



# AGENDA



TEAM MEMBER  
INTRODUCTIONS



Scenario



Suggestions



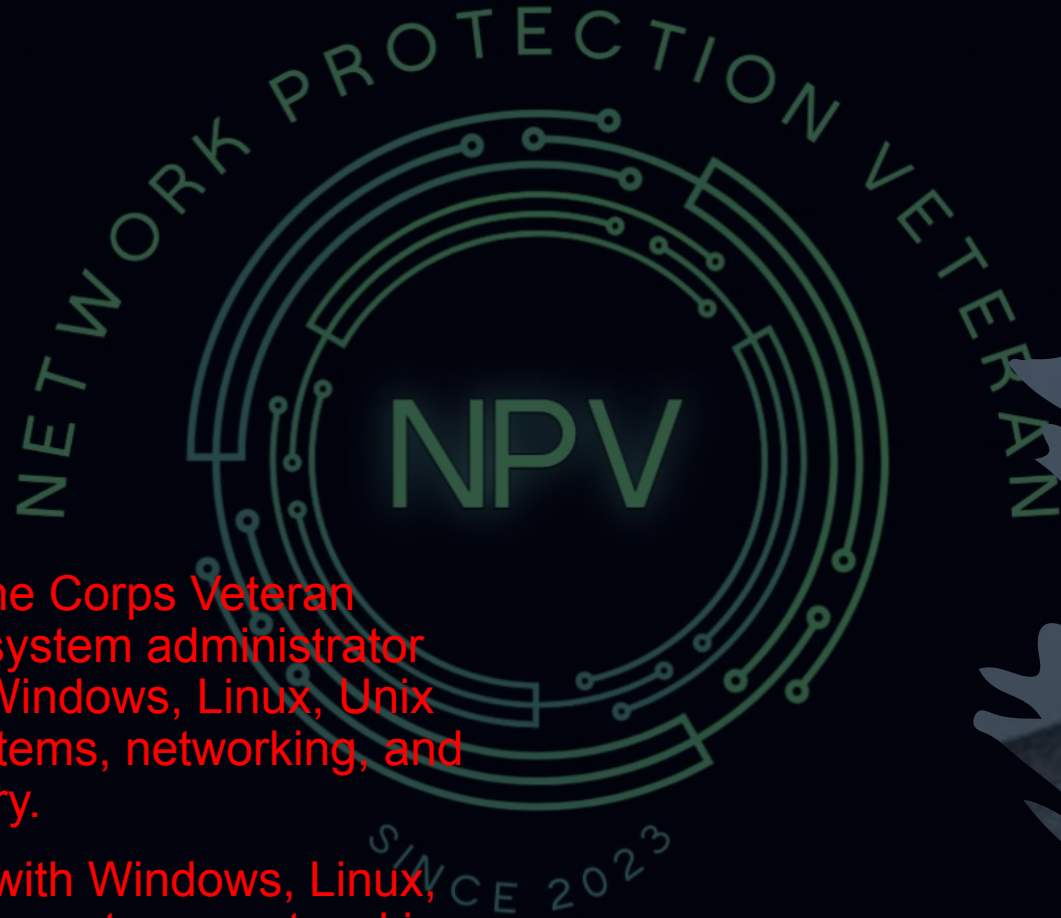
Demo's



Q&A



# WILLIAM BAUR



- 12-Year Marine Corps Veteran serving as a system administrator familiar with Windows, Linux, Unix operating systems, networking, and active directory.
- Experienced with Windows, Linux, Unix operating systems, networking, and active directory. Bachelor's degree in Finance and additional experience in Healthcare, Banking, Executive recruitment, and Sales



CODY JUHL



US Army veteran, giant tech enthusiast,  
familiar with Windows and Linux, grew up with IT  
in my life but never made a break into the  
industry. Self proclaimed cyber security analyst  
and knower of weird things, reptile





# SEYED HASHEMI



- An Army Veteran with specialty in CBRN operations.
- Solid background in Biology worked in labs for 7 years, and recently quit my job as Maintenance manager to pursue my passion in Cyber Security and Network Administration.

