Holo-Setup-Custom-ISO

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Table of contents

Holo-Setup-Custom-ISO 3
Software Staging to Holo-Build Host 3
Overview 3
Prerequisites 3
Download the Required Software 3
Access the Holodeck Toolkit Intake Form 3
Download remaining software to the Holo-Build host 3
Automated Holo-Console ISO Creation 4
Overview 4
Unzip VCF Lab Constructor 4
Edit the Configuration Files 4
Configure createISO.ps1 4
Validate createISO.ps1 customization files 5
Create ISO 6
Holo-Console ISO Creation 6
Staging of Holo-Console ISO to ESXi Host 9
Overview 9
Upload Holo-Console ISO 9
Upload the Holo-Console ISO File 9

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Holo-Setup-Custom-ISO

Software Staging to Holo-Build Host

Overview

This section details downloading and staging software components on the Holo-Build host used bootstrap the Holodeck deployment.

Prerequisites

To complete this section, you will need the following:

- A Microsoft Windows Server 2019-based system with
- Internet access
- Local access to Holodeck ESXi hosts
- Minimum of 200 GB of free space available

Download the Required Software

Upon completion of this task, all the required software will be downloaded in preparation for the creation of the Holo-Console ISO image

Access the Holodeck Toolkit Intake Form

- Navigate to https://via.vmw.com/Get-Holo-Toolkit
    - Complete the intake form
    - Follow the link in the intake form to download the Holodeck-Standard-Main1.3.zip file to C:\Users\Administrator\Downloads

Download remaining software to the Holo-Build host

- Download the following packages to C:\Users\Administrator\Downloads
    - Microsoft Server 2019 Desktop Experience (Eval copy with 6 month expiration)
    - Latest VMware VMTools package
    - Google Chrome Standalone
        - Ensure standalone EXE package
    - Latest VMware PowerCLI zip file
    - Latest VMware PowerVCF zip file
    - Latest VMware Power Validated Solutions Module zip file
    - Latest PuTTY SSH Client MSI
    - VMware OVFtool 4.5
        - Requires VMware CustomerConnect login
        - Download 64 Bit Windows Installer
    - VMware Cloud Foundation 4.5 Cloud Builder OVA
        - Requires VMware CustomerConnect login
    - Notepad ++ 8.4.7
    - VMware vRealize Automation 8.11.2 Easy Installer
        - Requires VMware CustomerConnect login
        - Download version 8.11.2 (Other versions have not been tested to work with the VLC Holodeck package)
        - This package is also available via VMUG Advantage vRealize Suite 2019 download

