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Prepare for Projects: Systems Selection Document

This project will require you to demonstrate skills you've learned so far in the course.

Scenario & Problem Domain

Your team is a MSP and has been selected by a growing technology company that is in need of a network upgrade to support its expanding workforce and enhance data security. The company currently has 20 employees working in different departments, including Sales and Marketing, Research and Development, and IT Management.

The CEO has emphasized the importance of a secure and efficient network infrastructure that enables seamless communication between the office and the home company's central server. Additionally, the company wants to implement measures to safeguard data, improve collaboration through file shares, ensure business continuity with a robust backup solution, and establish an IT onboarding policy.

Deliverable

Start a new Google Doc, and include the following components in your system selection submission.

- Name the doc "ops-201d# Team# System Selection"
  - Replace "#" with your cohort number and team number/name.
- Add team members to the "People with access" category with "Editor" privileges, using their gmail address.
- Format your Google Doc to be pageless.
  - File > Page Setup > Pageless > OK
  - Click on the margin's bar top/left side
  - Hover over Text Width
  - Select Full
- List all team members' full names at the top of the doc.
- Copy and paste your team's scenario into the doc with a header.

Systems Selection

Review the project guidelines and scenario. Meet as a team and decide what systems, platforms, or tools you'll be using this project. Each should represent a clear, logical solution to a problem the client company is facing.

Create a high-level list of systems, platforms, or tools you're going to implement for your client. For each, explain:

1. How does it fit into your scenario's requirements?
2. What problem or pain point does it solve? In other words, what value does this add to your client?
   - Keep it high level without going into too much detail, 3-4 sentences is enough.
3. Minimum Viable Product (MVP) definition. - What is the **minimum** required for you to present on your demo day?
   - **Michael R's Ideas –**
     i. **Powershell for user and AD automation**
     ii. **Two pfsenses - for VPN tunneling. WAN-DHCP LAN-static**
     iii. **We have to use windows server and AD**
     iv. **Since we have a windows server i feel we are probably going to have to have the three endpoints be a windows vm.**
     v. **We have 20 employees who fit in these departments**
        1. **VLAN 10: Management (Virtual Machine - Server)**
        2. **VLAN 20: Sales and Marketing (Virtual Machine - Computer 1)**
        3. **VLAN 30: Research and Development (Virtual Machine - Computer 2)**
        4. **VLAN 40: Future Expansion (Virtual Machine - Computer 3)**
     vi. **Each department will need to have their own OU and gpo adjusted for file sharing**
     vii. **We can open the drawio topology in github to adjust how we want it to look just so we are all clear on the end goal and what steps needed to take.**
     viii. **We could have the backup solution be an ubuntu server for strictly backups that would be routed through the AD. to fulfill the "Alter at least one parameter compared to what was performed in class" requirement.**

Minimal Viable Product

Automation Script

- **Automation Script should demonstrably perform:**
  - Assigns the Windows Server VM a static IPv4 address
  - Assigns the Windows Server VM a DNS
  - Renames the Windows Server VM
  - Installs AD-Domain-Services
  - Creates an AD Forest
  - Creates Organizational Units (OU)
  - Creates users

Standard Operating Procedures

- **Each SOP should include the following sections:**
  - Purpose
  - Scope
  - Responsibilities
  - Prerequisites
  - Procedures
  - References
  - Definitions
  - Revision History (including who contributed to each revision)

- **Compose thorough SOPs for each of the following:**
  - How will network account needs be handled for employees being onboarded?
  - How will network account needs be handled for employees being terminated?
  - How will OS version control be handled? ([Windows Server Update Services](#))
  - How will you ensure users can access their files from any domain attached system?
  - How will you monitor network traffic?
  - How will you manage change to the network (such as hardware, software, or configuration changes) while minimizing network disruptions and downtime?
  - How will you manage and maintain network security?
    1. **Employee onboarding**

2. **Employee termination**
3. **Handling OS version control**
4. **File sharing (accessing files from any domain attached system)**
5. **Monitoring network traffic**
6. **Network changes (hardware, software, config changes)**
7. **Manage and maintaining network security**

1. **Mike Sineiro: -**

   We need MVPs for the following:

   a. **Network Management Platform (NMP):**
   b. Requirement: Centralized network monitoring and control.
   c. Value: Proactive troubleshooting, improved performance, automated tasks, reduced IT workload.
   d. MVP: Basic network monitoring functionality with alerts for critical issues.

   Secure Wireless Access Point (WAP):

   e. Requirement: Enhanced Wi-Fi security and coverage for office and home users.
   f. Value: Protects against unauthorized access, prevents data breaches, improves user experience.
   g. MVP: Secured Wi-Fi network with WPA2 encryption and guest access control.

   Cloud-Based File Sharing Platform:

   h. Requirement: Secure and centralized file storage for collaboration and remote access.
   i. Value: Improves team communication, streamlines file sharing, reduces reliance on local storage.
   j. MVP: Integration with existing Office suite, basic user access control, version control for documents.

   IT Onboarding Automation Tool:

   k. Requirement: Streamlined new employee setup and access to network resources.

l. Value: Reduces IT workload, improves user experience, ensures consistent security policies.
m. MVP: Automated provisioning of user accounts, email access, and essential software licenses.

Enterprise Backup and Disaster Recovery (BDR) Solution:

n. Requirement: Automated data backup and restore in case of disasters.
o. Value: Minimizes downtime and data loss, ensures business continuity, improves disaster preparedness.
p. MVP: Automated backup of critical data to a secure cloud environment with rapid recovery capabilities.

During your pitch, your instructor will help you scope your project. Some features may become MVP and some may become stretch goals.

Once you are ready, find your instructor and pitch your solution ideas.