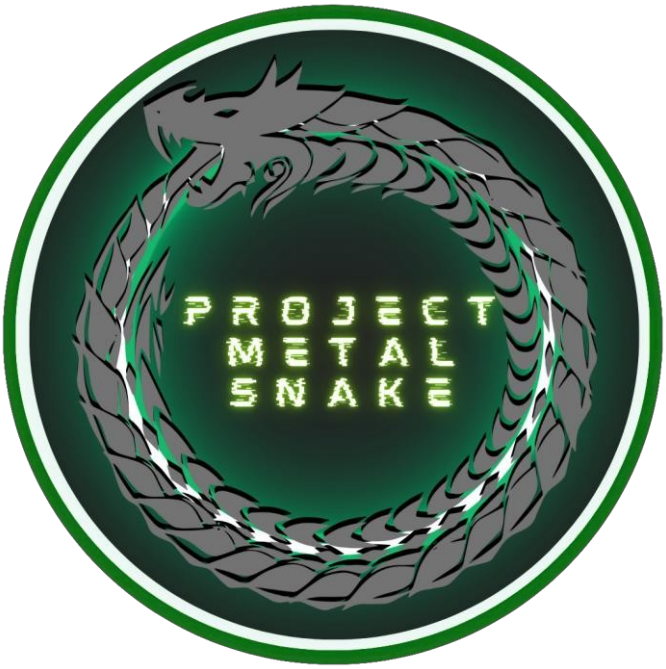
Project: METAL SNAKE



Project Plan

Project Sponsor: Brendan Gasparin

Project Manager: Brendan Gasparin

Date of Project Approval: 14/08/2024

Commencement Date: 29/07/2024

Estimated Completion Date: 24/10/2024

Estimated Project Duration: 17 Weeks

Version: 1.00 (2024-08-27)

1. Executive Summary

1.1. Purpose

The purpose of Project: METAL SNAKE is to create a secure, cost-effective on-premises cybersecurity lab that reduces reliance on cloud hosting and enhances the organization's security posture. This project will involve setting up a LAMP stack web server with Mautic email automation on Raspberry Pi devices, integrating cloud-based services to host client websites with maximum uptime, and implementing a cloud-based SIEM system for security monitoring.

1.2. Overview

Project: METAL SNAKE includes six major phases: Initiation, Planning and Design, Execution, Testing, Deployment, and Closure and Maintenance. The project will deliver a fully operational cybersecurity lab with documented processes and operational guides. Key risks include project delays due to hardware or software incompatibility, and security vulnerabilities during deployment.

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2. Project Objectives

2.1. Business Objectives

- Reduce operational costs by transitioning from fully cloud-based infrastructure to a hybrid on-premises and cloud model.
- Improve security by establishing an isolated cybersecurity lab for hands-on training and testing.
- Increase the organization's resilience by ensuring high uptime and performance for critical services.

2.2. Project Objectives

- Deploy a functioning cybersecurity lab using Raspberry Pi devices.
- Deploy a LAMP stack web server with Mautic email automation on a Raspberry Pi device.
- Set up a cloud-based web server for client website hosting and a cloud-based SIEM system for security monitoring.
- Document all setup and configuration steps for replication by others and internal training.

3. Project Scope

3.1. In-Scope

- Configuration and deployment of Raspberry Pi devices for network routing, firewall, web server, and wireless access point.
- Integration with cloud-based services, including a web server for client hosting and a SIEM system for monitoring.
- Development of documentation for setup, configuration, and operational processes.
- Testing and validation of network security, performance, and uptime.

3.2. Out-of-Scope

- Full migration of existing client websites to the new infrastructure (this will be handled separately).
- E-commerce platform development (not part of the current business offering).
- Third-party integrations beyond the SIEM system and Mautic.

4. Project Deliverables

4.1. Major Deliverables

- **On-Premises Network Infrastructure:** Setup and configuration of the Raspberry Pi router, firewall, web server, and wireless access point.
- **Cloud-Based Web Server:** Configuration of a cloud web server for hosting client websites.
- **Cloud-Based SIEM System:** Deployment and integration of a cloud-based SIEM system to monitor and secure the on-premises network.
- **Documentation:** Comprehensive documentation of all installation, setup, and configuration processes, including operational guides.

