Arista Enterprise Switch Replacement Project – IT PROPOSAL

Brent Buenarte

Western Governors University

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## Proposal Overview

### Problem

As a global leader in cloud computing, enterprise software, and cybersecurity, Sicromoft Corp. operates in a highly demanding and performance-sensitive environment—its mission is to create complex technologies while ensuring top-tier performance, scalability, and security for its customers. Sicromoft offers many system software for device management and operations, a suite of services such as real-time communication, asset management, high-performance service delivery, and a strong cybersecurity platform that protects customers from cyber threats. However, their central core, which serves many data centers worldwide, is Sicromoft Aruze, a cloud service designed for high availability, low latency, and flexible deployment.

Through its services, Sicromoft helps customers and developers rapidly build and deploy apps, migrate workloads to the cloud, and implement AI features. Their microservices architecture allows developers to scale parts of their applications, which is very important, allowing improved speed and minimal downtime. Thus, maintaining the network infrastructure of Sicromoft is of utmost importance to enable non-stop feature development, minimize downtime worldwide, and prevent any network bottlenecks or potential cyber-attacks.

**IT Solution**

As a global leader in cloud computing, enterprise software, and cybersecurity, Sicromoft Corp. operates in a highly demanding and performance-sensitive environment. To maintain its leadership in innovation and ensure compliance with internal security standards and industry best practices, it is crucial to upgrade all legacy enterprise network switches across all seven buildings in the West Campus region. Replacing outdated hardware with modern, enterprise-grade switches will enhance network reliability, throughput, and scalability. The benefits of upgrading to high-performance, modern network switches in an enterprise environment such as Sicromoft Corp is a critical investment with multiple benefits:

1. **Highly Improved Network Performance and Speed**: Current modern switches offer high bandwidth performance and capability (10/24/40/100+ Gbps), allowing faster data transfer between servers, storages, and user endpoints. This is very important in a cloud environment like Aruze, where speed and constant responsiveness are essential for hosting system services, APIs, and cloud services. This is a part of the upgrade that is currently being implemented. The old Arista switches presently deployed usage is 10 Gbps speed, while the new ones offer up to 25 Gbps speed, ensuring high network performance and speed for developers and customers.
2. **Stronger Security Features and Future-Proof for New Technologies**: As cyber-attacks become more common, legacy switches tend to be left behind on company support, near-end shelf life, and less support as time passes. Thus, upgrading legacy switches to a modern high-performance switch will come with newly adopted security measures such as Zero Touch Provisioning, Smart System Upgrade, advanced monitoring, network automation, and, most importantly, more extended system support.

3. **Enhanced Scalability and Flexibility**: In combination with high performance and capability, especially under high intense workloads from different customers and developers, modern high-performance enterprise switches support modular complex designs such as VXLANs, advanced routing protocols, network automation, and complete Layer 2/3 features, making it easier to scale services and microservices environments. Also, it is straightforward for network and system engineers to work together to automate these network switches.

**Implementation Plan**

We will define the implementation plan and use a hybrid project methodology to ensure proper migration from legacy to modern switches. The steps include the following:

**Step 1: Defining the Business Requirements and Purpose of Project**

The Project Manager will need to create a business objective and a project objective/goal for all participants to agree on before starting the project. The participants needed to be a part of the project include the following:

- As each of the network switches is being upgraded per building, each of the developer managers residing in the buildings must be a part of the project phase until their residing building has been fully upgraded. This will ensure proper communications and allow performance validations before continuing.
- The network engineers are needed to provide console access to both legacy and modern switches to migrate configurations. This will allow for less project time as this approach is much safer and faster than manual configuration. Also, they will be a part of the performance validation process to monitor any changes to network bandwidth or performance.
- The data center technicians will work on the physical aspect of the project, such as removing all previous cables and hardware, relabeling them, replacing them, and constantly updating the asset management system to ensure proper tracking for future-related support.