# THIERRY TRAN

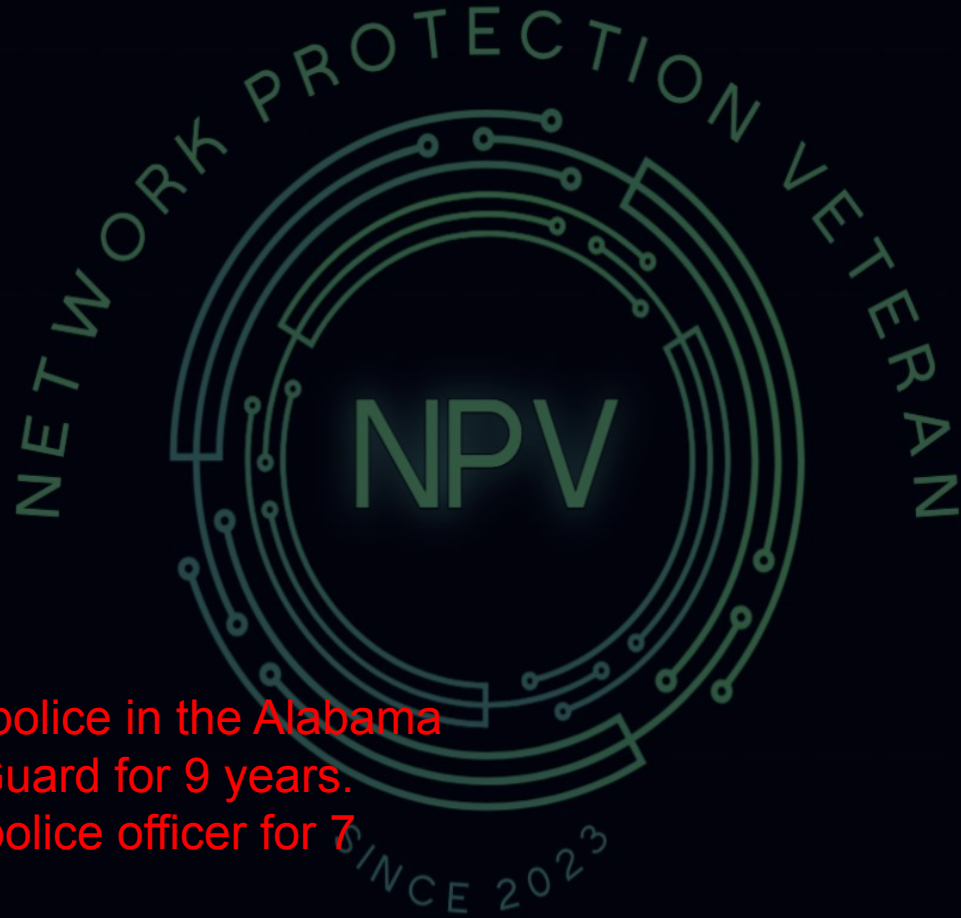


- US Army Veteran
- Just separated last month
- B.S in Computer Science
- My brother-in-law inspired me for Cybersecurity field





