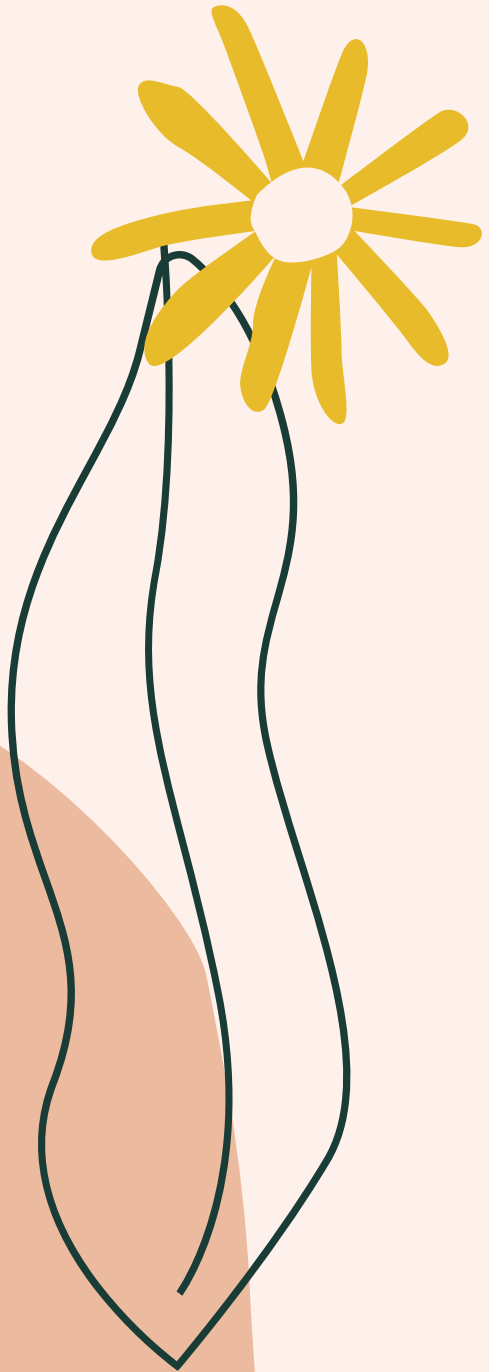
# What is network security?

Protect the underlying networking infrastructure from:

- unauthorized access
- misuse
- malfunction
- modification
- destruction or improper disclosure.

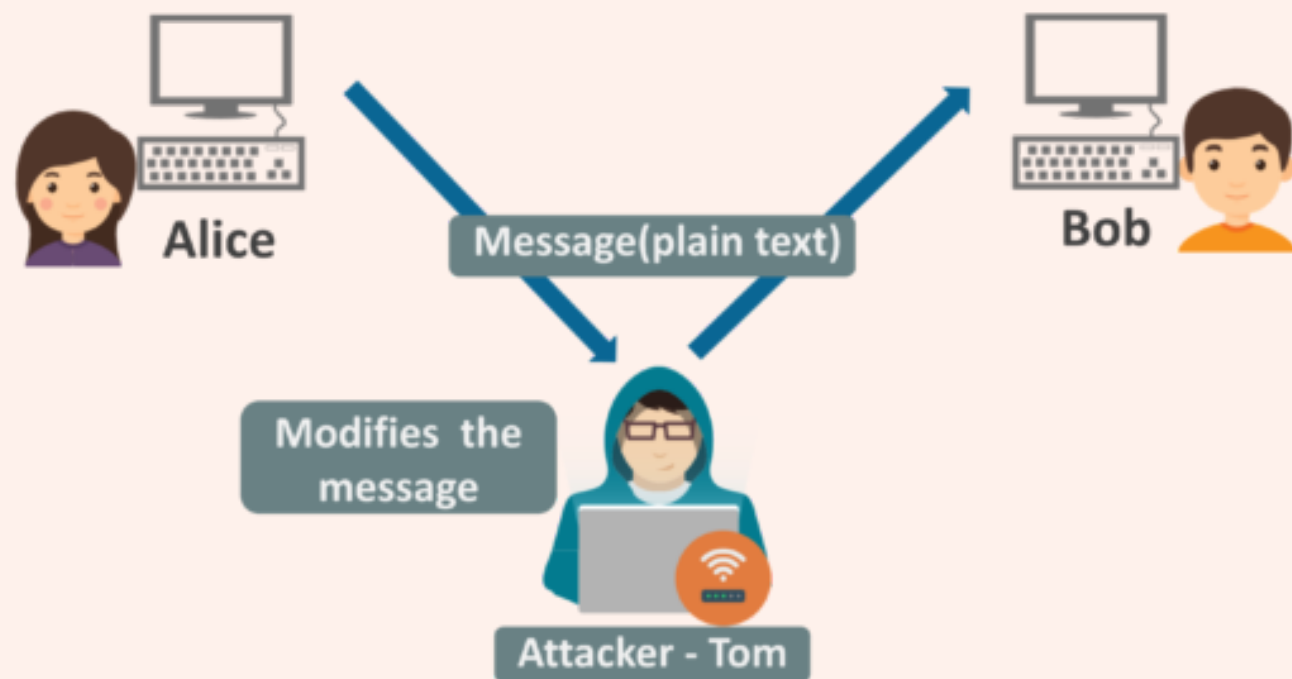
How to ensure network security?