**Step 2: Gather the Requirements**

For the project to start, we must gather the necessary details and requirements, such as communications from the developer managers from each building, the sole principal network engineer handling all the network changes, and the data center technicians. These can be gathered by requesting assets from their managers willing to cooperate with the project. Once all the assets have accepted the request, we may collect the hardware needed to replace the switches. This is done by the project manager contacting Arista, one of the company's trusted suppliers, to provide us with the necessary hardware.

**Step 3: Kick Off Meeting (Planning Phase)**

Understand the roles and responsibilities of each participant. The project manager will assign roles and responsibilities to each participant, determine the project timeline for each iteration of each building, and create the project goal for each iteration. This will ensure proper and smooth migration. The data center technicians will provide console access for network engineers to assist in the pre-configuration stage for legacy and modern network switches. They are also responsible for implementing the physical side of the project, such as switch replacement, labeling, and cable swap, and the logical side, such as asset management system updates. At the same time, the data center technicians will request downtime from the residing developers in the different studios. The DCTs will need to make sure to provide the necessary amount of downtime to fulfill and complete the task. This will ensure the developers can temporarily pause their production and workload to ensure no workload is lost or corrupted.

**Step 4: Implement the Switch Replacement Process (Phase Execution)**

Once everything has been confirmed, such as how the project will be executed, meeting the phase project goal, and project timeline, we will start the migration process. The process will be as follows:

1. We will stage the new switches next to their legacy counterpart and prepare the pre-configuration to apply the configuration information to the new switches.

2. Request downtime from the developers to let them know their network infrastructure will change. This will give them a week to pause production or tasks using the corporate network.
3. Once downtime is approved, we can start transferring all the ethernet cables, trunk cables, SFP cables, etc., to the new network switch, ensuring the legacy and the latest network switch match. This will ensure the network configuration matches and connects with the cables and ports.
4. Once the full physical migration is completed, we can update the asset management system, notify the network engineers of the MAC addresses of the new network switch, and add it to their network management system.

**Step 5: Validation and Testing (Phase Monitoring)**

Finally, we can start testing and validating the health and status of the new network switch while simultaneously communicating with the developers and providing any feedback if any bandwidth throttling occurs, checking the uptime of the switch, and the response time (hops). Usually, around this time, we would leave the switch running for a few hours to one day and see if any issues arise. We may start the next building if everything works on the network engineers' end, the developers', and the data center technicians' end.

**Step 6: Finalizing**

After a successful migration of all the network switches, we will close the project with a final project closure meeting. There, we will discuss any documentation needed for the network engineers to rely on, provide any updates after the transition, and discuss if any of the buildings experience any issues. We can close the project once everyone is satisfied with the migration.

**Review of Other Work**

**Summary of Four Works and its Relation to the Project:**

1. *Pittsylvania County School District*, located in Chatham, VA, upgraded its core network infrastructure at four high schools by upgrading its network switches. Their main target for the migration was to minimize disruptions under heavy workloads and reduce downtime to always have an uptime of support towards classroom technology, administrative tasks, and communication systems. Initially, they encountered multiple challenges when deciding to upgrade their network switches, such as various requests for downtime to implement changes due to a lack of communication between the district and the operations team. Another is understanding their network infrastructure, as some had unique hardware while others had proprietary hardware that was very difficult to configure. However, they overcame these challenges by working with the Advanced Technology Services (ATS) group to analyze their network infrastructure and develop a configuration that best suits their security compliance and network needs. The school district and third-party vendor were able to create documentation and preparations necessary to complete a task, resulting in seamless execution, minimal downtime, and restoring their network infrastructure to its fullest potential. (Simmer, 2025).
    a. This case study from this school district directly relates to the significant legacy-to-modern high-performance switch upgrade project by explaining the challenges and benefits of such a transition. Like the goal of this project, the school district aimed to reduce downtime, improve performance under heavy workloads, and ensure reliable support for critical operations, very much like our project goal as developers across the campus all rely on reliability, reduced downtime, and especially in a cloud environment, high-performance workload.