Automated Holo-Console ISO Creation

Overview

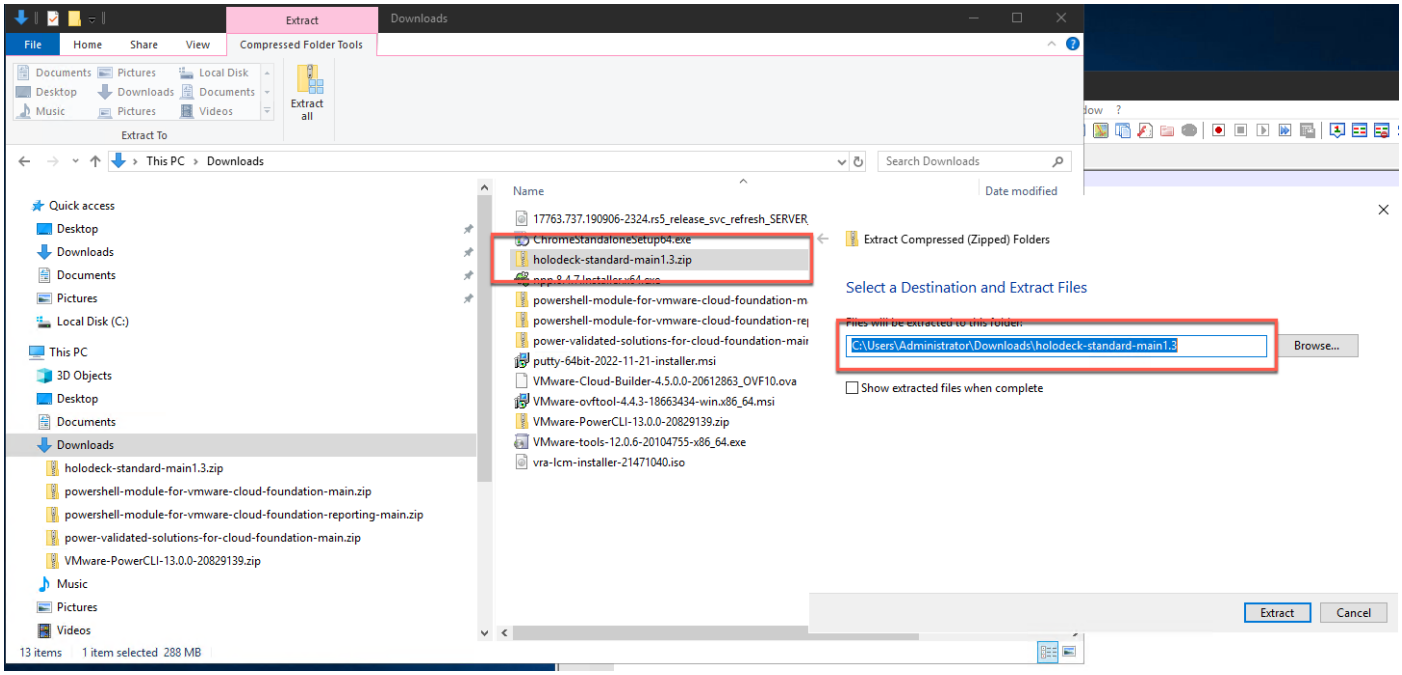
Interaction with the VLC Holodeck Standard configuration is done through a virtual machine referred to as the *Holo-Console*. This VM is a specifically configured Microsoft Windows Server 2019 based VM deployed inside the Holodeck Pod. Each Holodeck Pod deployed must contain one Holo-Console. This step uses PowerShell Automation to create a custom ISO that will provide complete hands-off deployment of Holo-Console

Unzip VCF Lab Constructor

A. Unzip holodeck-standard-main1.3.zip in the downloads directory

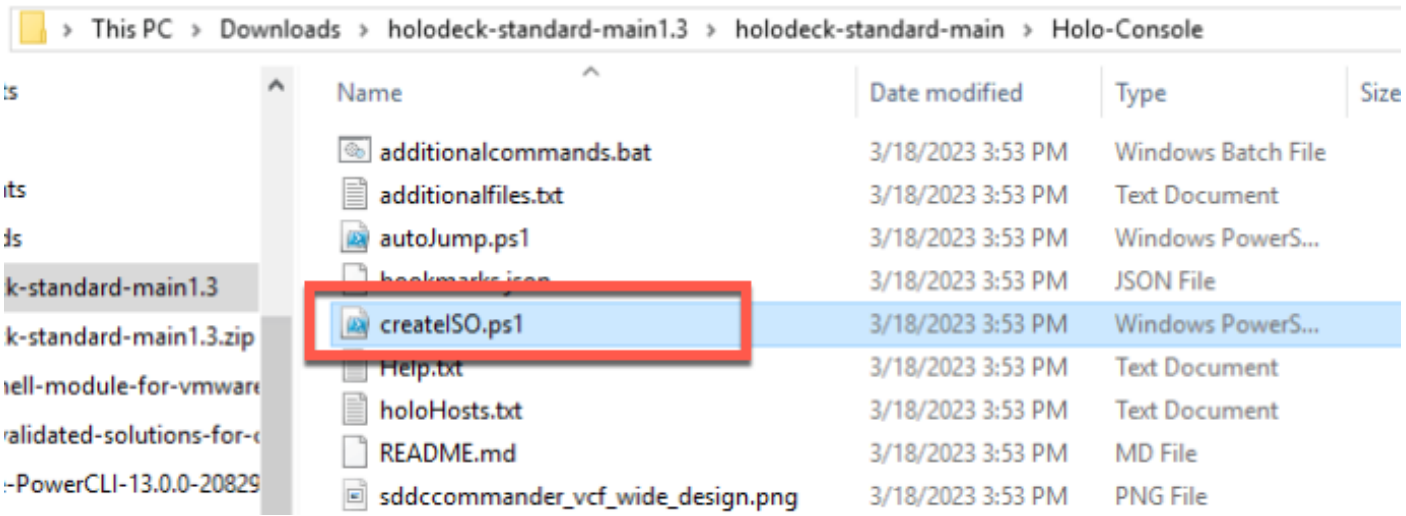
Edit the Configuration Files

Various configuration files are required to be edited to match the specific environment.