- Strong and Complex passwords

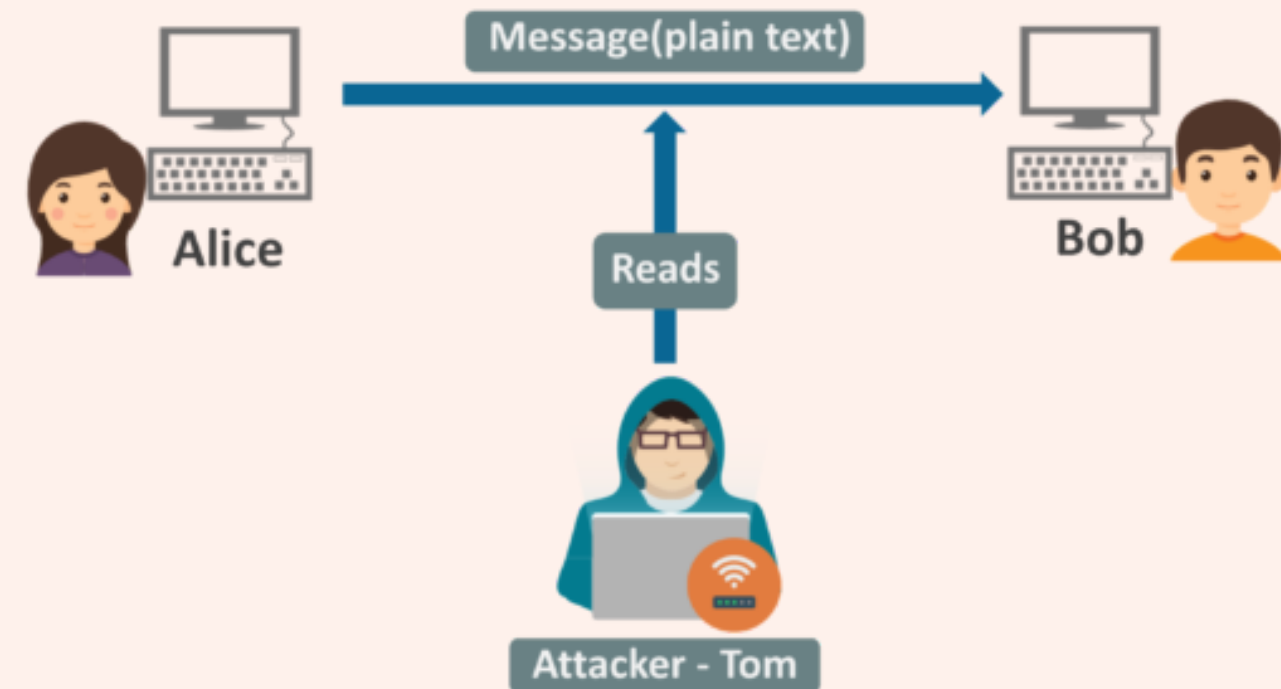


# WHAT IS NETWORK SECURITY ATTACK?

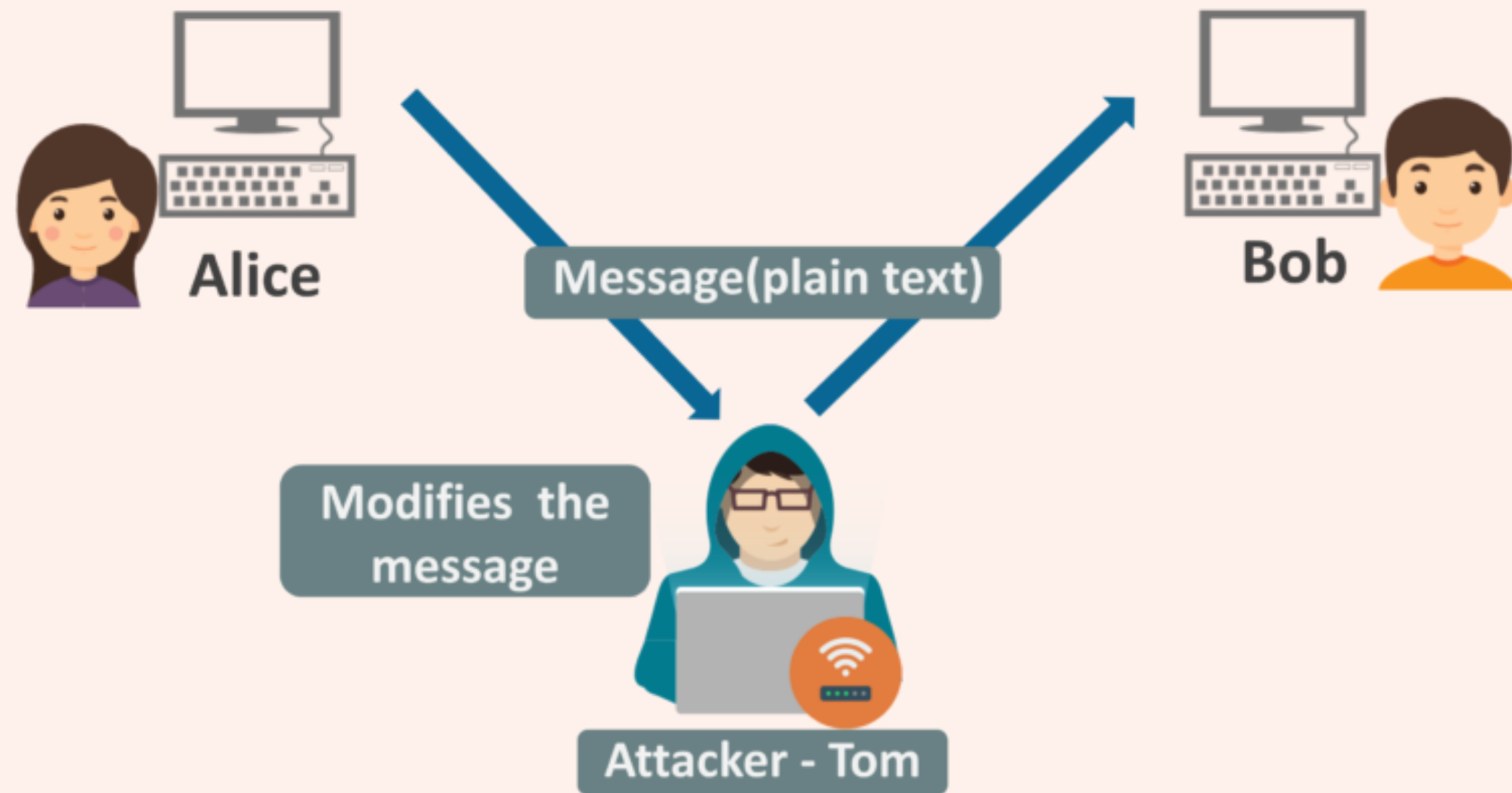
## ACTIVE ATTACKS



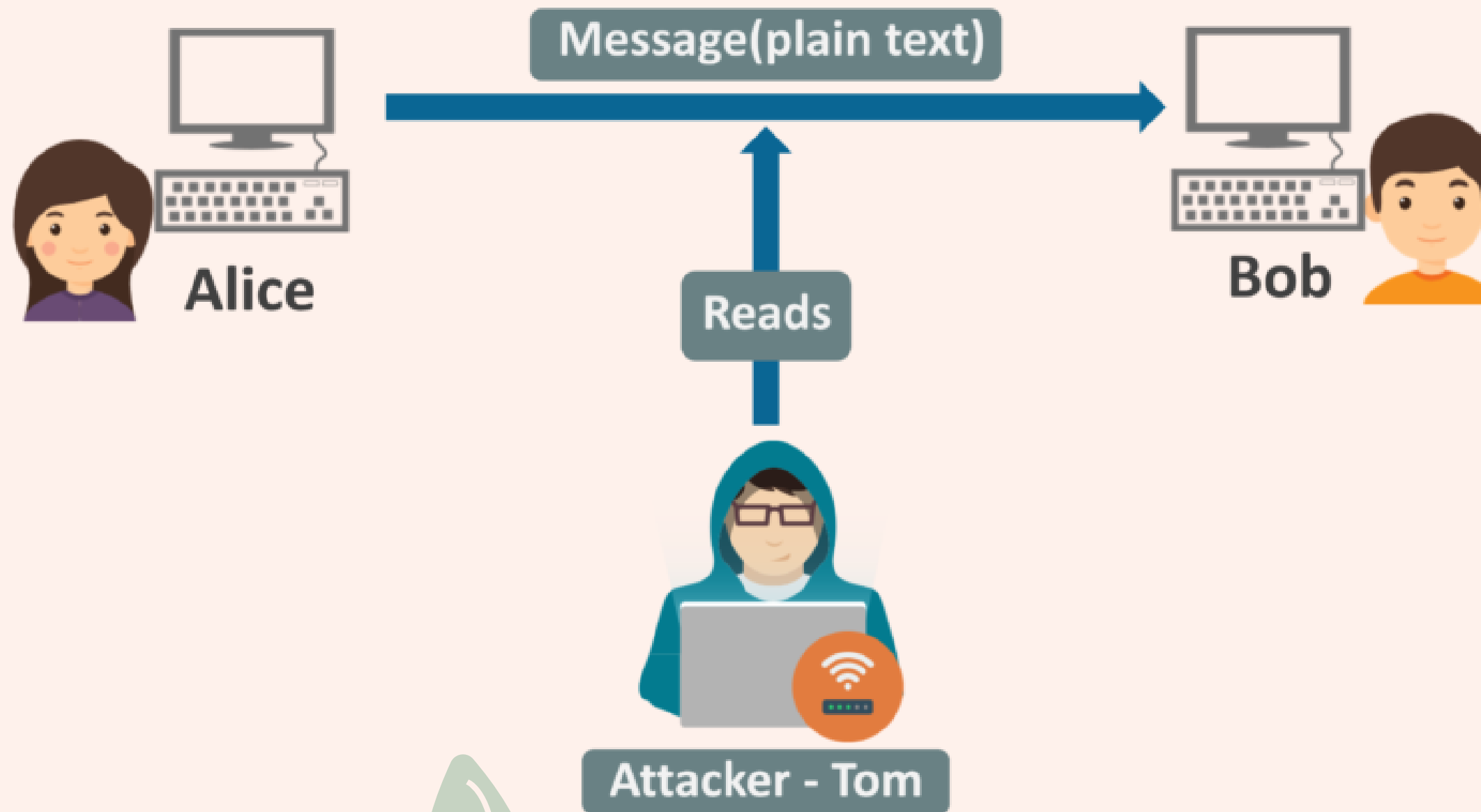
## PASSIVE ATTACKS



# ACTIVE ATTACK



# PASSIVE ATTACK





Intrusion  
