Monday, February 20, 2023 8:39 PM

## **Important Headings are Underlined and Bold:**

A bullet point indicates a note and NOT a step



- Bullet points may have images along with them to help visually
  - O Bullet points may also have sub-bullet points for a more in-depth explanation

## **Headings in Bold Also Indicate Important Steps:**

- 1. Steps are numbered, every new page starts with Step 1 and so on
  - a. Steps may have sub-steps to add more information
- 2. Steps may also have images to help visually



- 3. **Bold** word in steps indicate a button
- 4. Italicized words in steps indicate input fields or options
- 5. Keyboard Input in Courier New Font
- 6. <u>Underlined</u> words indicate files
- 7. Menu navigation is indicated by the pipe symbol and italic words: Start | Programs | MS Word
- 8. Numbers referencing other steps will be in red(1...2...3)
- 9. Code will be in a textbox in COURIER NEW font

```
#include <stdio.h>
int main(void)
printf("Hello World in C:)");
return 0;
}
```

## **Enabled SSH in Windows Server**

Friday, February 24, 2023 12:49 PM

#### **Enabled SSH:**

- 1. In Server Manager, navigated to the Local Server menu in the right column
  - a. Set IE Enhanced Security Configuration to OFF

Microsoft Defender Antivirus Real-Time Protection: On Feedback & Diagnostics Settings

IE Enhanced Security Configuration Off

Time zone (UTC-05:00) Eastern Time (US & Canada)

- Downloaded and installed OpenSSH
  - a. In Windows Server, opened Internet Explorer by clicking the icon in the taskbar
  - b. In the URL, went to the following website to download the latest version of Open SSH: <a href="https://github.com/PowerShell/Win32-OpenSSH/releases">https://github.com/PowerShell/Win32-OpenSSH/releases</a>

**⊘**<u>OpenSSH-Win64zip</u> 4.19 MB Dec 6, 2022

- c. Once file was downloaded, right clicked the .zip file and extracted all contents to : C:\Program Files\OpenSSH-Win64
- d. Opened PowerShell by searching for PowerShell in the Windows search icon and ran as administrator by right clicking and clicking *Run as Administrator*
- e. Modified the path system environment variable by running the following command and pressed Enter: setx PATH "\$env:path;C:\Program Files\OpenSSH-Win64" -m

```
PS C:\Windows\system32> setx PATH "$env:path;C:\Program Files\OpenSSH-Win64" -m
SUCCESS: Specified value was saved
```

- f. Switched to the location of OpenSSH directory by running the following command: cd "C:\Program Files \OpenSSH-Win64\OpenSSH-Win64"
- g. Ran the install script using the following command: .\install-sshd.ps1
- h. When Security Warning appears, selected the [R]Run Once option
- 3. Enabled automatic startup and started the sshd and ssh-agent by running the following command:
  - a. Set-Service sshd -StartupType Automatic; Set-Service ssh-agent -StartupType Automatic; Start-Service sshd; Start-Service ssh-agent

## **Allowed Access to Programs in Firewall:**

- 1. Allowed access in Firewall
  - a. Opened Control Panel and navigated to *System and Security | Windows Firewall | Advanced Settings* and selected the *Inbound Rules* option located on the left-hand side
  - b. In Inbound Rules, selected New Rule on the right-hand side and conducted the following tasks to add a new rule:
  - c. In pop-up menu, selected Custom option and clicked Next
  - d. In Programs, selected All Programs option and clicked Next
  - e. Left Protocols and Ports on default settings and clicked Next
  - f. Left Scope on default settings and clicked **Next**
  - g. In the Action menu, selected Allow the Connection and clicked Next

h. Under profile, left Domain, Private, and Public all checked and clicked Next and then Finish

#### **SSH to a Server:**

- In this example, Windows Server will SSH to an Ubuntu machine
- 1. In Windows Server, opened a PowerShell terminal as administrator
- 2. In terminal, entered ssh admin\_local@172.16.0.102
  - a. When prompted, entered password

```
PS C:\Windows\system32> ssh admin_local@172.16.0.102
admin_local@172.16.0.102's password:
Welcome to Ubuntu 22.04.1 LTS (GNU/Linux 5.19.0-32-generic x86_64)

* Documentation: https://help.ubuntu.com

* Management: https://landscape.canonical.com

* Support: https://ubuntu.com/advantage

0 updates can be applied immediately.

The list of available updates is more than a week old.
To check for new updates run: sudo apt update
Last login: Thu Feb 16 19:35:19 2023 from 172.16.0.1
admin_local@ubuntu:~$ _____
```

3. SSH connection was successfully established

# **Enabled SSH Ubuntu**

Friday, February 24, 2023 2:14 PM

## **Enabled SSH on Ubuntu:**

- 1. Logged into Ubuntu with an admin account and opened a terminal
- 2. Entered sudo apt update to update packages
- 3. If packages weren't up to date, used sudo apt upgrade to install the updates
- 4. Used sudo apt install openssh-server to install OpenSSH
- 5. Verified that the SSH service is started by executing sudo sytematl status ssh
  - a. Service should be running

```
Active: active (running)
```

6. Allowed SSH(port22) through Firewall by running sudo ufw allow ssh

#### **SSH** to a Server:

- In this example, Ubuntu will SSH into Windows Server
- 1. In a terminal, entered ssh@admin@172.16.0.1
  - a. When prompted about connection, entered yes

admin@maindomain.com@ubuntu:~\$ ssh admin@172.16.0.1

```
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes warning: Permanently added '172.16.0.1' (ED25519) to the list of known hosts. admin@172.16.0.1's password:
Microsoft Windows [Version 10.0.20348.1487]
(c) Microsoft Corporation. All rights reserved.
maindomain\admin@DC C:\Users\admin>
```

2. SSH Connection was successfully established