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MILESTONE 5 ASSIGNMENT
CYBR515: SECURITY ARCH & DESIGN

JUNE 2ND, 2022

INTRODUCTION

Network
Architecture

Password Security

Firewall
Protection

802.11 (Wi-Fi)
Security

BYOD (Bring Your
Own Device)
Security

DMZ Network
Security

Email Protection

Virtual Machines &
Antivirus Software
Security

FTP (File Transfer
Protocol) Security

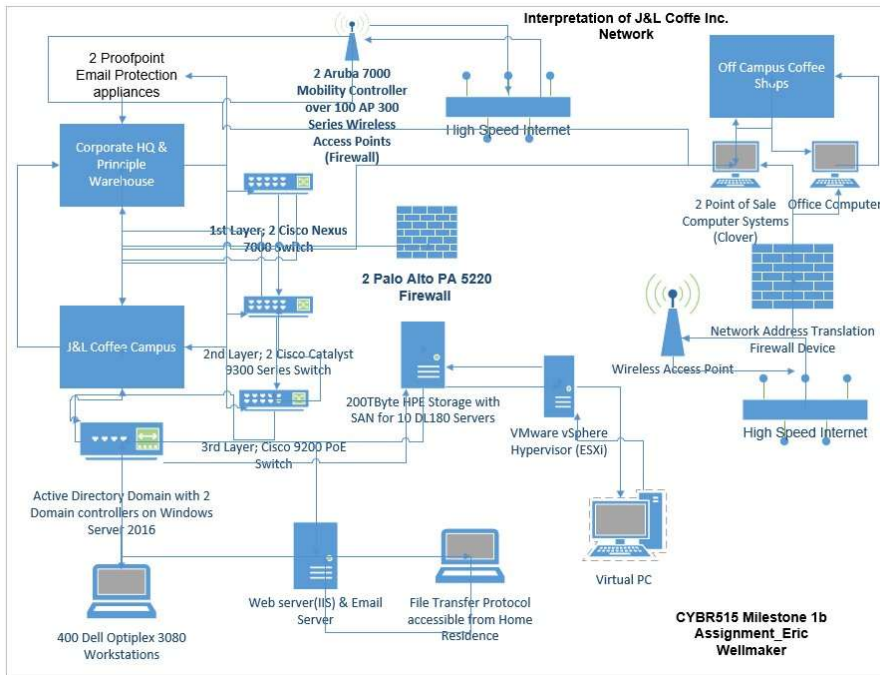
Web Browser
Security

PPTP (Point-to-
Point Tunneling
Protocol) Security

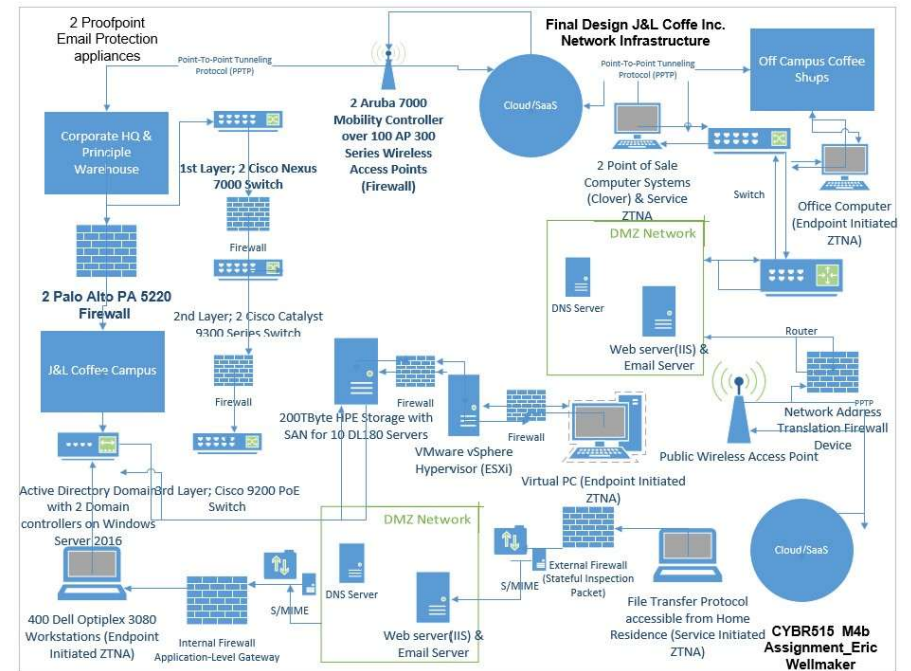
Identified System Vulnerabilities

NETWORK ARCHITECTURE

Current Framework



Revised Framework





PASSWORD & FIREWALL PROTECTION

- ZTNA (Zero Trust Network Access)
- Stateful Inspection Firewall
- Application-level Gateway Firewall