Prevention System



Access Control



Application  
Security

# What are the different types of Network Security?



Behavioral  
Analytics



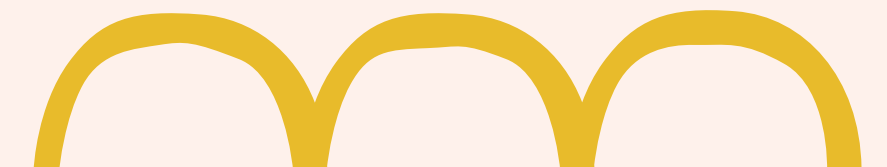
Firewalls

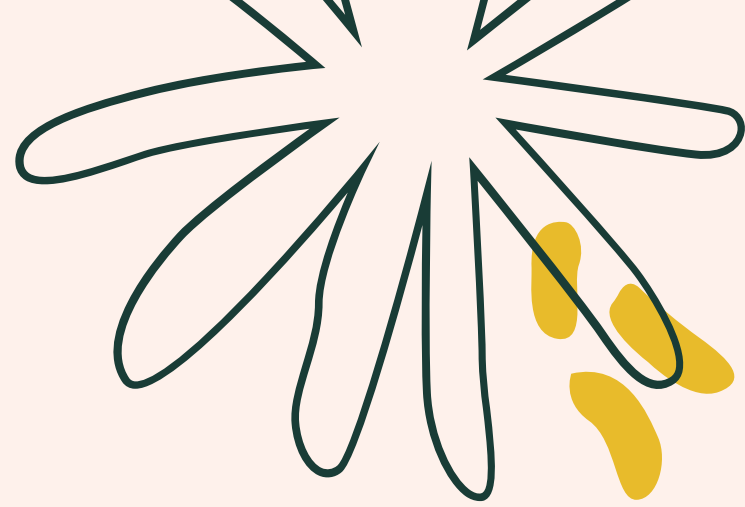


Wireless Security



