**Lockheed Martin**

**P.L.A.T.Y.P.U.S**

**Project Initiation Document**

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**Sponsors: Ronald Dean**

**Document History**

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| 1.0 | 02/14/2020 | John Gaffney | Initial document creation |
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**Defined Terms**

|  |  |
| --- | --- |
| **Term** | **Description** |
| The Team | Refers to the Product Manager, Scrum Master, and Development Team (see Section 7, Organization and Governance) |
| The Sponsors | Refers to the individuals who serve as representatives from Lockheed Martin |

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# 1 Purpose

This document describes the criteria and plan for development and design of1 P.L.A.T.Y.P.U.S. This is a high-level plan for the project, including:

* Scope and Background
* High-level Project Schedule
* Project Organization
* Cost-Benefit Analysis

# 2 Scope

The primary goal of the P.L.A.T.Y.P.U.S is to be able to identify and visualize the costs of fixing vulnerabilities on a case by case basis. To achieve this goal, we must primarily address our key objectives.

1. Identify security vulnerabilities in a system
2. Highlight the areas with the highest chances of breach
3. Estimate the cost of different repair options

In scope

|  |  |
| --- | --- |
| 1 | Use nmap to scan for vulnerabilities and out put the data to a usable format |
| 2 | After comparing the nmap data to the specific STIGs, display the most vulnerable areas |
| 3 | Use estimates to show the cost of software or hardware upgrades |

Out of Scope

|  |  |
| --- | --- |
| 1 | Scan with a multitude of tools on multiple systems |
| 2  3 | Choose STIG based on operating system  Recommend best solutions based on companies needs |

# 3 Project Background

* The idea for this project came from the concept of balancing the constant updating of security with its cost.
* The intent of this project is to identify vulnerabilities on a system, visualize the highest threats, and show the most cost-effective ways to keep a system secure.
* Users may benefit from this program by cutting their long-term costs of systems updates and upgrades.

# 4 Feasibility Analysis

The feasibility of this project depends on the team’s ability to utilize free and open source of a third-party tools, such as NMAP and Eclipse.

# 5 Assumptions, Dependencies, and Constraints

## 5.1 Assumptions

The team will be developing in the Eclipse operating environment. This will provide the development team with more tools and resources to ensure that they are able to build P.L.A.T.Y.P.U.S efficiently. The team will be making use of NMAP. This provides the most relevant functionality for determining a systems network ports and operating system.

## 5.2 Dependencies

The team is dependent on the use of Windows and Ubuntu Operating Systems. We are dependent on the ability to access the information of the operating systems and the configuration based on STIGs

## 5.3 Constraints

The only constraints on this project will be the 15-week time window. This will be enough time for the development team to complete this project. There is no budget to be concerned with.

# 6 Initial Project Plan

## Sprint 0: PRODUCT BACKLOG

* The goals of this sprint are to organize the product backlog, write user stories and tasks, and prioritize tasks. This sprint will prepare the development team for the work they will be doing throughout every following sprint.

## Sprint 1: RESEARCH AND IMPLEMENT SCAN TOOLS

* The goal of this sprint is to gather information on our system and network scanning tools, create a general mockup of our GUI.
* We will have to research different scanning tools and web scraping tools

## Sprint 2: LOCATE AND WEB SCRAPE STIGS

* The goal of this sprint is to create a file from the nmap scan, scrape STIGs from the web to use for testing and create a visual skeleton of the GUI.

## Sprint 3: PARSE DATA FOR COMPARISON

* The goal of sprint 3 is to parse the data we have received from the nmap scan and compare it to the data from the specific STIGs. Also, we will finalize the look of the GUI.

## Sprint 4: CONNECT FRONT END TO BACK END

* The goal of sprint 4 is to connect our backend process, scanning and paring the data, the buttons and displays of the front-end GUI.

## Sprint 5: PREPARE AND TEST FOR DEMONSTRATION

* In the final sprint, the development team will complete P.L.A.T.Y.P.U.S, all required documentation, implement as many low priority features as time permits, and create a user’s manual.

# 7 Organization and Governance

* The project’s contributors are Elija Amponsah, Isaac Duah-Acheampong, John Gaffney, Kevin Kropinack, Tyler Marolda and Patrick Moore.
* The project’s sponsors are Lockheed Martin and Ronald Dean.
* The Team consists of three main groups: The Product Owner, the Scrum Master, and the Development Team
  + The Product Owner, John Gaffney, is the primary communicator between the Team and the Sponsors. John Gaffney is also in charge of overseeing and delegating the project’s tasks to the Development Team.
  + The Scrum Master, Patrick Moore, is tasked with assisting the Development Team. Patrick Moore will also ensure the Agile Scrum methodology is being followed.
  + The Development Team, consisting of Elija Amponsah, Isaac Duah-Acheampong, Kevin Kropinack and Tyler Marolda, are the primary architects, designers, and coders for the project. It is their responsibility to follow the guidance set forth by the Sponsors and Product Owner and implement the project.

# 8 Communication Plan

* The team meets for 15-minute daily scrums 3 times a week at the beginning of the Software Engineering class. They also meet later after that class for a secondary scrum.
* Sprint reviews will be held every two Wednesdays at 12:30 PM for 30 minutes starting 02/19/202.

# 9 Quality Plan

## 9.1 High-Level Requirements

This is a list of the main high-level requirements which define the project.

### 9.1.1 Functional Requirements

* Run vulnerability scan on designated system
* Create file with vulnerability data
* Check data against Security Technical Implementation Guide
* Display highest risk areas with cost for repair

### 9.1.2 Non-Functional Requirements

* NMAP will run on designated IP to determine vulnerabilities
* Run script to parse data and compare to STIG values
* Calculate highest priority vulnerabilities

## 9.2 Deliverable List

* Project Initiation Document
* Requirements Document
* Design Document
* Validation Plan, with Traceability Matrix
* Test Plan, with Test Scripts
* User Manual, with Poster and Abstract

# 10 Risk Assessment

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Risk** | **Affects** | **Probability** | **Effects** | **Mitigation** |
| Lost team member | Project | Low | Tolerable | Maintain strong communication |
| ***…*** | ***Project/Product/Both*** | ***Low/Moderate/High*** | ***Tolerable/Serious/Catastrophic*** | ***…*** |
| ***…*** | ***Project/Product/Both*** | ***Low/Moderate/High*** | ***Tolerable/Serious/Catastrophic*** | ***…*** |
| ***…*** | ***Project/Product/Both*** | ***Low/Moderate/High*** | ***Tolerable/Serious/Catastrophic*** | ***…*** |

# 11 Estimated Cost and ROI

## 11.1 Estimated Cost

Assuming our sponsors can attend every sprint review for 1 hour, they will spend a total of 6 hours on the project in person or via teleconference. There are no costs associated with the licensing of third-party software or equipment needed. The total cost of the project will be 6 hours of the sponsors time, with miscellaneous time added in the form of short burst communication.

## 11.2 ROI

As a return on the investment placed into this project, P.L.A.T.Y.P.U.S is planned to be designed intuitively enough where most common users can start using it quickly and efficiently.

* Identification of vulnerabilities on a system
* Visualization of prices to fix vulnerabilities to reduce overall costs