802.11 (WI-FI) & BYOD (BRING YOUR OWN DEVICE)

- Disable/Rename SSID
- Utilize WPA2 Wi-Fi Security
- SaaS (Software as a Service)



DMZ NETWORK SECURITY & EMAIL PROTECTION

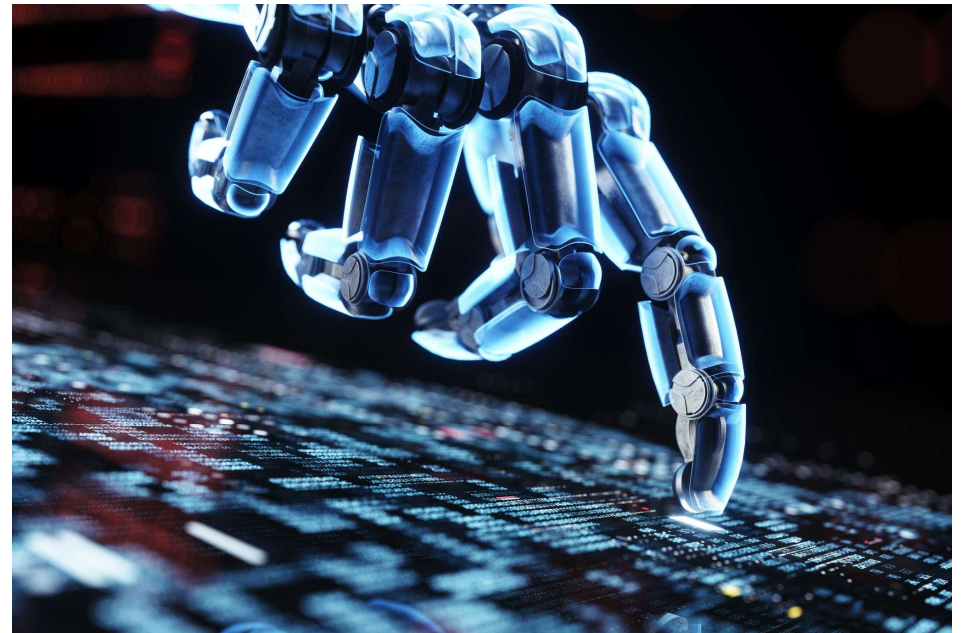
- Separate DNS, Web and Email Servers for employee and customers
- S/MIME (Secure/Multipurpose Internet Mail Extension)
- Symmetric Encryption