Configure createISO.ps1

A. Navigate to C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console
B. Open createISO.ps1 with notepad ++



C. Validate the filenames in the default createISO.ps1 match what you have downloaded. In cases where newer versions of files are downloaded, update filenames in createISO.ps1. This example is highlighting the vRealize Automation Easy Installer which was recently updated to version 8.11.2

createISO.ps1

```
$HoloConsoleParams = @{
    addHostsFile = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\holoHosts.txt"
    addCmdsFile = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\additionalcommands.bat"
    addFilesFile = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\additionalfiles.txt"
    bookMarksFile = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\bookmarks.json"
    chromeInstallerExeLoc = "C:\Users\Administrator\Downloads\ChromeStandaloneSetup64.exe"
    cloudBuilderISOLoc = "C:\Users\Administrator\Downloads\VMware-Cloud-Builder-4.5.0.0-20612863_OVF10.ova"
    holodeckZipLoc = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3.zip"
    lcmInstallOVALoc = "C:\Users\Administrator\Downloads\vra-lcm-installer-21471040.iso"
    ovfToolMsiLoc = "C:\Users\Administrator\Downloads\VMware-ovftool-4.4.3-18663434-win.x86_64.msi"
    powerCLIZipLoc = "C:\Users\Administrator\Downloads\VMware-PowerCLI-13.0.0-20829139.zip"
    powerVCFZipLoc = "C:\Users\Administrator\Downloads\powershell-module-for-vmware-cloud-foundation-main.zip"
    powerVSZipLoc = "C:\users\Administrator\Downloads\power-validated-solutions-for-cloud-foundation-main.zip"
    puttyMSILoc = "C:\users\Administrator\Downloads\putty-64bit-2022-11-21-installer.msi"
    vmToolsExeLoc = "C:\Users\Administrator\Downloads\VMware-tools-12.0.6-20104755-x86_64.exe"
    winIsoLoc = "C:\Users\Administrator\Downloads\17763.737.190906-2324.rs5_release_svc_refresh_SERVER_EVAL_x64FRE_en-us_1.iso"
    isoRole = "AD"
    esxLicense = ""
    nsxLicense = ""
    vcLicense = ""
    vsanLicense = ""
    }

.$PSScriptRoot\autoJump.ps1 @HoloConsoleParams
```

D. Add License Keys between the quotations at the bottom of createISO.ps1 for the following products.

- esxLicense (vSphere)
- nsxLicense (NSX)
- vcLicense (vCenter Server)
- vsanLicense (vSAN)

createISO.ps1

```
$HoloConsoleParams = @{
    addHostsFile = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\holoHosts.txt"
    addCmdsFile = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\additionalcommands.bat"
    addFilesFile = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\additionalfiles.txt"
    bookMarksFile = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\bookmarks.json"
    chromeInstallerExeLoc = "C:\Users\Administrator\Downloads\ChromeStandaloneSetup64.exe"
    cloudBuilderISOLoc = "C:\Users\Administrator\Downloads\VMware-Cloud-Builder-4.5.0.0-20612863_OVF10.ova"
    holodeckZipLoc = "C:\Users\Administrator\Downloads\holodeck-standard-main1.3.zip"
    lcmInstallOVALoc = "C:\Users\Administrator\Downloads\vra-lcm-installer-21471040.iso"
    ovfToolMsiLoc = "C:\Users\Administrator\Downloads\VMware-ovftool-4.4.3-18663434-win.x86_64.msi"
    powerCLIZipLoc = "C:\Users\Administrator\Downloads\VMware-PowerCLI-13.0.0-20829139.zip"
    powerVCFZipLoc = "C:\Users\Administrator\Downloads\powershell-module-for-vmware-cloud-foundation-main.zip"
    powerVSZipLoc = "C:\users\Administrator\Downloads\power-validated-solutions-for-cloud-foundation-main.zip"
    puttyMSILoc = "C:\users\Administrator\Downloads\putty-64bit-2022-11-21-installer.msi"
    vmToolsExeLoc = "C:\Users\Administrator\Downloads\VMware-tools-12.0.6-20104755-x86_64.exe"
    winIsoLoc = "C:\Users\Administrator\Downloads\17763.737.190906-2324.rs5_release_svc_refresh_SERVER_EVAL_x64FRE_en-us_1.iso"
    isoRole = "AD"
    esxLicense = ""
    nsxLicense = ""
    vcLicense = ""
    vsanLicense = ""
    }

.$PSScriptRoot\autoJump.ps1 @HoloConsoleParams
```

