Current Network Architecture

Overview: Network architecture refers to the layout of the network, consisting of the hardware, software, connectivity, communication protocols, and mode of transmission such as wired or wireless. For the second milestone, you will provide a high-level overview of the SNHUEnergy Inc. network architecture. You will evaluate traffic patterns to determine critical aspects of your business and provide basic insight into what should be done to the network from a capability aspect as well as a security viewpoint. Finally, you will develop a visual representation of an end-to-end path flow of the existing network by creating a Visio diagram showing the output of the traffic flows.

Prompt: In this section, you will analyze the information provided on SNHUEnergy Inc. in the Final Project Scenario document to provide a high-level assumption for the design of the network.

To complete this assignment, you must address the following critical elements:

- Based on what you know from the scenario, explain the types of physical network devices used in connecting all devices across the organization.
- Identify the critical traffic patterns currently used by the organization, supported by examples. Use the Traffic Flow Wireshark Capture document to guide your response.
    - Service (Voice over Internet Protocol [VoIP])
    - Application (Structured Query Language [SQL])
    - Network management
    - Other opportunities not specified above
- Describe the traffic patterns that the organization's critical applications take across the infrastructure from office to office. Remember, the organization's critical applications were specified in the scenario.
- Describe the potential performance issues that may occur within the current network if no changes are made to support the organization's expansion. Provide examples to support your response.
- Describe the potential security issues that may occur within the current network if no changes are made to support the organization's expansion. Provide examples to support your response.
- Develop a visual representation of an end-to-end path flow of the existing network by creating a Visio diagram showing the output of the traffic flows. Use the provided Logical Network Design Example file as a guide for creating your diagram, and include your diagram with your submission.

Rubric

Guidelines for Submission: Review each critical element and designate a bold subheading for each element followed by your review of the current network architecture. Include an introduction for this assignment that aligns with your analysis from the first milestone. Make sure your submission aligns with the current APA standards. Upload your Visio diagram as a separate file to complete this milestone.

Critical Elements	Proficient (100%)	Needs Improvement (70%)	Not Evident (0%)	Value
Physical Network Devices	Explains the types of physical network devices used in connecting all devices across the organization	Explains the types of physical network devices used in connecting all devices across the organization, but response is cursory or contains inaccuracies	Does not explain the types of physical network devices used in connecting all devices across the organization	15
Critical Traffic Patterns	Identifies the critical traffic patterns currently used by the organization, supported by examples	Identifies the critical traffic patterns currently used by the organization but does not provide examples, or examples provided are inappropriate, or response contains inaccuracies	Does not identify the critical traffic patterns currently used by the organization	15
Patterns Across the Infrastructure	Describes the traffic patterns that the critical applications take across the infrastructure from office to office	Describes the traffic patterns that the critical applications take across the infrastructure from office to office, but description is cursory or illogical or contains inaccuracies	Does not describe the traffic patterns that the critical applications take across the infrastructure from office to office	15
Performance Issues	Describes the potential performance issues that may occur within the current network if no changes are made to support the organization's expansion and provides examples to support response	Describes the potential performance issues that may occur within the current network if no changes are made to support the organization's expansion but does not provide examples, or examples provided are inappropriate, or description is illogical or contains inaccuracies	Does not describe the potential performance issues that may occur within the current network if no changes are made to support the organization's expansion	15
Security Issues	Describes the potential security issues that may occur within the current network if no changes are made to support the organization's expansion and provides examples to support response	Describes the potential security issues that may occur within the current network if no changes are made to support the organization's expansion but does not provide examples, or examples provided are inappropriate, or description is illogical or contains inaccuracies	Does not describe the potential security issues that may occur within the current network if no changes are made to support the organization's expansion	15
Visual Representation	Develops a visual representation of an end-to-end path flow of the existing network by creating a Visio diagram showing the output of the traffic flows	Develops a visual representation of an end-to-end path flow of the existing network by creating a Visio diagram showing the output of the traffic flows, but diagram is illogical or contains inaccuracies	Does not develop a visual representation of an end-to-end path flow of the existing network	25
			Total	**100%**