2. *Carillion Clinic*, a non-profit medical clinic serving the people of Southwest Virginia, faced reliable delivery congestion when providing voice services, access to electronic medical records, and imaging applications, leading to their existing network hardware being unable to keep up with increasing traffic demands. However, the clinic turned to Cisco, and they were able to upgrade their network infrastructure with Cisco's Catalyst 3850 Series switches, resulting in an immediate dramatic improvement in their network performance, desktop connectivity, and user experiences. Michael Smith, the director of their network services, explained that their response time increased 10 times faster than before, with users noticing the impact. (Koskie, 2022)
    a. The network switch upgrade at Carilion Clinic and its goal aligns with our legacy-to-modern high-performance switch project by clearly showing the downside of outdated infrastructure. Outdated network infrastructure and hardware can become bottlenecks or cause network congestion for essential services. For example, Carilion Clinic experienced network congestion affecting applications like voice, imaging, and their electronic medical record system. As traffic demand increases, these outdated network switches may struggle to keep up with the demand, leading to bandwidth throttling and increased downtime. This issue greatly aligns with ours as more customers rely on Sicromoft's cloud and system services. It will be tough for legacy network switches to adapt to high demand, leading to bandwidth throttling or increased downtime. This clinic's solution is to migrate from legacy to modern network infrastructure for improved reliability, faster data delivery, and greater support for operational demands, similar to our main project goal.

3. *James Sprunt Community College*, an educational institution in Raleigh, NC, experienced performance and logistical issues with some of its network equipment. They discovered that their existing network switches and connections could no longer keep up with the required scalability and speed to keep the building intact. However, the school provided a solution to hire a third party, Data Networks, to analyze the network infrastructure of each facility to fully propose an understanding of their current network constraints and determine the work needed to complete the network switch migration. This led to the huge proposal solution to upgrade their network infrastructure, such as fully upgrading their network switch backbone across campus and implementing fast Juniper network switches and access points. The outcome of this massive network switch upgrade led to modernized network architecture, minimized campus impact by allowing centralized management for the network engineers to monitor outages and schedule maintenance in an orderly manner, increased user productivity at the college, and allowed scalability in the future when needed. (Data Networks, 2024)
    a. James Sprunt Community College's experience is relevant to our legacy-to-modern high-performance switch upgrade project, as it focuses on modernizing outdated infrastructure to support high demand and heavy workloads. Like our project, this community college understands that its outdated network infrastructure was limiting its network scalability, speed, and overall reliability. Similarly, they worked with a third party to analyze their current infrastructure and create a migration plan, similar to our project process. This community college was allowed to transition to fast, modern switches, allowing their infrastructure to have high network performance, reduced downtime, operational disruptions, and scalability growth. These outcomes that they earned are the outcomes we aim for through our switch upgrade.

4. A leading public-sector insurance company in India requested to modernize its network infrastructure by replacing legacy L2 switches nearing their end and selling new reliable, high-performance, fully managed 8-port and 24-port switches. Their company's network infrastructure creates a digital foundation that allows for non-stop operations, real-time data communications, and minimal loss of connectivity across the company's ecosystem. They ensure efficient resource sharing and data transmissions across systems that customers, employees, and agents use. After the proposed and successful migration of the network switch replacement, results include optimized bandwidth utilization, smooth communication for data transactions, and SNMP configuration implementation to monitor, detect, diagnose, and resolve network performance bottlenecks, leading to reduced downtime. (HFCL, 2023)

    a. Modernizing the public-sector insurance company in India's network infrastructure aligns with our goals and outcomes. Their switch from aging L2 switches to reliable, fully managed high-performance switches led to fast real-time communications and uninterrupted operations, like our project objectives: reliability and minimal downtime. By upgrading, their bandwidth utilization is enhanced, and enhanced SNMP monitoring is used to monitor network performance. These improvements reflect our project's focus on high network performance, reducing downtime, and more effective monitoring across the infrastructure.

