**Network Security Analysis**

Overview

* Project assignment in Network Security
* Individual project
* Based on a full semester, it is prepared in stages

Primarily covers six aspects of network security:

1. Network (Wired/Wireless) Security
2. System (PC/Server/Device) Security
3. Backups/Disaster Recovery
4. Physical Security
5. AAA (Authorization/Authentication/Accounting)
6. User Education

Includes separate sections for:

* Wireless range analysis
* Port scanning (Internal/External)
* Action Plan (Remediation priorities)

Network Security Analysis

Outcomes and Objectives

Outcomes directly related to the Network Security Analysis have been **bolded**.

OUTCOME 1: Students will be able to use applications common to network security professionals

OBJECTIVES:

1.       Perform packet analysis

2.       Interpret packet analysis results

**3.       Perform a network scan**

**4.       Interpret network scan results**

**5.       Analyze a system log file**

6.       Explain the appropriate use of exploitation tools

OUTCOME 2: Students will be able to configure network security

OBJECTIVES:

**1.       Configure an operating system to improve network security**

**2.       Configure a security device to improve network security**

**3.       Configure a firewall to permit and deny traffic**

4.       Configure a virtual private network

5.       Evaluate different types of encryption

OUTCOME 3: Students will be able to evaluate vulnerabilities

OBJECTIVES:

**1.       Assess different types of security**

**2.       Recommend remediation strategies**

3.       Perform a basic risk assessment

**4.       Write a network security analysis**

OUTCOME 4: Students will be able to explain best practices as they apply to network security

OBJECTIVES:

1.       Identify professional codes of conduct common to network security professions

2.       Explain the responsibilities of a network security professional

3.       Interpret how laws affect hacking activities

4.       Interpret the implications of different security policies

5.       Describe compliance regulations

Network Security Analysis

Assignment Weight - Point Values

**Network Security Analysis - Assignment Parts – Point values**

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| --- | --- |
| **Assignment** | **Points** |
| Part 1 - Summary | 20 |
| Part 2 - Outline | 20 |
| Part 3 – Rough Draft | 60 |
| Part 4 – Final Copy | 300 |
| **Total Points** | **400** |

**Assignment Description: Network Security Analysis – Part 1 – Summary**

Write a one or two paragraph summary on your security analysis. Briefly explain who your customer is, what type of network they have, what some of your key concerns are.

Include FIVE or more questions that you want to ask the customer about their network. These should be questions that will give you information that will help you prepare for the analysis. If YOU are the customer, write down five questions that you want answered by the security analysis.

Using Microsoft Word (or in a Word-compatible .DOCX document), summarize the above information for the security analysis. Include the following information at the top of the page:

* Class ID
* Semester
* Student Name
* Customer description in one or two sentences

Example:

* CMP 123
* Spring 2019
* John Doe
* Four bedroom house, family of four, two adults and two teenage children with a variety of wired and wireless devices

**Assignment Description: Network Security Analysis – Part 2 – Outline**

**Remember that this is just an outline for your security analysis. You are NOT performing these activities yet. This is creating your "To Do List" of items and issues you will analyze for the project.**

Consider the following Security Analysis categories that were discussed in class and are contained in the security analysis template:

* Network/Wireless Security
* System (PC/Server) Security
* Backups/Disaster Recovery
* Physical Security
* AAA (Authorization/Authentication/Accounting)
* User Education

For EACH of the above categories, create five to seven topics/questions in each category that you will analyze for your customer.

Then, for each topic/question, write a brief action item describing how you will approach that topic for your customer.

For example:

* Category: Wireless Network Security
* Topic: Is the wireless network password protected?
* Action: Use laptop to try and connect to wireless network.

Your grade will be based on the quality of your questions and action items.

Using Microsoft Word (or in a Word-compatible .DOCX format), create an outline based on the categories that were discussed in class for the security analysis. Include the following information:

* Class ID
* Semester
* Student Name
* Customer description in one or two sentences

Example:

* CMP 123
* Fall 2015
* John Doe
* Family of four, two adults and two teenage children with a variety of wired and wireless devices

**Assignment Description: Network Security Analysis – Part 3 – Rough Draft 1**

Submit a rough draft of your security analysis.

It is recommended that you try to write about at least one potential or actual vulnerability under each category for this rough draft. The more you have completed, the more useful my feedback will be.

Submit it to blackboard AND bring in a printed copy to class.

**Assignment Description: Network Security Analysis – Part 4 – Final Copy**

Submit the final copy of your network security analysis to this drop box before the deadline.

Be sure to use the grading rubric as a guide/checklist before submission.