E. Save createISO.ps1

Validate createISO.ps1 customization files

A. Notepad++ is copied into the ISO using the additionalfiles.txt customization file. If you are using a version of Notepad++ other than 8.4.7 it will need to be updated here. This customization file also copies the SDDC Commander custom wallpaper and PowerShell script to do the customization into the console. This is a very handy feature if you need to make files available in each deployed console.

C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\additionalfiles.txt - Notepad++ [Administrator]

File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?

additionalcommands.bat | additionalfiles.txt

```
C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\README.md
C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\sddccommander_vcf_wide_design.png
C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console\setwallpaper.ps1
C:\Users\Administrator\Downloads\npp.8.4.7.Installer.x64.exe
```

B. Notepad++ is deployed in the Holo-Console using the additionalcommands.bat customization file. Commands placed here are run at the very last step of automated Holo-Console deploy. If you are using a version of Notepad++ other than 8.4.7 update the installer filename here. Also note that files placed in the ISO are accessible at %WINDIR%\Setup\Scripts\ when this script is run. This is also a very handy feature for customizing your Holo-Console deployment

createISO.ps1 | additionalcommands.bat | additionalfiles.txt

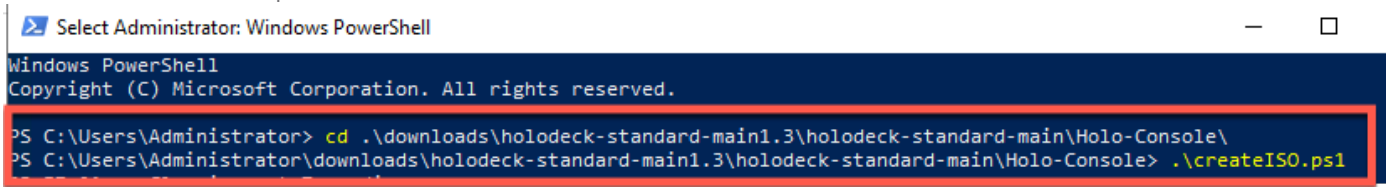
```
::============================================================
:: This file gives several examples of commands that can be run
:: All of the installers, files and scripts referenced will need
:: to be copied to the image using by listing in the
:: additionalfiles parameter
:: Note:If there are spaces in the path or filename it must be quoted.
::============================================================
::
:: Add a *non-persistant* route

route add 0.0.0.0 mask 0.0.0.0 10.0.0.1

:: Runs a powershell script to set wallpaper

%WINDIR%\system32\WindowsPowerShell\v1.0\powershell.exe -c %WINDIR%\Setup\Scripts\setwallpaper.ps1

:: Futher Examples
:: You will need to download the binaries/installer for additional software and ensure it is copied t
::
:: Example - Install Notepad ++ using the executable installer with "Silent" switch
::
%WINDIR%\Setup\Scripts\npp.8.4.7.Installer.x64.exe /S
::
:: Example - Install FireFox using the MSI installer with "quiet" switch and "no restart".
::
:: "%WINDIR%\Setup\Scripts\Firefox Setup 107.0.msi" /q /norestart
```

Create ISO

The following steps are performed create the Holo-Console ISO

Holo-Console ISO Creation

A. **Open a PowerShell window NOTE: Ensure you open a 64 bit PowerShell session versus an X86 session.**
B. Change directories to C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console
C. Run .\createISO.ps1