In conclusion, the upgrade potential of legacy network switches to modern, high-performance switches significantly improves operational efficiency, reliability, and scalability across various industries. For example, as mentioned above, a major public-sector insurance company in India replaced their aging switches with brand new models, resulting in better bandwidth handling, real-time data communication, and reduced downtime through network monitoring. Comparably, James Sprunt Community College modernized its network infrastructure, leading to centralized network management, minimized disruptions, and improved scalability and productivity.

Companies like Carilion Clinic saw a 10x increase in response time after implementing new high-performance switches, improving access to medical records and voice services. Similarly, the Pittsylvania County School District experienced smoother tech integration and minimized downtime after a switch upgrade with their partner. Despite the initial challenges in their network infrastructure, these organizations achieved a more stable, secure, and future-ready network infrastructure by upgrading their switch hardware.

**Relation of Works to Proposal Design**

**Project Rationale**

The primary goal of this project is to upgrade the network infrastructure across all seven buildings in the West Campus region, Studios A through G, by replacing the existing outdated legacy switches (Arista DCS-7010T) with high-performance, next-generation switches (Arista DCS-7010TX-48-F). This upgrade will ensure network reliability enhancement, upgraded speed, and scalability in alignment with current operational demands and future growth.

**Current Project Environment**

Currently, the project environment involves an enterprise network infrastructure that relies heavily on legacy switches, which have become, as time passes. Technology is getting more advanced

and is prone to multiple network issues, such as performance bottlenecks, very limited scalability, and hardware reliability issues. These legacy switches that lasted more than a decade no longer meet the demands of today's high-speed data transfer, low-latency applications and services, and the prioritization of cloud computing services.

Furthermore, the existing network switches lack compatibility with modern network management tools and security protocols. Unfortunately, this outdated environment risks operational continuity and limits the organization's ability to support future growth and innovation. The upgrade project is set within this context, aiming to replace all legacy switches with high-performance, modern switches to enhance network reliability, performance, and scalability.

**Methodology**

The methodology model used for this project will be a combination, or a hybrid, of a Waterfall Core structure with a Phase Implementation and Agile-like feedback loop within the phase implementation. Network infrastructure upgrades tend to be heavily hardware-focused, rely on critical dependencies, and may affect work uptime. Thus, this methodology allows for clearly defined requirements, design, understanding of risks and planning, and a thorough updating of documentation, such as auditing and backup plans.

Second, we are implementing the execution through phases by location and floor to ensure minimal disruption to developers, a more straightforward troubleshooting process, and testing and validating network performances before proceeding with the next phase. In connection with phase execution, as we require user input and feedback, we are implementing Agile-inspired feedback, which will help us refine any extra network configurations, validate performance, and quickly complete and adapt to tasks.

**Project Goals, Objectives, and Deliverables**

**Goals, Objectives, and Deliverables Table**

| | Goal | Supporting Objectives | Deliverables Enabling the Project Objectives |
|---|---|---|---|
| 1. | Analyze and create network assessment from previous network infrastructure | 1.a. Understand the previous network infrastructure and layout | 1.a.i. Write down the locations and positions of the network switches, especially in a data center environment |
| | | | 1.a.ii. Count the number of switches needed to replace, to order the number of switches needed. I need approval. |
| | | | 1.a.iii. Once you receive new switches, pre-stage them next to their old counterparts for configuration preparation. |
| | | 1.b. Create a pre-configured network configuration from previous network switches | 1.b.i Provide console access for network engineers to analyze the legacy network switch |
| | | | 1.b.ii. Determine if the network switch still gets updates or any support from the vendor |
| | | | 1.b.iii. Replicate the pre-existing network configurations and apply it in a physical storage medium, such as a USB drive. |
| 2 | (PHASE) Migrate from old network switch to new enterprise switch | 2.a. Implement pre-configured network configuration to new network switches | 2.a.i. Staging and Transfer pre-existing network configuration to the new network switches |
| | | | 2.a.ii. Allow the network engineers to compare the configurations of the new switch to the legacy |
| | | 2.b. Approval Downtime Request from residing developers per building | 2.b.i. Communication with residing developers and managers for downtime approval request |
| | | 2.c. Remove old and install new equipment | 2.c.i. Pre-label each network cables, such as what port it originally comes from to ensure proper tracking |
| | | | 2.c.ii. Once downtime has been approved, fully disconnect all labeled network cables and power cables and carefully remove the network switch from the network rack. |
| | | | 2.c.iii. Implement the new network switch into the network rack and reattach the labeled network cables to their respected location. |
| | | 2.d. Asset/Information Update | 2.d.i. For tracking purposes, remove the legacy network switch from the asset |