Virtual Private  
Networks(VPN)

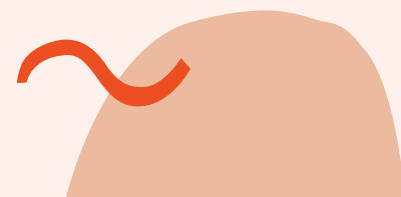


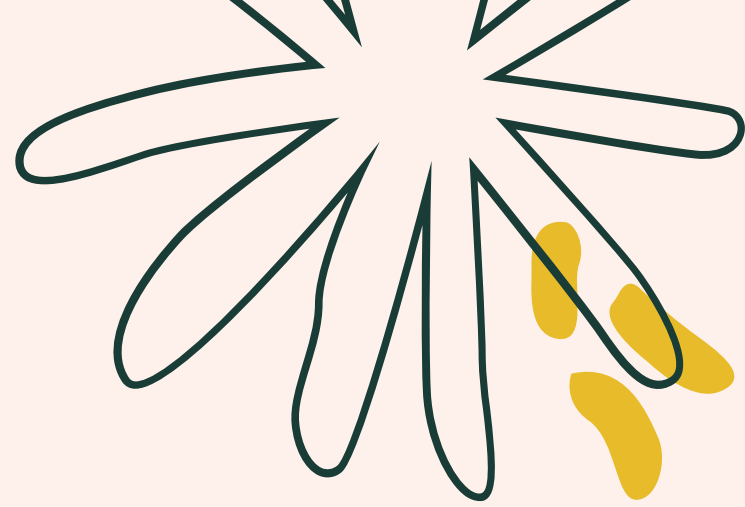


# Access Control



- Block unauthorized users and devices from accessing your network.
- Users that are permitted network access should only be able to work with the set of resources





