*Implementation of an Open-World Recognition-capable Network Intrusion Detection System*

Vision

# Introduction

# The project hopes to build a working prototype that accomplishes the goals of

# Positioning

## 2.1               Problem Statement

[Provide a statement summarizing the problem being solved by this project. The following format may be used:]

|  |  |
| --- | --- |
| The problem of | Computer Networks Attacks |
| affects | [the stakeholders affected by the problem] |
| the impact of which is | [what is the impact of the problem?] |
| a successful solution would be | [list some key benefits of a successful solution] |

## 2.2               Product Position Statement

[Provide an overall statement summarizing, at the highest level, the unique position the product intends to fill in the marketplace. The following format may be used:]

|  |  |
| --- | --- |
| For | [target customer] |
| Who | [statement of the need or opportunity] |
| The (product name) | is a [product category] |
| That | [statement of key benefit; that is, the compelling reason to buy] |
| Unlike | [primary competitive alternative] |
| Our product | [statement of primary differentiation] |

[A product position statement communicates the intent of the application and the importance of the project to all concerned personnel.]

# 3.                  Stakeholder Descriptions

## 3.1               Stakeholder Summary

| **Name** | **Description** | **Responsibilities** |
| --- | --- | --- |
| [Name the stakeholder type.] | [Briefly describe the stakeholder.] | [Summarize the stakeholder’s key responsibilities with regard to the system being developed; that is, their interest as a stakeholder. For example, this stakeholder:  ensures that the system will be maintainable  ensures that there will be a market demand for the product’s features  monitors the project’s progress  approves funding  and so forth] |

**3.2 User Summary**

[Present a summary list of all identified users.]

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Description** | **Responsibilities** | **Stakeholder** |
| [Name the user type.] | [Briefly describe what they represent with respect to the system.] | [List the user’s key responsibilities with regard to the system being developed; for example:  captures details  produces reports  coordinates work  and so on] | [If the user is not directly represented, identify which stakeholder is responsible for representing the user’s interest.] |

## 3.3               User Environment

[Detail the working environment of the target user. Here are some suggestions:

Number of people involved in completing the task? Is this changing?

How long is a task cycle? Amount of time spent in each activity? Is this changing?

Any unique environmental constraints: mobile, outdoors, in-flight, and so on?

Which system platforms are in use today? Future platforms?

What other applications are in use? Does your application need to integrate with them?

This is where extracts from the Business Model could be included to outline the task and roles involved, and so on.]

## 3.4 Summary of Key Stakeholder or User Needs

[List the key problems with existing solutions as perceived by the stakeholder or user. Clarify the following issues for each problem:

• What are the reasons for this problem?

• How is it solved now?

• What solutions does the stakeholder or user want?]

[It is important to understand the **relative** importance the stakeholder or user places on solving each problem. Ranking and cumulative voting techniques indicate problems that **must** be solved versus issues they would like addressed.

Fill in the following table—if using Rational RequisitePro to capture the Needs, this could be an extract or report from that tool.]

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Need** | **Priority** | **Concerns** | **Current Solution** | **Proposed Solutions** | |
| Broadcast messages |  |  |  | |  |

## 3.5 Alternatives and Competition

[Identify alternatives the stakeholder perceives as available. These can include buying a competitor’s product, building a homegrown solution, or simply maintaining the status quo. List any known competitive choices that exist or may become available. Include the major strengths and weaknesses of each competitor as perceived by the stakeholder or end user.]

# 4. Product Overview

[This section provides a high level view of the product capabilities, interfaces to other applications, and system configurations. This section usually consists of two subsections, as follows:

• Product perspective

• Assumptions and dependencies]

## 4.1 Product Perspective

[This subsection of the **Vision** document puts the product in perspective to other related products and the user’s environment. If the product is independent and totally self-contained, state it here. If the product is a component of a larger system, then this subsection needs to relate how these systems interact and needs to identify the relevant interfaces between the systems. One easy way to display the major components of the larger system, interconnections, and external interfaces is with a block diagram.]

## 4.2 Assumptions and Dependencies

[List each factor that affects the features stated in the **Vision** document. List assumptions that, if changed, will alter the **Vision** document. For example, an assumption may state that a specific operating system will be available for the hardware designated for the software product. If the operating system is not available, the **Vision** document will need to change.]

# 5. Product Features

[List and briefly describe the product features. Features are the high-level capabilities of the system that are necessary to deliver benefits to the users. Each feature is an externally desired service that typically requires a series of inputs to achieve the desired result. For example, a feature of a problem tracking system might be the ability to provide trending reports. As the use-case model takes shape, update the description to refer to the use cases.

Because the **Vision** document is reviewed by a wide variety of involved personnel, the level of detail needs to be general enough for everyone to understand. However, enough detail must be available to provide the team with the information they need to create a use-case model.

To effectively manage application complexity, we recommend for any new system, or an increment to an existing system, capabilities be abstracted to a high enough level so 25-99 features result. These features provide the fundamental basis for product definition, scope management, and project management. Each feature will be expanded in greater detail in the use-case model.

Throughout this section, each feature will be externally perceivable by users, operators, or other external systems. These features should include a description of functionality and any relevant usability issues that must be addressed. The following guidelines apply:

• Avoid design. Keep feature descriptions at a general level. Focus on capabilities needed and why (not how) they should be implemented.

• If you are using the Rational RequisitePro toolkit, all need to be selected as requirements of type for easy reference and tracking.]

[Define the priority of the different system features. Include, if useful, attributes such as stability, benefit, effort, and risk.]

# 6. Other Product Requirements

[At a high level, list applicable standards, hardware, or platform requirements; performance requirements; and environmental requirements.

Define the quality ranges for performance, robustness, fault tolerance, usability, and similar characteristics that are not captured in the Feature Set.

Note any design constraints, external constraints, or other dependencies.

Define any specific documentation requirements, including user manuals, online help, installation, labeling, and packaging requirements.

Define the priority of these other product requirements. Include, if useful, attributes such as stability, benefit, effort, and risk.]