| | | | |
|---|---|---|---|
| | | | management and add the new network switch |
| | | | 2.d.ii. Notify the network engineer of the MAC address of the new network switch for its VLAN, and network configured to support the MAC address. |
| 3 | (PHASE) Test and validate network condition after replacement | 3.a. Configure legacy switches to have its console wiped | 3.a.i Provide console access to network engineer to config wipe previous switches |
| | | | 3.a.ii. Recycle legacy network switches |
| | | | |
| | | 3.b. Validate and test physical and network connection | 3.b.i Physically check the cables |
| | | | 3.b.ii Test network connection using command tools and work with developers |
| | | | |

**Goals, Objectives, and Deliverables Descriptions**

***First Goal***: Analyze and create network assessment from previous network infrastructure: It is crucial first to determine and assess the network infrastructure of the current network environment of all the buildings in the West Campus. We need to ensure all configurations of the current network layout match the configurations of the new network switch. (This process will be applied to all buildings without downtime).

1. a: ***Understand the previous network infrastructure and layout*** – Data Center Technicians will document the network switches in each of the buildings on the West Campus. The deliverables/steps below will show the process and what needs to be done to achieve this goal.

1. a.i. ***Write down the locations and positions of the network switches, especially in a data center environment*** – Data Center Technicians will document the locations of the network switches. This is essential for data center technicians and network engineers as these will be traced in their asset management and see any previous connections or review the residing developers who use the network switch. This information will also be helpful as we will transfer location information to the new switches.

1.a.ii. ***Count the number of switches needed to be replaced to order the number of switches needed. This needs approval.*** – At the same time, while the data center technicians jot down locations, they will also count the number of switches that need to be replaced. Usually, we may request an additional spare to ensure proper replacement and minimal downtime. Once the number of switches required to be replaced is determined, we may contact the project manager to purchase these new network switches. This must be tracked daily using the tracking and PO numbers, including non-stop communication updates to prevent delays or project time extensions.

1.a.iii. ***Once you receive new switches, pre-stage them next to their old counterparts for configuration preparation.*** – The new switches will be delivered to the data center technicians' office after communications between the vendor, the project manager, and freight delivery drivers. We will then start the staging process of the network switches to their locations. Data Center Technicians will load the network switches into a van or any vehicle and transport them to the locations. We will then pre-stage these switches next to their legacy counterpart and jot down the new serial number and asset tags for when we need to update the Asset Management system later.

1.b: ***Create a pre-configured network configuration from previous network switches*** – We will need to work with the network engineers in transferring the current network configuration, such as port numbers and their VLAN, DHCP information, SNMP configuration, etc. This will ensure proper configuration with minimal configuration to prevent any mistakes if done manually.

1. b.i. ***Provide console access for network engineers to analyze the legacy network switch.*** – As mentioned above, we will need the network engineers to analyze the legacy network switches. They will need to check the network configuration and document the information if the pre-configuration may experience any corruption when transferring to the new network switch. All of this is for documentation and backup configuration migration plan.

1.b.ii. ***Determine if the network switch still gets updates or any support from the vendor.*** – This is a minimal task for the network engineers as they are all connected directly via the internet. During the console access, the network engineer must check with the vendor and request any updates that can be implemented into the legacy switches. If there are no provided switches, as these machines are EOL/EOS, the network engineers will notify the data center technicians that these legacy switches will no longer have long-time support.