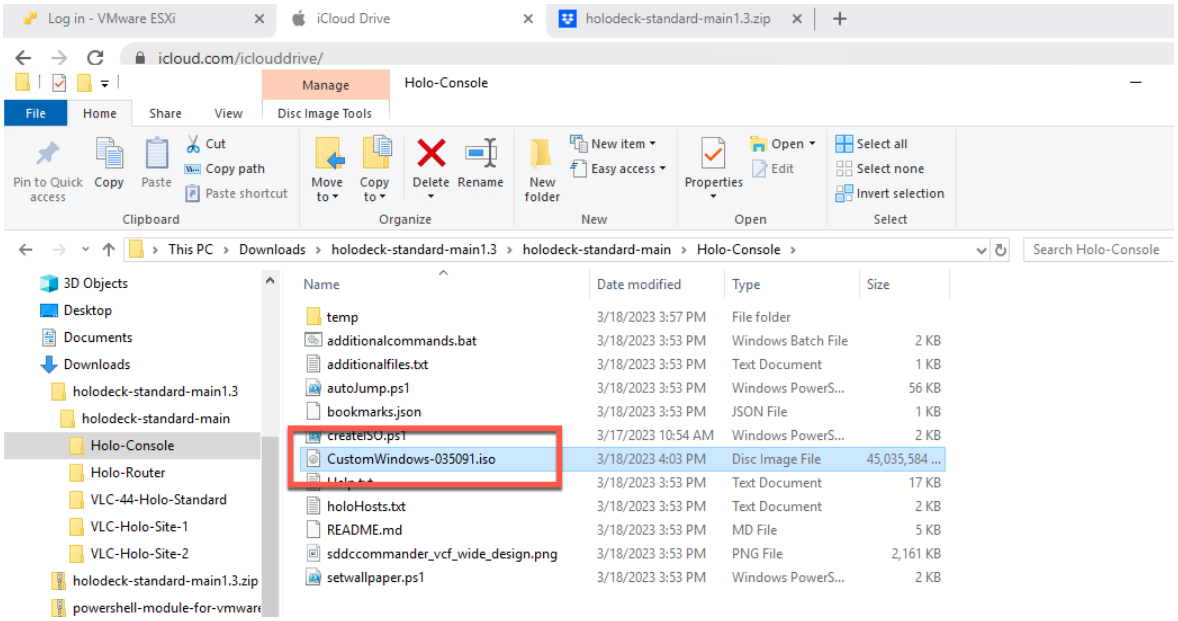


D. **The process takes approximately 7 minutes**

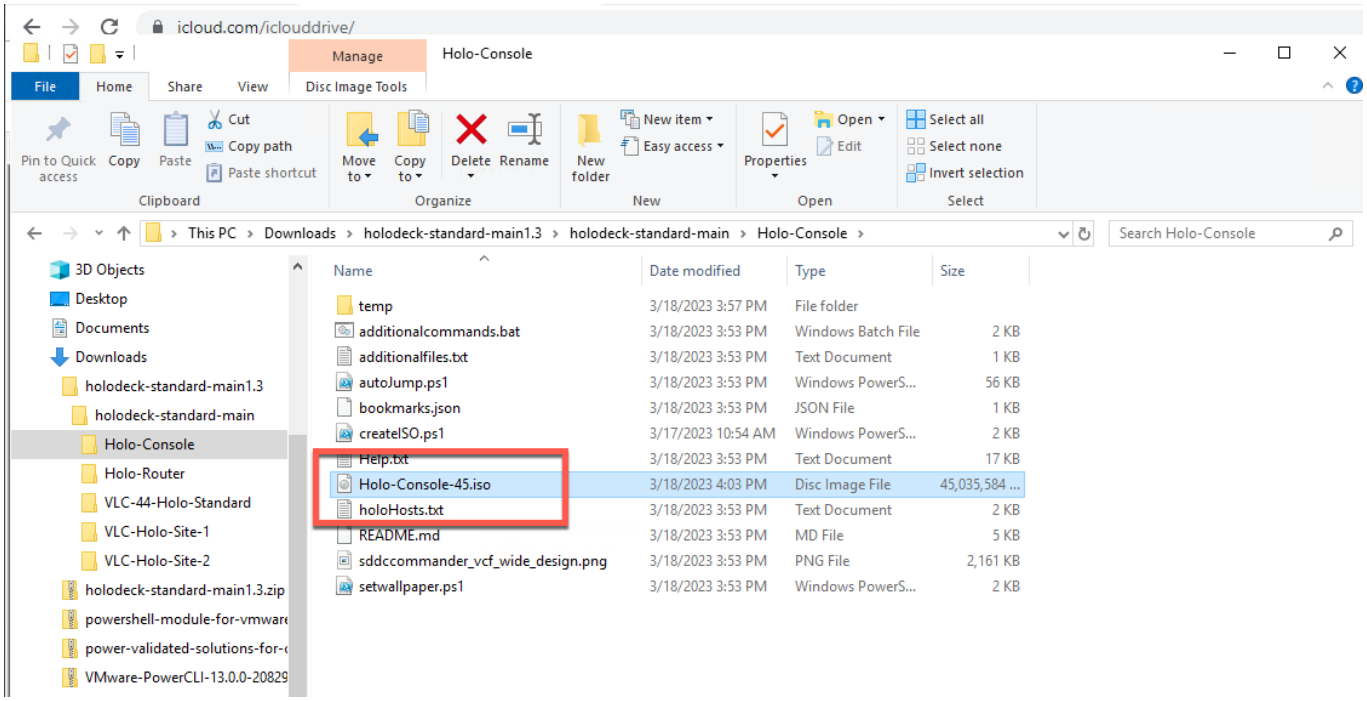
```
Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----        3/18/2023   3:57 PM                Scripts
03:57:56 :> Extracting holodeck-standard-main\VLC-Holo-Site-1 to C:\Users\Administrator\downloads\holodeck-standard-main
1.3\holodeck-standard-main\Holo-Console\Temp\VLC
03:58:00 :> Adding License keys to NOLIC-Holo-Site-1-vcf-ems-public.json
03:58:00 :> Extracting holodeck-standard-main\VLC-Holo-Site-2 to C:\Users\Administrator\downloads\holodeck-standard-main
1.3\holodeck-standard-main\Holo-Console\Temp\VLC
03:58:03 :> Adding License keys to NOLIC-Holo-Site-2-vcf-ems-public.json
03:58:03 :> Creating VLC.zip
03:58:06 :> Copying hosts file
03:58:06 :> Copying additional specified files
03:58:07 :> Copying Cloudbuilder ISO (large)
03:59:09 :> Copying vRealize LCM Installer (large)
03:59:50 :> Copying and creating install script for default apps
03:59:51 :> Customize and move files to appropriate locations
03:59:51 :> Create custom ISO
04:03:12 :> ISO creation Complete


    Directory: C:\Users\Administrator\downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
-a----        3/18/2023   4:03 PM    46116438016 CustomWindows-035951.iso


PS C:\Users\Administrator\downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console>
```

E. The final file size with Cloud Builder and VRA Easy Installer in the ISO is approximately 46GB

F. The ISO file generated is located under C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console with a filename similar to “CustomWindows-XXXXXX.iso