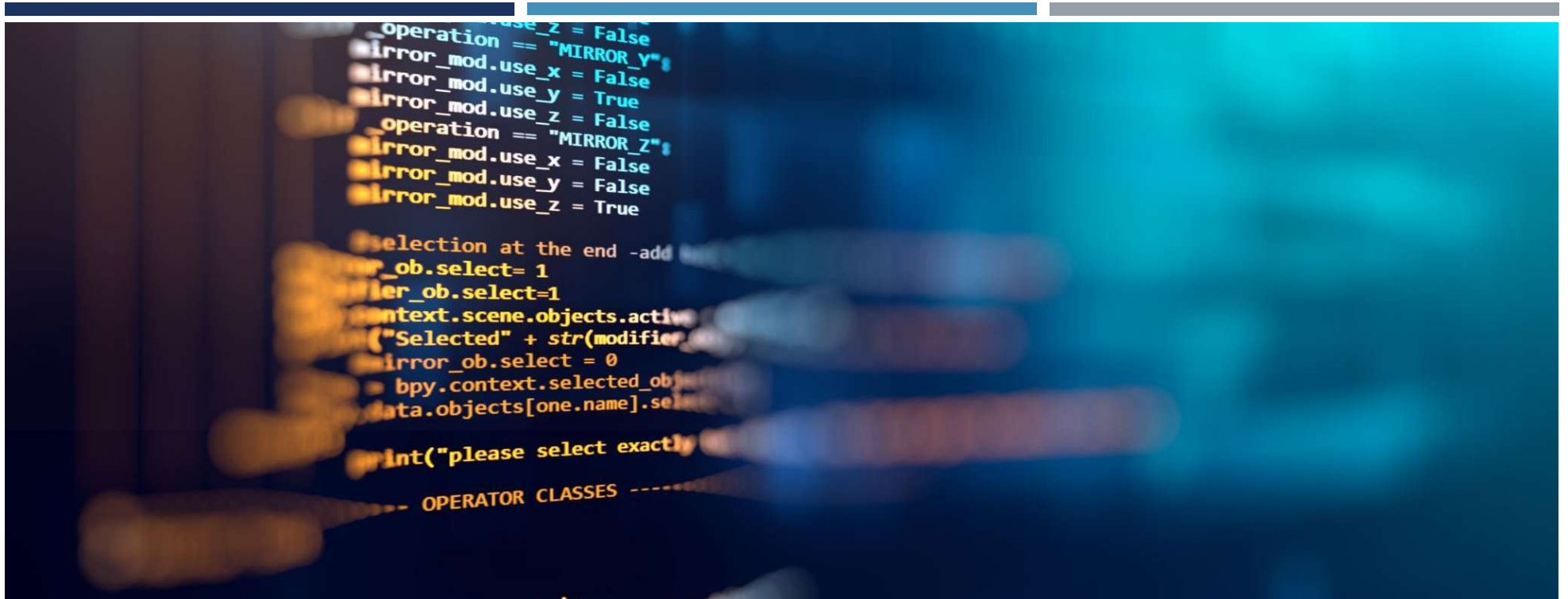
DMZ Network Architecture



VIRTUAL MACHINES & ANTIVIRUS SOFTWARE SECURITY

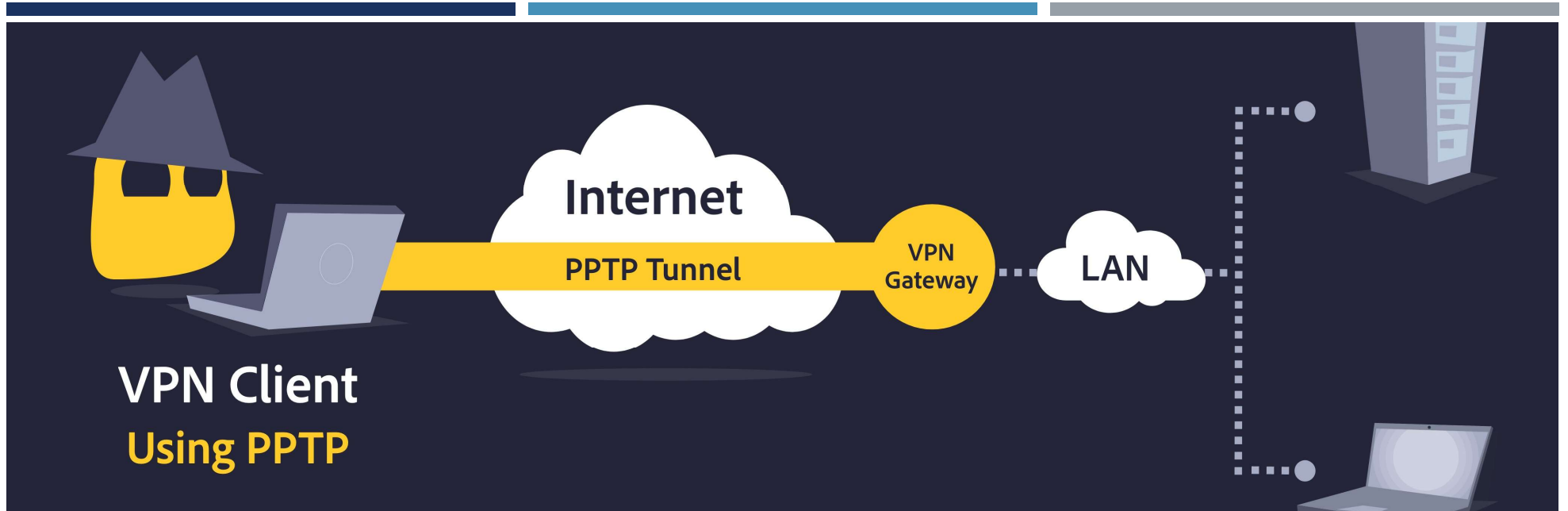
- SaaS Network
- Endpoint Initiated ZTNA





FTP (FILE TRANSFER PROTOCOL)
SECURITY & WEB BROWSER SECURITY

- IPv6
- TLS Version 1.2



PPTP (POINT-TO-POINT TUNNELING PROTOCOL) SECURITY

CONCLUSION

J &L Coffee Inc. has suffered a security breach from their current network design and current running security protocols. With the revised framework that I have designed, I believe this new network will significantly reduce the likelihood of a security breach. Let's work together to protect and mitigate J & L Coffee Inc. employees and customers.

REFERENCES

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