4.2. Milestones

Milestone	Target Completion Date
Project Approval	11/08/2024
Design Completion	01/09/2024
Project Kick-Off	02/09/2024
On-Premises Server Installation	08/09/2024
Cloud Web Server Installation	15/09/2024
System Testing Completion	03/11/2024
System Deployment	10/11/2024
Final Project Sign-Off	24/11/2024

5. Project Schedule

5.1. Timeline

Phase/Subphase	Start Date	End Date	Deliverables
1. Initiation	29/07/2024	11/08/2024	Preliminary Schedule Business Case Stakeholder Register Project Charter Project Manager Assignment Scope Statement Initial Risk Register High-Level Project Plan
2. Planning and Design: Subphase 1: Planning	12/08/2024	25/08/2024	Scope Statement (2.0) Work Breakdown Structure (WBS) Project Schedule Requirements Document Resource Plan Project Budget Risk Management Plan Quality Management Plan Change Management Plan Communications Management Plan Technical Specification Document Project Plan Introductory Video
2. Planning and Design: Subphase 1: Planning	19/08/2024	19/08/2024	Work Breakdown Schedule (WBS) Project Schedule
2. Planning and Design: Subphase 1: Planning	20/08/2024	20/08/2024	Scope Statement (revised)
2. Planning and Design: Subphase 1: Planning	21/08/2024	21/08/2024	N/A
2. Planning and Design: Subphase 1: Planning	22/08/2024	22/08/2024	Communication Plan Change Management Plan Project Schedule
2. Planning and Design: Subphase 1: Planning	23/08/2024	23/08/2024	Requirements Document Resource Plan Project Budget
2. Planning and Design: Subphase 1: Planning	24/08/2024	24/08/2024	Cost Management Plan Risk Management Plan Quality Management Plan
2. Planning and Design: Subphase 1: Planning	25/08/2024	25/08/2024	Project Plan Introductory Video
2. Planning and Design: Subphase 2: Design	26/08/2024	01/09/2024	Technical Specification Document System Architecture Document Requirements Specification Document Data Model and Database Design Document Interface Design Document Security Design Document Network Design Document

2. Planning and Design: Subphase 2: Design	26/08/2024	26/08/2024	System Architecture Document
2. Planning and Design: Subphase 2: Design	26/08/2024	26/08/2024	Requirements Specification Document
2. Planning and Design: Subphase 2: Design	27/08/2024	27/08/2024	Data Model and Database Design Document
2. Planning and Design: Subphase 2: Design	28/08/2024	28/08/2024	Interface Design Document
2. Planning and Design: Subphase 2: Design	29/08/2024	29/08/2024	Security Design Document
2. Planning and Design: Subphase 2: Design	30/08/2024	30/08/2024	Network Design Document
2. Planning and Design: Subphase 2: Design	31/08/2024	31/08/2024	Finalize Phase 2 Subphase 2
2. Planning and Design: Subphase 2: Design	01/09/2024	01/09/2024	N/A
3. Execution: Subphase 1: Raspberry Pi Server	02/09/2024	08/09/2024	Server Technical Documentation Raspberry Pi Server Server Operating Manual Initiation Phase Video Planning and Design Video
3. Execution: Subphase 2: Cloud Server	09/09/2024	15/09/2024	Cloud Server Technical Documentation Cloud Server Cloud Server Operating Manual Raspberry Pi Server Video Google Cloud Server Video
3. Execution: Subphase 3: Raspberry Pi Firewall	16/09/2024	22/09/2024	Firewall Technical Documentation Raspberry Pi Firewall Firewall Operating Manual Raspberry Pi Firewall Video
3. Execution: Subphase 4: Raspberry Pi Router	23/09/2024	29/09/2024	Router Technical Documentation Raspberry Pi Router Router Operating Manual Raspberry Pi Router Video
3. Execution: Subphase 5: Raspberry Pi Wireless Access Point	30/09/2024	06/10/2024	WAP Technical Documentation Raspberry Pi WAP WAP Operating Manual Raspberry Pi WAP Video
3. Execution: Subphase 6: System Integration and LAN Installation (SILI)	07/10/2024	13/10/2024	System Technical Documentation LAN Setup System Operating Manual Raspberry Pi LAN Installation Video
3. Execution: Subphase 7: SIEM System	14/10/2024	20/10/2024	SIEM Technical Documentation SIEM System SIEM Operating Manual SIEM System Video
3. Execution: Subphase 8: Mautic Email Automation	21/10/2024	27/10/2024	Mautic Technical Documentation Mautic Installation Mautic Operating Manual Mautic Email Automation Video
4. Testing	28/10/2024	03/11/2024	Testing Plan