# Application Security



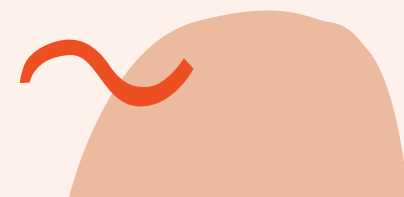
Application security is the process of

- developing,
- adding, and
- testing

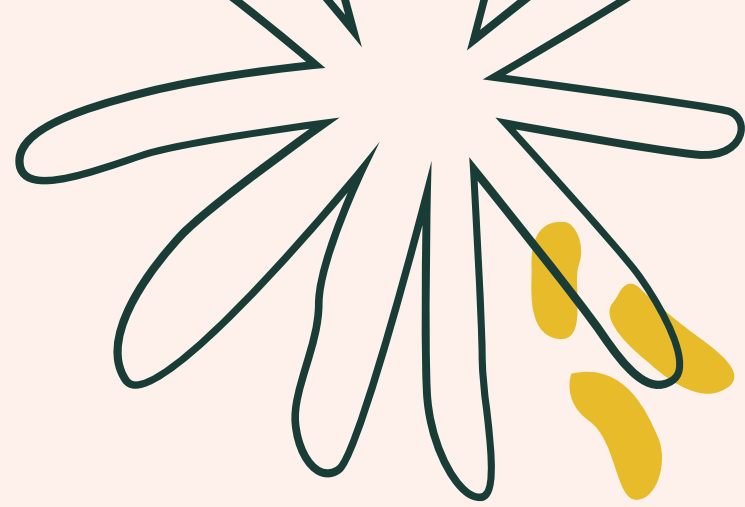
security features to the system to prevent vulnerabilities.

