**Module 2 Critical Thinking**

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Course Code: **CSC501** (Management for the Computer Science Professional)

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**Network and Laptop Equipment Refresh Project Plan**

The objective of this project is to upgrade the laptop systems and core network infrastructure (routers and switches) across 150 employees located in facilities distributed over 48 continental U.S. states. Each site is expected to receive an upgrade including one router, 2–3 switches depending on scale, and employee laptop replacements. The goal is to enhance productivity, security, and connectivity across the organization’s nationwide presence.

**Project Phases**

1. **Planning & Assessment (Weeks 1–2)**

Inventory of the current hardware and software.

Evaluate facility requirements by size, staff count, and usage needs.

Define technical specs for laptops (e.g., CPU, RAM, SSD), routers, and switches.

Select standardized models from company approved vendors list to streamline procurement and support.

1. **Procurement & Logistics (Weeks 3–4)**

Procure 150+ business-class laptops, 60 routers, and approximately 120–180 switches.

Partner with a logistics provider to manage staggered shipping to each state.

Ship equipment in waves by region to manage resource loads.

1. **Configuration & Staging (Weeks 5–6)**

Pre-configure all laptops with corporate images and security software.

Configure routers/switches off-site using templated configurations.

Establish a secure asset tagging and inventory tracking system.

1. **Deployment (Weeks 7–10)**

Roll out deployments regionally, supported by remote teams and on-site smart hands.

Conduct pilot deployments in 2–3 low-risk sites first, collect feedback, and adapt the plan.

Implement a helpdesk escalation path for any post-deployment issues.

1. **Post-Deployment Review & Support (Weeks 11–12)**

Gather feedback from users and IT staff.

Evaluate performance improvements, user satisfaction, and cost tracking.

Close the project with documentation and lessons learned.

**Key Deliverables**

* 150 upgraded laptops delivered, configured, and activated.
* Updated routers and switches per site with configuration and redundancy.
* Central asset tracking sheet with deployment and serial info.
* User documentation and IT support readiness.

**Risks and Mitigation**

*Risk mitigation strategy.*

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| **Risk** | **Mitigation Strategy** |
| Shipping delays | Buffer time in schedule, select dependable logistics partner |
| Hardware incompatibility | Pre-configuration testing and standardization |
| On-site installation issues | Use local smart hands with clear SOPs and remote support |
| User resistance or training gaps | Provide documentation and 1:1 support where needed |

**Cost Considerations**

* Opt for volume discounts with preferred vendors.
* Consider total cost of ownership over hardware lifespan.
* Balance performance needs with budget constraints.

**Hardware Selection Rationale**

**Laptops**: Business-grade (e.g., Dell Latitude, Lenovo ThinkPad) offer better reliability, warranty support, and manageability features.

**Routers/Switches**: Devices with Layer 3 capabilities and PoE support to accommodate scalability and IP devices (e.g., Cisco or Ubiquiti solutions).

**Conclusion**

This refresh project will modernize the hardware ecosystem across all facilities, ensure better connectivity and performance, and simplify IT support through standardization. Strategic planning, regional deployment, and smart risk mitigation will ensure successful and smooth execution.

**References**

Kerzner, H. 8th edition. Project Management: A Systems Approach to Planning, Scheduling, and Controlling: <https://web-p-ebscohost-com.csuglobal.idm.oclc.org/ehost/ebookviewer/ebook/bmxlYmtfXzEwNDEzNl9fQU41?sid=b8572790-ee34-432b-965f-15bc96e6172e@redis&vid=0&format=EB&rid=1>

Blog post on switches and routers

<https://www.atera.com/blog/best-network-switch/>

<https://planetechusa.com/what-are-the-benefits-of-a-poe-layer-3-switch/>