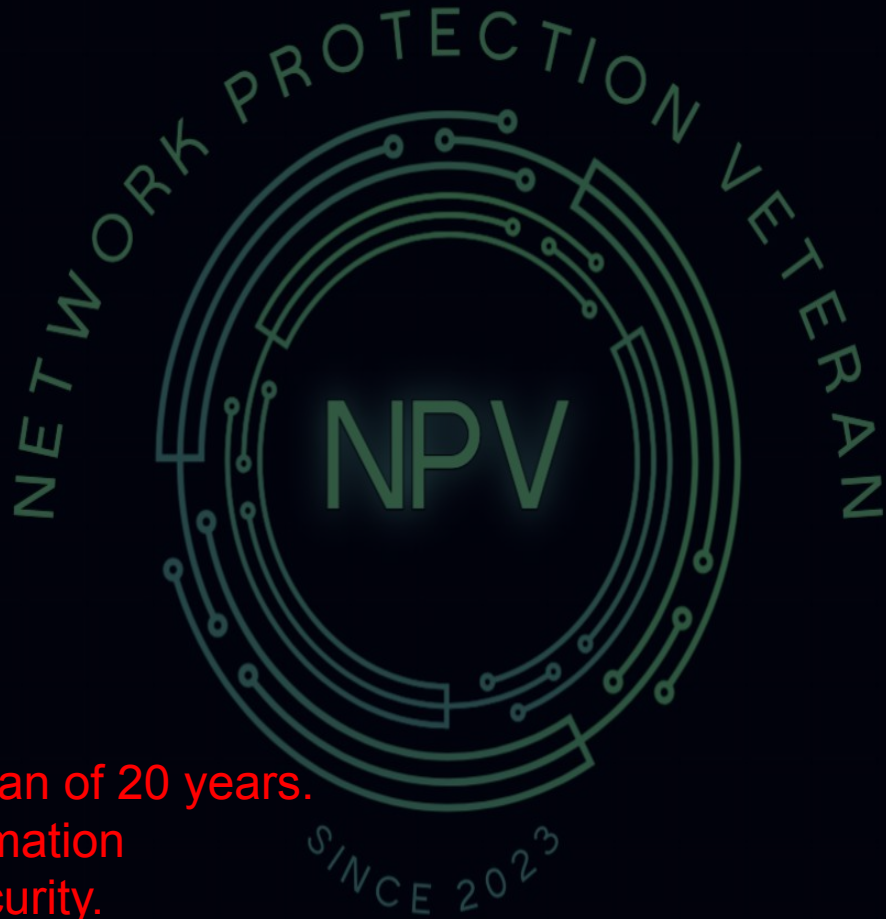
# Brittany Powell



- A veteran.
- A military police in the Alabama National Guard for 9 years.
- A civilian police officer for 7 years.
- During my time on the force I've done public relations, a member of the Special Response Team, and an instructor.



# Tommy S Taylor II



- Army Veteran of 20 years.
- BA in Information Systems Security.
- Currently have the ITIL Foundations Certification and recently graduated the Cyber Security Analyst Certification course through IBM Skills Build.





# InnovateTech



## Client Overview:

Rapidly growing tech firm.  
20 employees across  
Sales,  
R&D,  
IT Management.  
Robust & secure network



## Project Objectives:

Network upgrade  
CEO's emphasis on seamless  
communication, data security,  
and collaboration.  
reliable backup solutions and  
streamlined IT onboarding.



## Specific Goals:

Optimize communication  
between the office and central  
server.  
Enhance data security  
measures.  
Foster collaboration through  
efficient file shares.  
Establish a robust backup  
solution for business continuity.  
Implement industry best  
practices for IT onboarding.



## NVP Tech Solutions Role:

Tasked with delivering a  
tailored solution.  
Focus on scalability, security,  
and efficiency in the network  
environment.