May include:

- Authentication
- Authorization
- Encryption



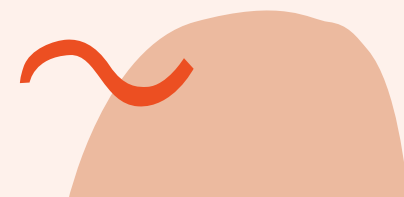


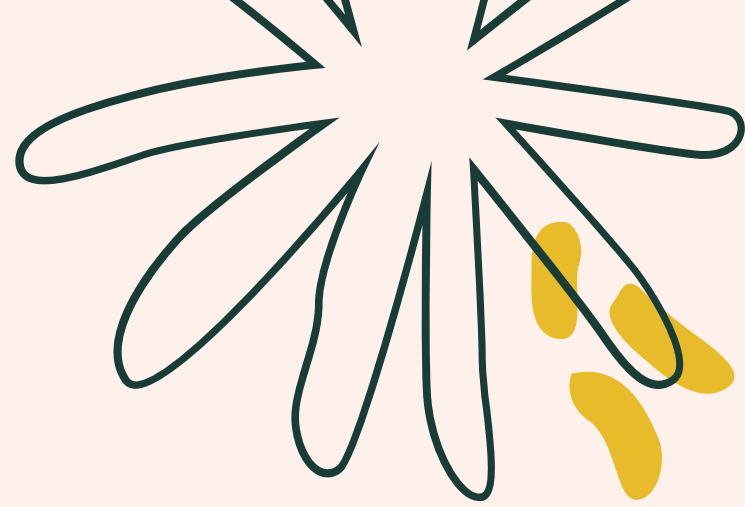


# Firewalls



- Acts as a gatekeeper
- What enters and exits the network
- Set of defined rules
- Exists as a:
  - Hardware
  - Software
  - Cloud-based service

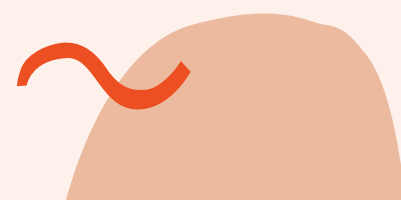


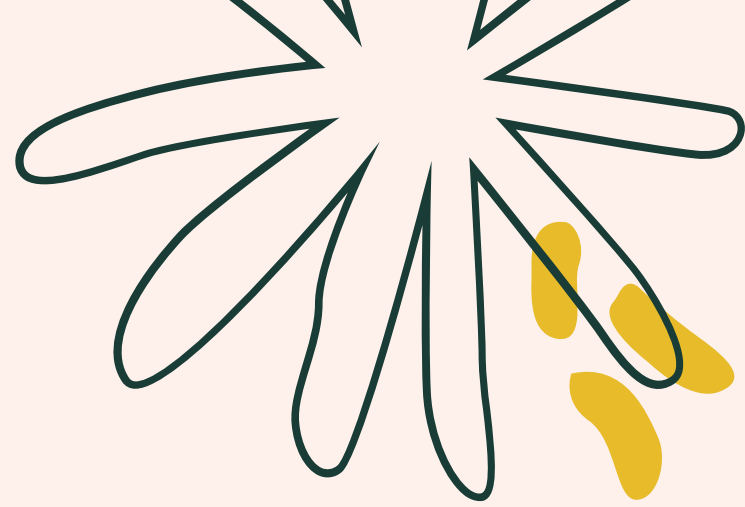


# Virtual Private Networks(VPN)



- Encrypts the connection
- Authenticates the communication between a device and a secure network
- Secure, encrypted “tunnel” across the open internet
- Hides the IP Address