1.b.iii. ***Replicate the pre-existing network configurations and apply them in a physical storage medium, such as a USB drive.*** – Once confirmed that the network switch will no longer get updates, the data center technicians will insert a physical medium, such as a USB drive, and work with the network engineers to replicate the copy of all the network configurations to the flash drive. Once again, this ensures a smooth migration process and reduces the time to adjust the configuration, saving project time manually.

**(PHASE OPEN – Starting from STD A to STD G)**
***Second Goal***: (PHASE EXECUTION) Migrate from old network switch to new enterprise switch: This will be in conjunction with the third goal, as these two goals will be initiated in phases. This will ensure a proper, smooth transition of legacy to new network switches. Also, phases will allow us to communicate with the residing developers in the building to provide feedback on any network performance changes or issues. Lastly, the data center technicians will implement new labels and asset management updates for future support, allowing us to track these switches if problems occur. Phases will be initiated per building. This information will be provided in the project timeline with milestones.

2.a. ***Implement pre-configured network configuration to new network switches*** – Before completely turning off the legacy switches and replacing them with the new switches, we will apply the network configuration to the new switches. This will ensure that after transferring all cables to the new switch, it will automatically configure itself and align with the network configuration.

2. a.i. ***Staging and Transferring pre-existing network configuration to the new network switches*** – Fully stage the new network switch next to the previous one. For example, rack and stack the network switch under or above the current network switch and only plug the power cable of the new network switch into the power distribution unit. Then, you will provide console access to the network engineer for the new network switch and add the USB media drive to allow the configuration to apply to the new network switch.

2.a.ii. ***Allow the network engineers to compare the configurations of the new switch to the legacy*** – As mentioned in 1. b.i, the network engineer must have documentation and a backup configuration plan if any corruption or issues arise. In this procedure, the configuration is applied to the new switch, and the network engineer will now cross-reference between the documentation/configuration plan and see any changes or similarities. They must check this thoroughly to ensure a smooth transition to the new network switch.

2.b. ***Approval Downtime Request from residing developers per building (IMPORTANT STEP. MUST FOLLOW BEFORE PROCEEDING TO NEXT GOAL OBJECTIVE)*** – This is critical as you must obtain approval from the residing developers that heavily rely on the network. Different buildings in the West Campus primarily work on the microservices and cloud platform provided by Sicromoft for the customers, so it is of utmost importance to request minimal downtime and carefully work on these network switches.

2. b.i. ***Communication with residing developers and managers for downtime approval request*** – The Data Center Technicians and the developer managers living in the building must communicate with each other for a requested downtime. Usually, the best approach for a downtime request is to schedule it one week ahead, as this will give the developers time to close any programs or testing before working on their network. Thus, a one-week request for downtime is recommended.

2.c. ***Remove old and install new equipment*** – This is the start of the migration process from legacy switches to modern switches. We must have everything needed in this process to have a quick, simple, and safe process. We must have our pre-configuration USB drive and cables labeled to replicate the layout, prepare any tools for the rack and stack of the new switch, and remove the legacy switch.

2. c.i. ***Pre-label each network cable, such as what port it originally comes from, to ensure proper tracking*** – This is important as unlabeled wires can lead to confusion when replicating the network layout. We must pre-label all the network cables to understand which cable goes to which port.

2.c.ii. Once downtime has been approved, fully disconnect all labeled and power cables and carefully remove the network switch from the rack. Remember to be careful not to lose track of the wires.

2.c.iii. ***Implement the new network switch into the rack and reattach the labeled network cables to their respective locations***. – We will migrate the cables to the new switch to ensure they replicate the original network layout.

2.d. ***Asset/Information Update*** – This is solely to provide tracking on the network hardware for data center technicians to refer to when support is needed in the future.

2. d.i. ***For tracking purposes, remove the legacy network switch from the asset management and add the new network switch***. This will ensure no mix-up between the legacy and new network switches.