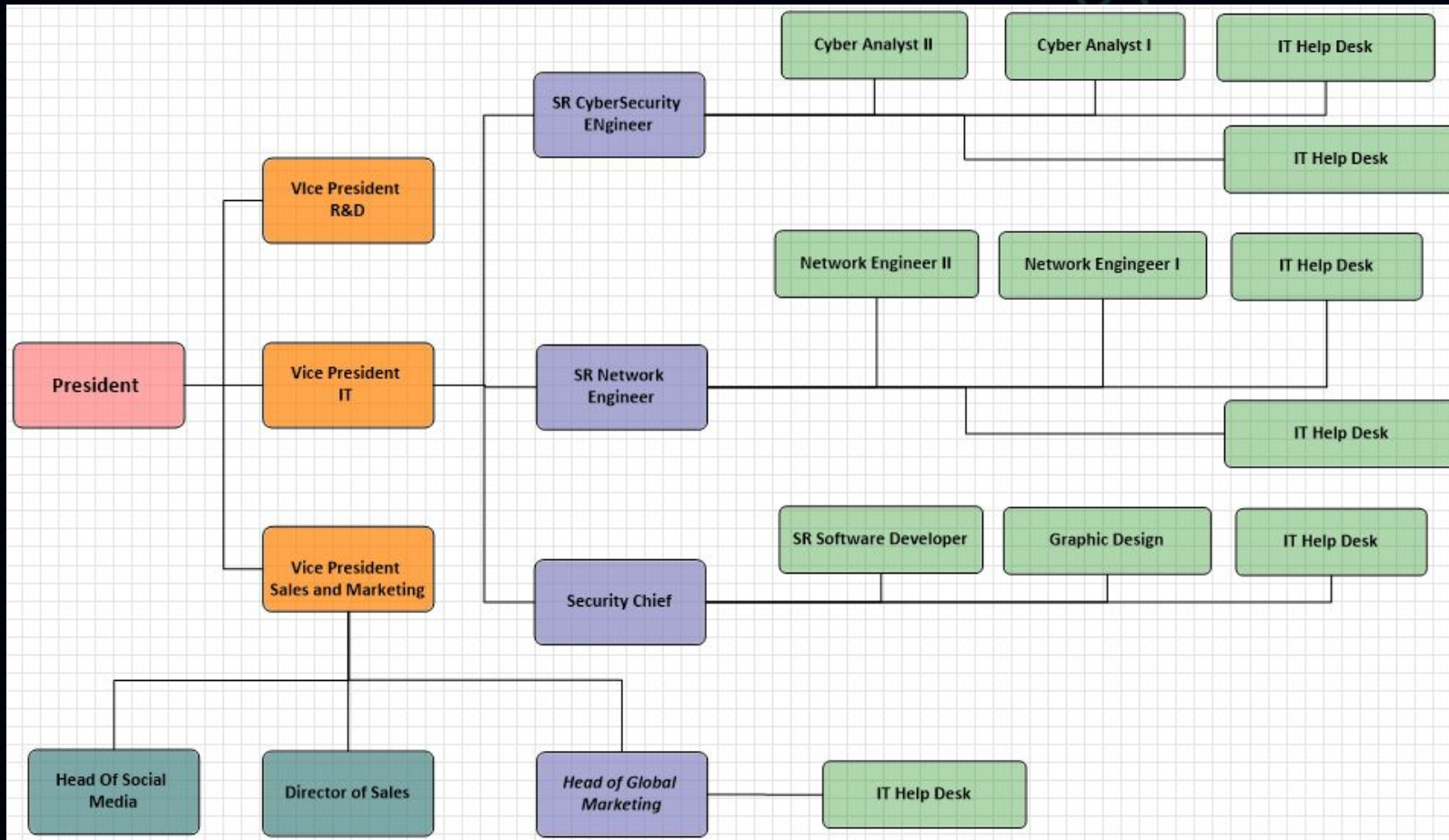
# Overview

- Organizational Chart
- Network design
- Topology
- VPN
- DNS
- Security
- File share Scalability
- additional software recommendations





# Organizational Chart



# SOLUTIONS



## VPN Setup:

Build secure site-to-site VPN tunnel.  
Alter parameters for uniqueness.  
Demonstrate access to network resources.



## VLAN Implementation:

Create VLANs for Management, Sales, R&D, and Future Expansion.



## Backup Solution:

Develop on-site and off-site backups.  
Schedule regular backups for data integrity.



## File Shares:

Set up departmental file shares on the central server.  
Implement access controls for security.



## Security Measures:

Implement firewalls, antivirus, and security protocols.



