**1. Methodology Tracking: Documented Efforts Toward Methodology**

We’ve followed a research-driven methodology aligned with best practices from:

* **NIST 8425A** (Security Requirements for Consumer Routers)
* **NIST 800-128** (Security-Focused Configuration Management)
* **RFC 2544** (Network Performance Testing)
* **CVSS** (Common Vulnerability Scoring System)
* BSI TR-03148 Secure Broadband Router
* CL-GL-GDS-BCP-V01-211007: Gateway Device Security Best Practices
* TR-124: Functional Requirements for Broadband Residential Gateway Devices
* System Usability Scale (SUS)

**Core Methodological Steps Completed So Far:**

* Defined **quantifiable security metrics** based on research-backed standards.
* Created a **weighted scoring system** for router evaluation.
* Established a research-informed **performance evaluation method** (via spec mining & third-party benchmarks).
* Outlined **usability evaluation** using SUS scoring.
* Structured router reviews into **four main categories**: Security, Usability, Performance, Cost.

2. Tasks Achieved from the Backlog

|  |  |  |
| --- | --- | --- |
| Task ID | Description | Status |
| #12, #16 | Literature review of NIST, ISO, CVSS, BSI TR-03148, CL-GL-GDS-BCP-V01-211007, NIST IR 8425A, TR-124, and RFC standards | Completed |
| #34 | Defined router evaluation categories and sub-metrics | Completed |
| #14 | Created security scoring model quantifiable grid | Completed |
| #35 | Collected documentation from major ISPs (router specs) | In Progress |
| #31 | Setup Codebase | In Progress |
| #32 | Evaluate Deployment Strategy | In Progress |
| #37 | Create Skeleton Website | In Progress |
| #36 | Created comparison matrix template | Completed |
| #23 | Create Research Paper | In Progress |
| #38 | Create Literature Review Summary | Completed |
| #39 | Create Project Realization Documents for Milestone 2 Submission | Completed |
| #40 | Created Methodology explaining the reasoning for the router grid scoring | Completed |
| #41 | Create Scoring Criteria explaining scoring of each item | Completed |
| #46 | Create Visual Diagrams Document diagrams in main README.md file for conveying project details | In Progress |
| #36 | Ensure Issues and Projects are updated and reflected in Github Kaban | In Progress |
| #37 | Create PowerPoint of Project for Milestone 2 | In Progress |
| #38 | Environment Setup - Update README.md file with setup instructions in main repository | In Progress |
| #47 | Create Video for M2 Submission | In Progress |

3. Product Increments (Deliverables in This Milestone)

|  |  |  |
| --- | --- | --- |
| Deliverable | Description | Format |
| Evaluated\_Router\_Matrix | Quantifiable scoring system with weighted criteria | .docx |
| Quantifiable\_Security\_Grid | Researched-backed framework for evaluating routers | .docx |
| Web Structure Draft | One-page site layout with comparison, search, and recommendations |  |
| Literature Review Summary | Summarized References from NIST, IEEE, ISO, CVE databases | .docx |
| Research Paper | Skeleton of research paper with summary | .docx |
| Methodology | Created Methodology explaining the reasoning for the router grid scoring | .md |
| Scoring\_Criteria | Create Scoring Criteria explaining scoring of each item | .md |
| Project\_Realization\_Document | Document prototype-progress-report.md Outlining Milestone 2 Requirement of Progress | .md |
| Visual\_Diagrams | Document diagrams in main README.md file for conveying project details | .md |
| Issue Tracking | Ensure Issues and Projects are updated and reflected in Github Kaban | Github |
| Presentation\_M2 | Create powerpoint of project including 1) conveying a sense of interest and excitement about your project 2) cool product demos, and 3) interesting intermediate findings of conducting your projects. | .pptx |
| Environment Setup | Update README.md file with setup instructions in main repository | .md |
| Video Presentation | Video Reviewing PowerPoint |  |

4.Binding Tasks, Code, and Documentation Together

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| --- | --- | --- | --- |
| Task ID | Description | Code / Artifact | Documentation |
| #12, #16 | Literature review of NIST, ISO, CVSS, BSI TR-03148, CL-GL-GDS-BCP-V01-211007, NIST IR 8425A, TR-124, and RFC standards |  | Literature\_Review\_Summary.docx |
|  | Defined router evaluation categories and sub-metrics | Evaluated\_Router\_Matrix.docx | Scoring\_criteria.md |
| #14 | Created security scoring model quantifiable grid | Quantifiable\_Security\_Grid.docx |  |
| #35 | Collected documentation from major ISPs (router specs) |  | Breaking-Down-ISP-Routers-Security-Privacy-Insights\Research\_Materials\Router\_Review\_Documents |
| #31 | Setup Codebase |  |  |
| #32 | Evaluate Deployment Strategy |  |  |
| #37 | Create Skeleton Website |  |  |
| #36 | Created comparison matrix template | Router\_Comparison\_Matrix.xlsx | Methology.md |
| #23 | Create Research Paper |  |  |
| #38 | Create Literature Review Summary |  | Literature\_Review\_Summary.docx |
| #39 | Create Project Realization Documents for Milestone 2 Submission |  | prototype-progress-report.md |
| #40 | Created Methodology explaining the reasoning for the router grid scoring |  | Methodology.md |
| #41 | Create Scoring Criteria explaining scoring of each item |  | Scoring\_Criteria.md |
| #42 | Research CVEs Found |  | CVE\_Data.xlsx |
| #46 | Create Visual Diagrams Document diagrams in main README.md file for conveying project details |  | README.md |
| #36 | Ensure Issues and Projects are updated and reflected in Github Kaban |  | Github |
| #37 | Create PowerPoint of Project for Milestone 2 |  |  |
| #38 | Environment Setup - Update README.md file with setup instructions in main repository |  | README.md |
| #47 | Create Video for M2 Submission |  |  |