G. Rename the ISO to **Holo-Console-45.iso**


icloud.com/iclouddrive/
Manage
Holo-Console
File
Home
Share
View
Disc Image Tools
Pin to Quick access
Copy
Paste
Cut
Copy path
Paste shortcut
Clipboard
Move to
Copy to
Delete
Rename
Organize
New folder
New item
Easy access
New
Properties
Open
Edit
Open
Select all
Select none
Invert selection
Select
This PC › Downloads › holodeck-standard-main1.3 › holodeck-standard-main › Holo-Console ›
Search Holo-Console
3D Objects
Desktop
Documents
Downloads
holodeck-standard-main1.3
holodeck-standard-main
Holo-Console
Holo-Router
VLC-44-Holo-Standard
VLC-Holo-Site-1
VLC-Holo-Site-2
holodeck-standard-main1.3.zip
powershell-module-for-vmware
power-validated-solutions-for-
VMware-PowerCLI-13.0.0-20829
Name
Date modified
Type
Size
temp 3/18/2023 3:57 PM File folder
additionalcommands.bat 3/18/2023 3:53 PM Windows Batch File 2 KB
additionalfiles.txt 3/18/2023 3:53 PM Text Document 1 KB
autoJump.ps1 3/18/2023 3:53 PM Windows PowerS... 56 KB
bookmarks.json 3/18/2023 3:53 PM JSON File 1 KB
createISO.ps1 3/17/2023 10:54 AM Windows PowerS... 2 KB
Help.txt 3/18/2023 3:53 PM Text Document 17 KB
Holo-Console-45.iso 3/18/2023 4:03 PM Disc Image File 45,035,584 ...
holoHosts.txt 3/18/2023 3:53 PM Text Document 2 KB
README.md 3/18/2023 3:53 PM MD File 5 KB
sddccommander_vcf_wide_design.png 3/18/2023 3:53 PM PNG File 2,161 KB
setwallpaper.ps1 3/18/2023 3:53 PM Windows PowerS... 2 KB

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Staging of Holo-Console ISO to ESXi Host

Overview

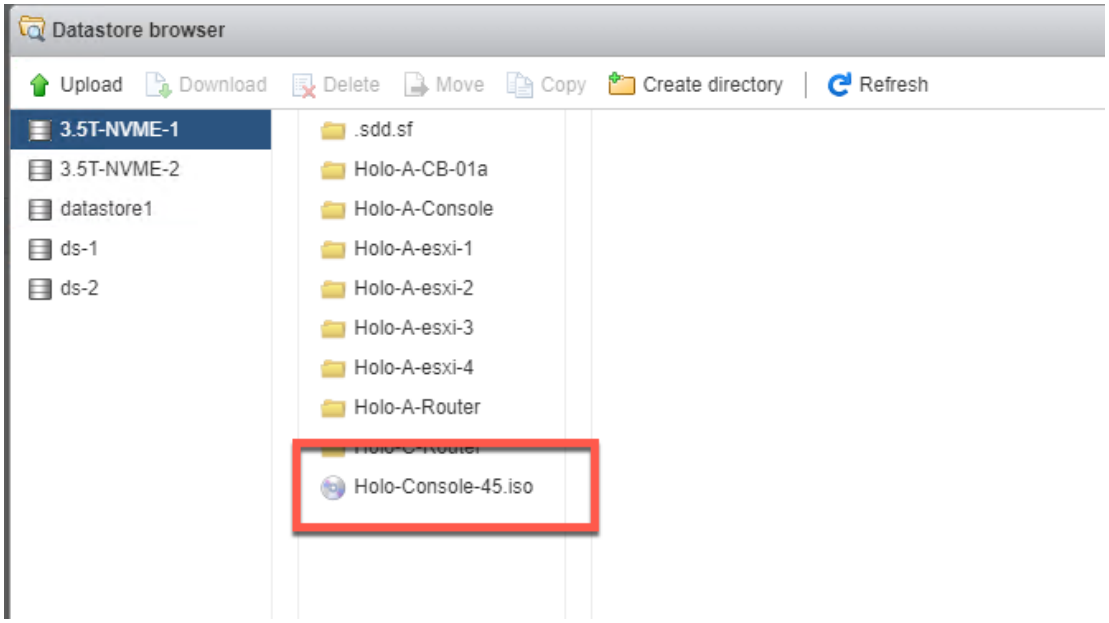
After the Holo-Console customer ISO image has been created, it needs to be moved to a datastore accessible by the ESXi host in order to create a Holo-Console VM.

Upload Holo-Console ISO

The following steps are performed move the ISO to ESXi local storage.

Upload the Holo-Console ISO File

A. Using the vSphere Web UI, connect to the ESXi server
B. Select an appropriate datastore with enough spare capacity to host the Holo-Console custom ISO image
C. Open the Datastore Browser for the selected datastore
D. Select Upload
E. Select the Holo-Console-45.iso file under C:\Users\Administrator\Downloads\holodeck-standard-main1.3\holodeck-standard-main\Holo-Console



F. Due to file size, this can take 10 minutes or more
G. Wait for the upload to complete successfully
H. Close the Datastore Browser

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