## Windows Server and Domain Controller Setup:

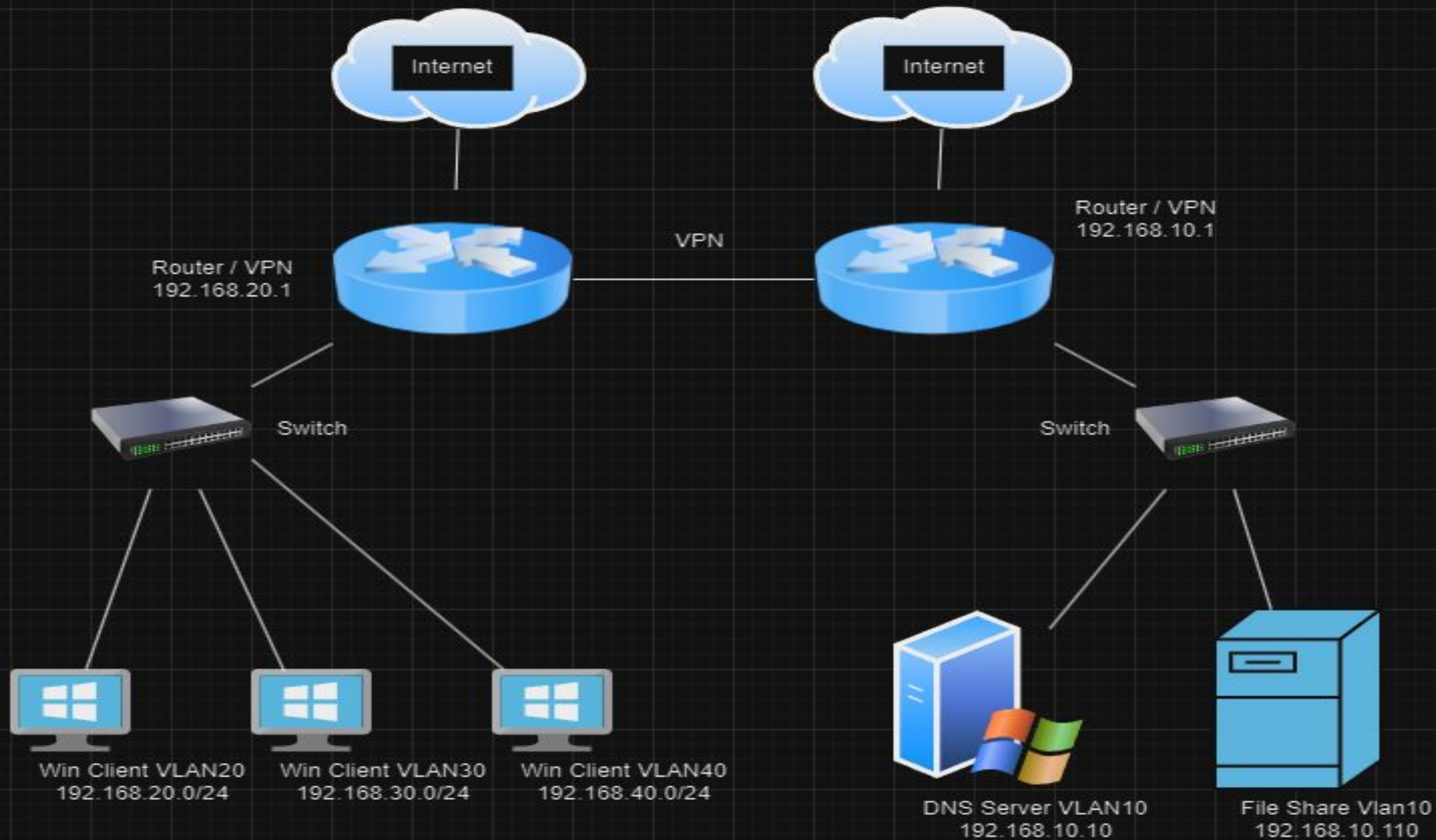
Automate Windows Server deployment with scripts.  
Configure DNS, AD Forest, OUs, and users.  
Integrate the server into the existing network.



## Virtual Machine Deployment:

Deploy VMs for the server, router, and departmental computers.  
Associate each computer with the correct VLAN





# Network Design

- Remote Site
- VPN
- Local Site
- 3 VLANs for scalability

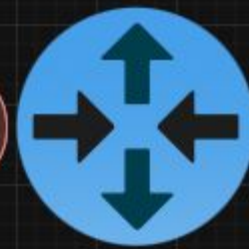




# VPN



ROUTER/VPN 20  
WAN 10.0.2.16  
LAN 192.168.20.1



ROUTER/VPN 10  
WAN 10.0.2.14  
LAN 192.168.10.1

## IPsec Tunnel

### IPsec Status

ID	Description	Local	Remote	Role	Timers	Algo
con1 #1	Side-10	ID: Any identifier Host: 10.0.2.16:500 SPI: 9b0bebad789bd71a	ID: Any identifier Host: 10.0.2.14:500 SPI: 0000000000000000	IKEv2 Initiator	Rekey: Disabled Reauth: Disabled	

ID	Description	Local	SPI(s)	Remote	Times	Algo	Stats
con1	Side-20	192.168.20.0/24		192.168.10.1/24			

### IPsec Status

ID	Description	Local	Remote	Role	Timers	Algo	Status
con1 #1	Side-20 on Side-10	ID: 10.0.2.14 Host: 10.0.2.14:500 SPI: 6874fef50c7ad731	ID: 10.0.2.16 Host: 10.0.2.16:500 SPI: 26c2272d32d3a147	IKEv2 Initiator	Rekey: 26878s (07:27:58) Reauth: Disabled	AES_CBC (256) HMAC_SHA2_256_128 PRF_HMAC_SHA2_256 MODP_2048	Established 28 seconds (00:00:28) ago