			Defect Log Test Summary Reports Project: METAL SNAKE Testing Video
5. Deployment	04/11/2024	10/11/2024	Deployment Plan Deployment Report Project: METAL SNAKE Deployment Video
6. Closure and Maintenance	11/11/2024	24/11/2024	After-Action Review/Post-Mortem Report Closure and Maintenance Video

5.2. Key Milestones

Milestone	Target Completion Date
Project Approval	11/08/2024
Design Completion	01/09/2024
Project Kick-Off	02/09/2024
On-Premises Server Installation	08/09/2024
Cloud Web Server Installation	15/09/2024
System Testing Completion	03/11/2024
System Deployment	10/11/2024
Final Project Sign-Off	24/11/2024

6. Project Budget

6.1. Personnel Costs

The Project Manager and the intern are working on Project: METAL SNAKE alone, without drawing salaries or wages.

6.1.1. Salaries and Wages

Role	Estimated Cost	Actual Cost	Variance
Project Manager	$0.00		
IT Team	$0.00		
Security Team	$0.00		
Operations Team	$0.00		
Intern	$0.00		
Total	$0.00		

6.1.2. Total Benefits and Overheads

Description	Estimated Cost	Actual Cost	Variance
Benefits/Overheads	$0.00		

Total Personnel Costs	$0.00		

6.2. Hardware Costs

6.2.1. Procurement of Equipment

Some items, such as cabling, a network switch, and an ISP modem were already owned by the organization, ot the organization has been given permission to use them by stakeholders.

Item	Est. Cost	Actual Cost	Variance
Raspberry Pi 5 B 8GB x 4	$538.00		
Raspberry Pi 5 Power Supply x 4	$82.60		
Raspberry Pi 5 Official Case x 2	$34.42		
Argon NEO 5 Raspberry Pi Case x 2	$69.90		
Raspberry Pi Active Cooler x 4	$34.44		
Raspberry Pi Keyboard	$32.00		
Raspberry Pi Mouse	$18.00		
512GB SanDisk SD Card x 4	$323.96		
Micro HDMI Cable x 2	$15.10		
Wireless Network Adapter x 2	$93.60		
USB to Ethernet Adapter x 2	$39.98		
External Storage 5TB	$189.00		
Lan Cables x 5	$14.99		
Total	$1,485.99		

6.2.2. Hardware Maintenance and Replacement Costs

Item	Estimated Cost	Actual Cost	Variance
Maintenance	$200.00		
Total	$200.00		

Total Hardware Costs	$1,685.99		

6.3. Software Costs

Software costs are kept to a minimum by using free software or software that is already used by the business.

Item	Estimated Cost / Month	Estimated Cost Over Project Lifetime	Actual Cost	Variance
Cloud Web Server (Google Cloud)	$15.00	$30.00		
SIEM System Web Hosting	$15.00	$15.00		
Total	$30.00	$45.00		

6.4. Facility Costs

Item	Estimated Cost / Month	Estimated Cost Over Project Lifetime	Actual Cost	Variance
Static IP Hire	$10.00	$40.00		
Total	$10.00	$40.00		

6.5. Miscellaneous Costs

Item	Estimated Cost / Month	Estimated Cost Over Project Lifetime	Actual Cost	Variance
Contingency Fund	$0.00	$500.00		
Office Supplies	$20.00	$80.00		
Total	$20.00	$580.00		

7. Risk Management

7.1. Risk Register

The Risk Register will be used to track risks and provide mitigation strategies for those risks. Each risk is categorized and given a score for likelihood and impact, which are cross-referenced to give a risk score that can be used to prioritize risks for monitoring and management.

7.2. Risk Monitoring

Risks will be tracked using the Risk Register and monitored through weekly risk reviews. Regular updates will be provided in project status reports, and mitigation strategies will be adjusted as required.

8. Quality Management

8.1. Quality Objectives

- Achieve 99.9% uptime for business-critical services.
- Ensure that all deliverables, including network components and documentation, are defect-free.
- Meet or exceed security benchmarks through successful security testing.