2.d.ii. ***Notify the network engineer of the MAC address of the new network switch for its VLAN and network configured to support the MAC address*** – As per security compliance and security networking requirements, we do not just install switches without knowing their serial number and primary MAC addresses. The data center technicians will provide the hardware's information to the network engineers to allow corporate networks to accept the new switch.

***Third Goal:*** Test and Validate Network Condition After Replacement: Once everything has been set up for all the network switches, we will usually give the network switches a few hours to a few days of uptime to test the network bandwidth and reliability and determine any issues.

***3.a. Configure legacy switches to have their console wiped –*** As we need to follow recycling protocols and remove the hardware from the premise, we need to remove the network switch both logically and physically.

***3. a.i. Provide console access to the network engineer to configure wipe previous switches –*** Work with the network engineer to have the legacy network switch entirely wiped out and sent to its default factory settings. This is due to security compliance and prevent any data leaks.

***3.a.ii. Recycle legacy network switches –*** Once the logical cleanup has been completed, we may simply recycle the network switch to its designated area. Usually, at the end of the labs, near the door, there is a staging area for recycling.

***3.b. Validate and test physical and network connections –*** We must ensure that the new switch works fully and that the necessary network connections are provided throughout the floor and building.

***3. b.i. Physically check the cables –*** It is essential to double-check the wires and make sure all the ports are plugged in, review the LED statuses of all the ports, and make sure all show any activity lights and labeling for all the cables are correct and updated (if needed.)

***3.b.ii. Test network connection using command tools and work with developers –*** The network engineer will then check the response time of the system uptime of the machine, provide any latest updates as this may lead to enhancements to the switches' capabilities, and check its security management capabilities to make sure the switches follow network security compliance. Ensure connections from developers' hardware to the switch are solid and provide a low-latency connection. We will also get user feedback; they can provide any updates regarding performance, reliability, or bandwidth issues.

**Project Timeline with Milestones**

| Milestone | Duration (hours or days) | Projected Start Date | Anticipated End Date |
|---|---|---|---|
| Project Initiation | 5 Days | June 23, 2025 | June 27, 2025 |
| Project Kick-Off Meeting | 1-2 Hours | June 27, 2025 | June 27, 2025 |
| Documenting All Needed Switches | 1-3 Days | June 30, 2025 | July 3, 2025 |
| Purchase New Switches and Arrival | 1-3 Weeks | July 7, 2025 | < July 28, 2025 |
| Stage Switches (Send to its destination) | 1-3 Days | July 28, 2025 | July 31, 2025 |
| Obtain Pre-Configuration | 1-3 Days | August 1, 2025 | August 5, 2025 |
| Apply Pre-Config to New Switches | 1-3 Days | August 5, 2025 | August 8, 2025 |
| **PHASE 1 – STUDIO A (4-story Building)** | | | |
| Request Downtime | 7 Day Notification for Working Developers | August 11, 2025 | August 15, 2025 |
| Downtime | 14 Days | August 15, 2025 | August 29, 2025 |
| Switch Replacements per floor | 4-6 Hours/day | August 15, 2025 | August 29, 2025 |
| Legacy Switch Wipe | 1 Hour/day | August 15, 2025 | August 29, 2025 |
| Physical Validation and Performance Test | 2 Days | August 27, 2025 | August 29, 2025 |
| **PHASE 2 – STUDIO B (4-story Building)** | | | |
| Request Downtime | 7 Day Notification for Working Developers | September 1, 2025 | September 5, 2025 |
| Downtime | 14 Days | September 5, 2025 | September 19, 2025 |
| Switch Replacements per floor | 4-6 Hours/day | September 5, 2025 | September 19, 2025 |
| Legacy Switch Wipe | 1 Hour/day | September 5, 2025 | September 19, 2025 |
| Physical Validation and Performance Test | 2 Days | September 17, 2025 | September 19, 2025 |
| **PHASE 3 – STUDIO C (4-story Building)** | | | |
| Request Downtime | 7 Day Notification for Working Developers | September 22, 2025 | September 26, 2025 |
| Downtime | 14 Days | September 26, 2025 | October 10, 2025 |
| Switch Replacements per floor | 4-6 Hours/day | September 26, 2025 | October 10, 2025 |
| Legacy Switch Wipe | 1 Hour/day | September 26, 2025 | October 10, 2025 |