Disconnect P1

ID	Description	Local	SPI(s)	Remote	Times	Algo	Stats
con1 #2	Side-10	192.168.10.0/24	Local: cdc7fcd5 Remote: c0850ef1	192.168.20.0/24	Rekey: 2900s (00:48:20) Life: 3572s (00:59:32) Install: 28s (00:00:28)	AES_GCM_16 (128) IPComp: None	Bytes-In: 0 (0 B) Packets-In: 0 Bytes-Out: 0 (0 B) Packets-Out: 0

Disconnect P2

# DNS & File Share & Security

- Active Directory configuration to allow for easy management and easy expansion.
- Active Directory will double as DNS server to allow any computer connected to the domain to access the company intranet
- Scripted to have the setup of active directory and the process of adding users to be automated.
- Easier access to company computer resources.



# Future File scalability

NAS (network-attached storage)

Synology DiskStation DS1522+



Server

Dell PowerEdge R650



RAID (Redundant Array of Independent Disks)

RAID 5: Offers good performance and data protection with one parity drive. Ideal for most businesses.

RAID 6: Provides greater data protection with two parity drives, suitable for critical data storage.

RAID 10: Combines mirroring and striping for high performance and redundancy. A good choice for performance-intensive applications.

# SOFTWARE RECOMMENDATIONS



VPN SetUp



Network  
Design and Topology



Backup Solution



IT Management :  
Kaseya VSA



Communication,  
Productivity, and  
Collaboration

Office 365

zendesk

SPICEWORKS™

Help Desk  
and Ticketing

NETWORK PROTECTION VETERAN

NPV

SINCE 2023



# Thank You:

Our NPV Team

Marco Vazquez

Roger Huba

Zachary Derrick

Ben Arno

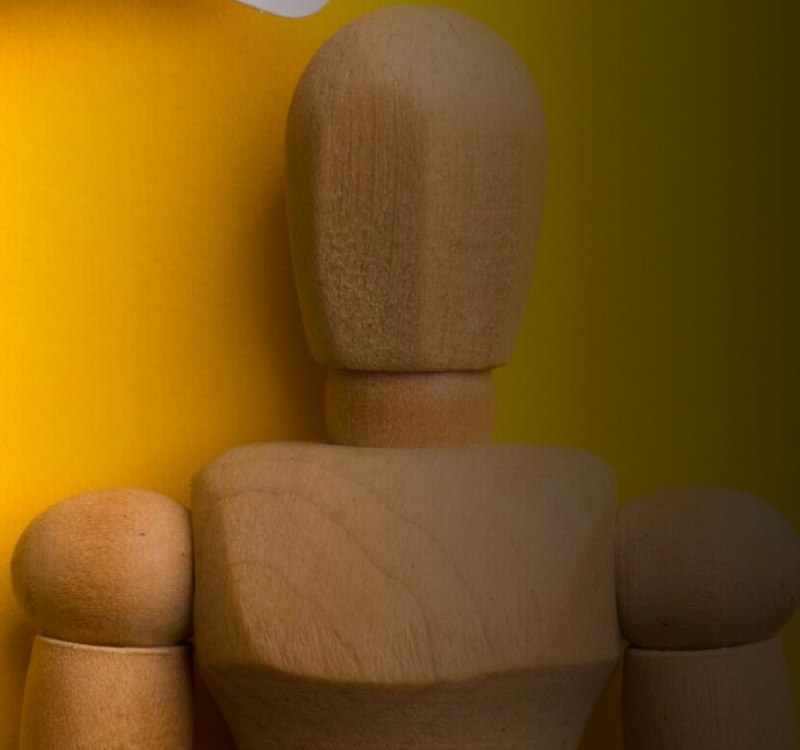


[NPV GITHUB](#)





QUESTIONS?







# *Problem Domain*



## **Client Overview:**

InnovateTech, a rapidly growing tech firm.

Workforce of 20 employees across Sales, R&D, and IT Management.

Emphasis on a robust and secure network infrastructure.



## **Project Objectives:**

Comprehensive network upgrade led by NPV Tech Solutions.

CEO's emphasis on seamless communication, data security, and collaboration.

Implementation of reliable backup solutions and streamlined IT onboarding.



## **Specific Goals:**

Optimize communication between the office and central server.

Enhance data security measures.

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