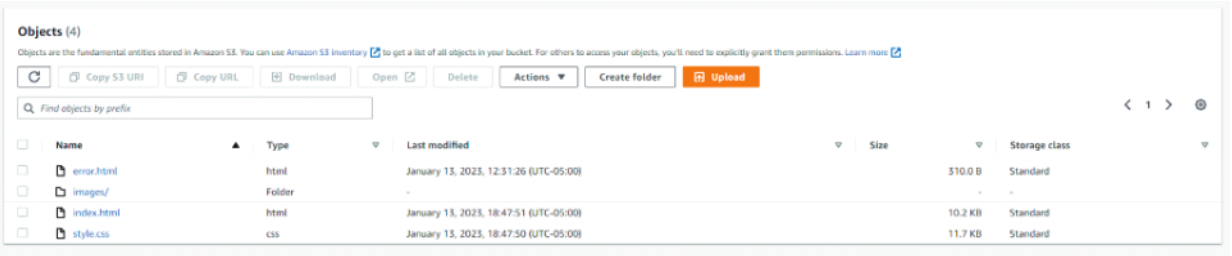
KEY

Monday, February 20, 2023 8:39 PM

Important Headings are Underlined and Bold:

- A bullet point indicates a note and NOT a step

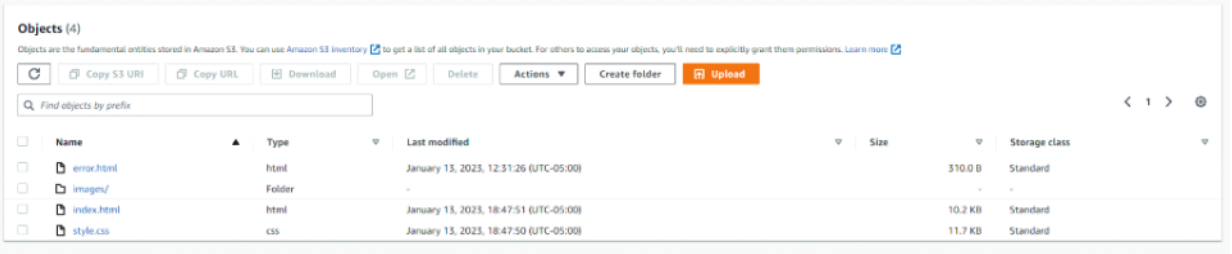


- Bullet points may have images along with them to help visually
  - Bullet points may also have sub-bullet points for a more in-depth explanation

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. Underlined 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

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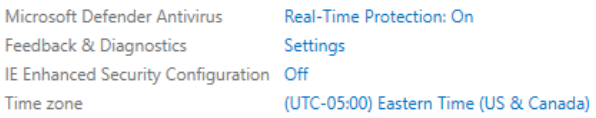
Enabled SSH:

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



2. 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: *https://github.com/PowerShell/Win32-OpenSSH/releases*

   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`

   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**

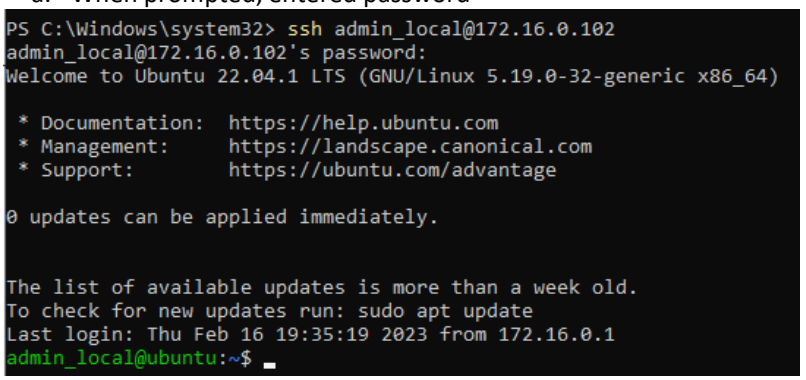
h. Under profile, left *Domain*, *Private*, and *Public* all checked and clicked **Next** and then **Finish**

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



3. SSH connection was successfully established

Enabled SSH Ubuntu

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Enabled SSH on Ubuntu:

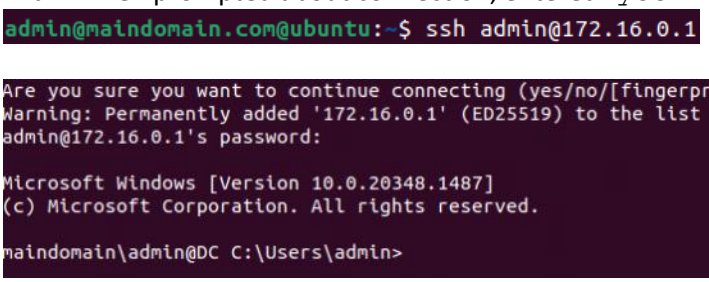
1. Logged into Ubuntu with an admin account and opened a terminal
2. Entered `sudo apt update` to update packages
3. If packages weren't up to date, used `sudo apt upgrade` to install the updates
4. Used `sudo apt install openssh-server` to install OpenSSH
5. Verified that the SSH service is started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



2. SSH Connection was successfully established