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|---|---|---|---|
| Physical Validation and Performance Test | 2 Days | October 08, 2025 | October 10, 2025 |
| **PHASE 4 – STUDIO D (4-story Building)** | | | |
| Request Downtime | 7 Day Notification for Working Developers | October 13, 2025 | October 17, 2025 |
| Downtime | 14 Days | October 17, 2025 | October 31, 2025 |
| Switch Replacements per floor | 4-6 Hours/day | October 17, 2025 | October 31, 2025 |
| Legacy Switch Wipe | 1 Hour/day | October 17, 2025 | October 31, 2025 |
| Physical Validation and Performance Test | 2 Days | October 29, 2025 | October 31, 2025 |
| **PHASE 5 – STUDIO E (3-story Building)** | | | |
| Request Downtime | 7 Day Notification for Working Developers | November 3, 2025 | November 7, 2025 |
| Downtime | 7 Days | Novemeber 7, 2025 | November 14, 2025 |
| Switch Replacements per floor | 4-6 Hours/day | Novemeber 7, 2025 | November 14, 2025 |
| Legacy Switch Wipe | 1 Hour/day | Novemeber 7, 2025 | November 14, 2025 |
| Physical Validation and Performance Test | 2 Days | Novemeber 12, 2025 | November 14, 2025 |
| **PHASE 6 – STUDIO F (3-story Building)** | | | |
| Request Downtime | 7 Day Notification for Working Developers | November 17, 2025 | November 21, 2025 |
| Downtime | 7 Days | November 21, 2025 | November 28, 2025 |
| Switch Replacements per floor | 4-6 Hours/day | November 21, 2025 | November 28, 2025 |
| Legacy Switch Wipe | 1 Hour/day | November 21, 2025 | November 28, 2025 |
| Physical Validation and Performance Test | 2 Days | November 26, 2025 | November 28, 2025 |
| **PHASE 7 – STUDIO G (3-story Building)** | | | |
| Request Downtime | 7 Day Notification for Working Developers | December 1, 2025 | December 5, 2025 |
| Request Downtime | 7 Days | December 5, 2025 | December 12, 2025 |
| Switch Replacements per floor | 4-6 Hours/day | December 5, 2025 | December 12, 2025 |
| Legacy Switch Wipe | 1 Hour/day | December 5, 2025 | December 12, 2025 |
| Physical Validation and Performance Test | 2 Days | December 10, 2025 | December 12, 2025 |
| **FINAL VALIDATION (ASSET UPDATES, DOUBLE-CHECK)** | | | |
| Final Check of all switches | 14 days (2 days per building) | December 15, 2025 | December 29, 2025 |
| Project Closure (Final Notes) | 1-2 Hours | December 30, 2025 | December 30, 2025 |

**Outcome**

The criteria for success in upgrading the network switches can be measured through defined expected outcomes such as improved network performance, reduced downtime, increased scalability, enhanced security, and higher end-user satisfaction. These outcomes will be marked as successful and lead to the completion of the project when information such as output console logs, testing and validating the network performance, consistent uptime across all systems, and user approval are all proven and completed. Upgrading modern switches from legacy switches will also allow for more reliable network monitoring and simplified management.

The data will be measured using performance benchmarks to validate and test network performance. These include metrics such as response time between buildings and IPs, bandwidth usage, and user experience, as mentioned during the execution phase. User input is the key criterion in the success of this network switch migration as they are mostly the primary users of the network switches as they perform heavy workloads in the cloud, thus requiring sustainable network performance and less downtime. This quantitative and qualitative data will provide a comprehensive view of the migration's impact and success.

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