8.2. Quality Assurance and Control

- **Quality Assurance:** Process audits, peer reviews of configurations and documentation, security audits.
- **Quality Control:** Functional and performance testing, security testing, inspections of hardware installations.

8.3. Quality Metrics

- **Performance Metrics:** Network throughput (100 Mbps), server response time (500 milliseconds), uptime (99.9%).
- **Defect Metrics:** Number and severity of defects, defect resolution time.
- **Security Metrics:** Results of security audits, penetration tests, and vulnerability scans.

9. Communication Plan

9.1. Communication Objectives

- Keep stakeholders informed of project progress and any issues.
- Ensure alignment across the project team regarding objectives and timelines.
- Manage stakeholder expectations through regular updates and clear communication.

9.2. Communication Channels

Email: Weekly status updates and important announcements.

Meetings: Weekly team meetings, bi-weekly stakeholder reviews.

Project Management Tools: Documentation. ClickUp (if necessary).

Reports: Monthly progress reports and milestone reviews.

9.3. Communication Schedule

Weekly Status Meetings: Every Monday.

Bi-Weekly Stakeholder Reviews: Every other Friday.

Monthly Progress Reports: First Monday of each month.

Milestone Reviews: Upon completion of key milestones.

10. Resource Management

10.1. Resource Requirements

- **Personnel:** Project Manager (also functioning as IT Team, Security Team, and Operations Team), Intern.
- **Hardware:** Raspberry Pi devices, ISP modem, network switch, Ethernet cables, peripherals.
- **Software:** Raspbian OS, Apache, MySQL, PHP, Mautic, cloud-based web server and SIEM system.
- **Facilities:** Secure, climate-controlled room for on-premises infrastructure, power supply, and Internet service.

10.2. Resource Allocation

- **Project Manager:** 20 hours per week for overall coordination.
- **IT Team:** 30 hours per week for hardware setup, network configuration, and server installation.
- **Security Team:** 20 hours per week for security planning, configuration, and testing.
- **Operations Team:** 10 hours per week during closure and maintenance for ongoing support.

11. Change Management

11.1. Change Control Process

- **Change Requests:** All change requests will be submitted to the Project Manager for evaluation and assessment of the impact on project scope, schedule, and budget.
- **Change Approval:** Changes that significantly impact the project must be approved by the Project Manager and key stakeholders. Minor changes may be approved by the Project Manager.

11.2 Change Management Roles

- **Project Manager:** Responsible for evaluating and assessing change requests.
- **Stakeholders:** Involved in the approval of major changes.

12. Stakeholder Management

12.1. Stakeholder Identification

Stakeholder Name	Role	Organization	Interest in Project	Internal / External
Brendan Gasparin	Sole Proprietor / Project Sponsor / Project Manager	Brendan Gasparin	Owner of business	Internal
[redacted]	Premises Owner	???	Premises Owner	External
	Premises Owner	[redacted]	Premises Owner	External
	Intern	Brendan Gasparin	Education, experience, fun	Internal
Vendors	Supplier	Varies	Supplier	External
Clients	Varies	Varies	Client	External
Users	Varies	Varies	End-user	External

12.2. Stakeholder Engagement

- Regular communication through status reports, meetings, and progress updates.
- Stakeholders will be involved in key decision-making processes, such as design approval and change management.
- Continuous feedback will be gathered to ensure stakeholder satisfaction with project progress and outcomes.

13. Project Closure

13.1. Project Handover

- Handover of project deliverables, including the on-premises infrastructure and cloud-based services, to the Operations Team.
- Final testing and validation of all systems before handover.
- Training sessions and operational manuals for the Operations Team with information on managing and maintaining the infrastructure.

13.2. Project Closeout

- Completion of final status reports and lessons learned sessions.
- Formal sign-off from stakeholders to confirm project completion.
- Archive project documentation for future reference.

13.3. Post-Project Evaluation

- Post-project review to evaluate the project's success against its objectives.
- Measure the impact on the organization, including cost savings, security improvements, and system performance.
- Document lessons learned and opportunities for improvement in future projects.

14. Approval and Sign-Off

The following stakeholders have reviewed and approved the Project Plan for Project: METAL SNAKE:

Project Manager:

Brendan Gasparin

X _____

(Signature)

X _____

(Date)

Premises Owner:

[redacted]

X _____

(Signature)

X _____

(Date)

Premises Owner:

[redacted]

X _____

(Signature)

X _____

(Date)