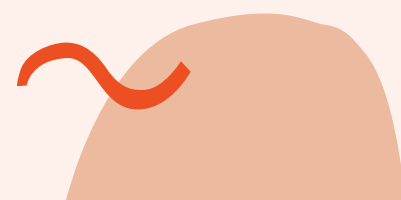


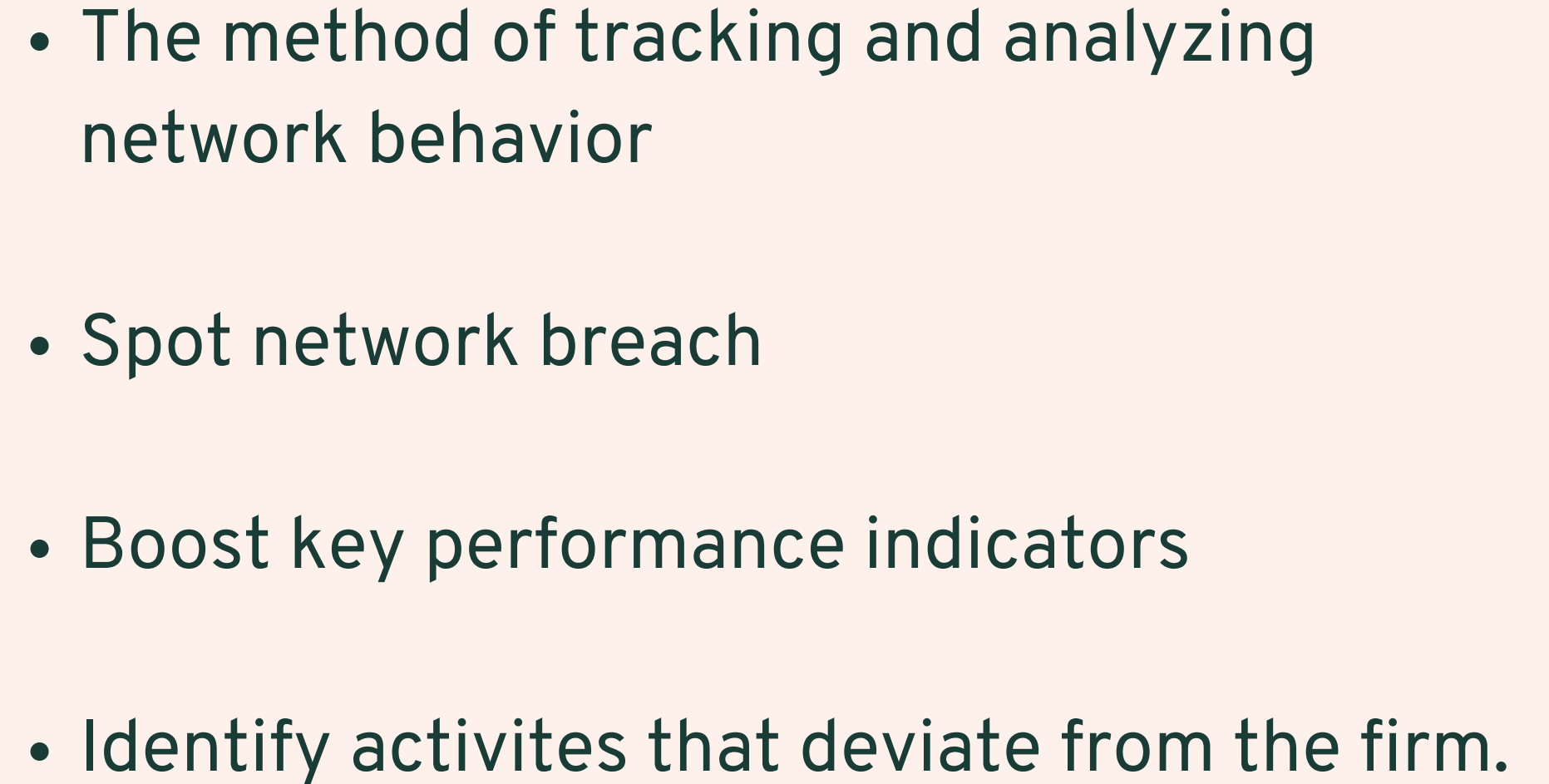


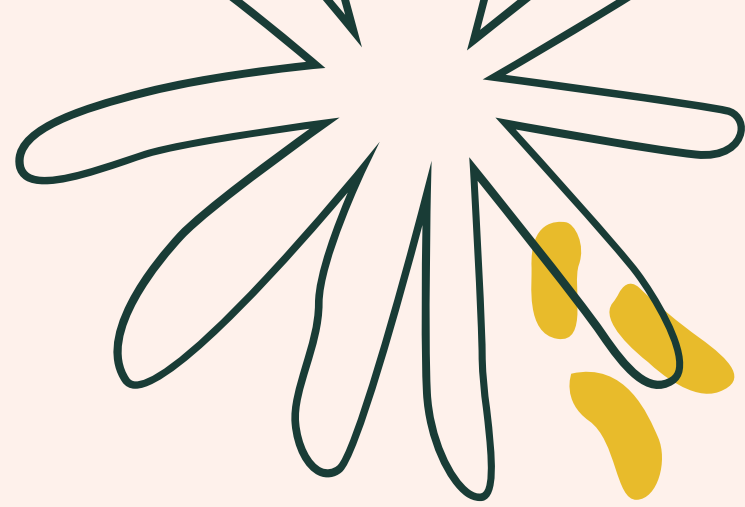
# Wireless Security



- Prevention of unauthorized access or damage to computers or data
- Control which devices can access your network
- Insures the confidentiality, integrity, and availability of the network
- Not as secure as wired ones



