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Descriptive Title: Information Assurance and Security

Laboratory Entry Level Overview

1. Setting up firewalls on windows 10

Procedural Documentation

Purpose

The purpose of this documentation is knowing and explaining the proper procedures in setting up the firewalls on windows 10. A firewall's main purpose is to allow non-threatening traffic in and to keep dangerous traffic out.

Scope

This describes the process of setting up firewalls on windows 10 and its effects.

Definitions/Acronyms

• **Firewall:** it is a network security device that monitors and filters incoming and outgoing network traffic based on an organization's previously established security policies.

Procedures

Setting up firewalls on windows 10

• Open the **control panel.**



• Then in All Control Panel Items



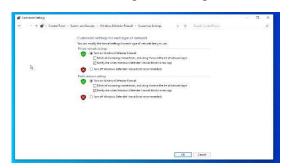
• Look for Windows Defender Firewall



• On the left you will see Turn Windows Defender Firewall on or off.



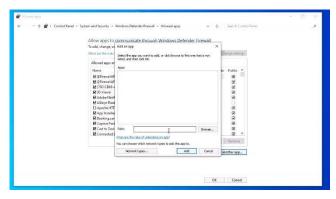
Unless you have a third party firewall, windows firewall should be on by default. In this tab, you can block all incoming connections, including those in the list of allowed apps. If you're in a situation where you want to maximize security when you want to connect to a public network, or when there is new computer worms spreading across the internet, this is a good setting to use.



- You will not be notified when windows firewall blocks programs. Programs in the allowed list of allowed programs are ignored. When you block all incoming connections, you can still view most web pages, send and receive email and instant messages.
- O Avoid turning off windows firewall unless you have another firewall to take over for it. Turning it off leaves your system vulnerable to damage from hackers and malicious software. And as a point of information, do not run two firewalls at the same time. The conflicting firewalls will actually leave your system vulnerable.
- If you want to block or allow an app or feature through windows firewall, click on allow on the left. You can remove an allowed app from the list by unchecking its box.



To add a program, click on allow another app. Then look for the file path and add to
the list. If you are unable to add or find the program, you might need to consider opening
a port for the application. For instance you play a game like call of duty or some other
online games on your system you might want to open a port that allows the game to
reach your system.



• Go to advanced settings in the firewall defender. Click on inbound rules then new rule and follow the onscreen prompts to set up the new open port.

Explain the effects of these settings through searching for justification on the said setup

Setting up firewalls on Windows 10 is important because they protect your computer or network from dangerous or unnecessary network traffic, preventing outside cyberattacks. Additionally, firewalls can stop harmful software from connecting to a computer or network over the internet.

The effects of setting up firewalls on windows 10 provides protection against outside cyber attackers by shielding our computer or network from malicious or unnecessary network traffic. Moreover, firewalls protect our computer or network from outside cyberattacks by removing harmful or unnecessary network traffic. Additionally, firewalls can stop malicious software from connecting to a computer or network over the internet.

2. How to configure the firewall on windows server

Procedural Documentation

Purpose

The purpose of this documentation is knowing and explaining the proper procedures in configuration of a firewalls on windows server. A firewall configuration main purpose is to keep organizations protected from data leakage and cyberattacks.

Scope

This documentation describes the process of how to configure the firewall on a windows server and its effects.

Definitions/Acronyms

- **Firewall Configuration:** it involves configuring domain names and Internet Protocol (IP) addresses and completing several other actions to keep firewalls secure.
- **Firewall policy configuration:** it is based on a network types called "profiles" that can be set up with security rules to prevent cyber attacks.
- Windows Server: it is a group of operating systems designed by Microsoft that supports enterprise-level management, data storage, applications, and communications.

Procedures

- Using Server Manager to configure firewall
- Opening Firewall
- Windows Defender Firewall interface
- Elements and actions in the firewall interface
- First way to open properties
- Second way to open properties
- Creating rules in the firewall
- Look at existing rules
- Services Microsoft Management Console
- Troubleshooting firewall

Explain the effects of these settings through searching for justification on the said setup

The effects of configuring a firewall on a windows server is that a properly configured firewall allow authorized users to access data inward and outward and blocking malicious users from accessing data. In the internet world running servers or computer without a firewall is very dangerous. And chances of getting hacked are very high. By prohibiting unwanted users from accessing our computer through the Internet or a network, Windows Firewall assists in

keeping it secure. If the firewall is disabled, all traffic will be able to reach the system and an attacker may be better able to take advantage of a network service's vulnerability.

3. How to set up file server on windows server

Procedural Documentation

Purpose

The purpose of this documentation is knowing and explaining the proper procedures in setting up a file server on windows server.

Scope

This describes the process of how to set up file server on windows server and its effects.

Definitions/Acronyms

- **File Server:** it is a computer responsible for the storage and management of data files so that other computers on the same network can access the files.
- Windows Server: it is a group of operating systems designed by Microsoft that supports enterprise-level management, data storage, applications, and communications.

Procedures

- Launch Server Manager
- The Pre-configured file server default
- Install and set-up file server
- Verify file server has been installed
- Shares, iSCSI, and Work Folders
- Features of File Server Resource Manager

Explain the effects of these settings through searching for justification on the said setup

The effects of setting up file servers is that it provides a central location to keep all of our company's files, allowing different users to work with the same documents, spreadsheets, and other data without difficulty. One computer can be used as a backup by a company using this centralized storage to ensure the security of their data. Furthermore, file servers make it easier for an organization to store, secure, and share information. Given that ransomware and hackers commonly target file servers, more care must be taken to protect them from intrusions. There are advantages and disadvantages of file servers, the advantages is that data is more secured as the server may be physically locked in a room with only authorized access, and the disadvantages of file server is that it is minutely slower because we are performing an external call to the server from our program. File server programs tend to be large.