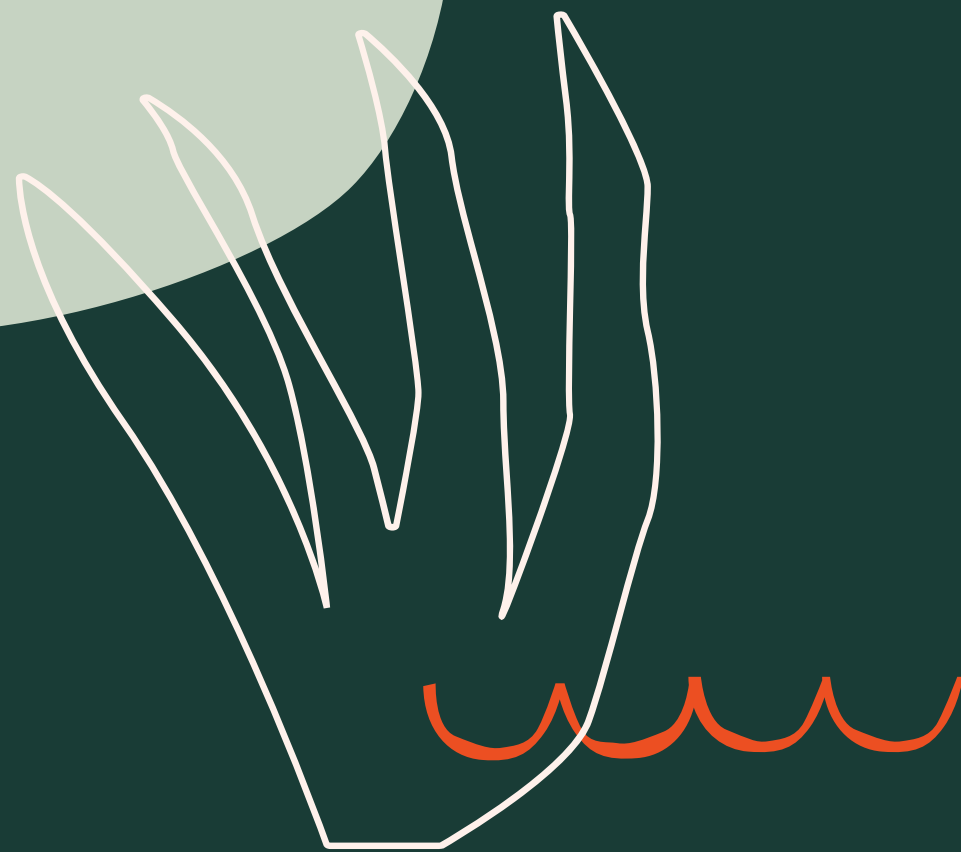




# Intrusion Prevention System

- Scan network traffic to identify and block attacks
- Software and hardware tools to ensure network security are:
  - Firewalls
  - Packet crafters
  - Web scanners
  - Packet sniffers
  - Intrusion detection system
  - Penetration testing software





thank  
you!

