



VCF TechCon

Powered by VMUG

VCF 9 offline depot on Synology NAS

Vikash Jhagroe

Who am I

- More than 20 years of experience working in IT
- Currently in the role of VCF TAM at VMware by Broadcom
- Tech enthusiast
- Privacy advocate

vmware®
by **Broadcom**

In this session

VCF 9 offline depot running on Synology NAS



VMware Cloud
Foundation™



Why an offline depot?

- A disconnected environment
- Limited bandwidth
- A lab environment
- Part of DTA
- Stability of depot during VCF deployment
- High secure or classified infrastructure (DARK SITE)

Why on Synology NAS?

- Synology already might be running in your LAB
- Ease of use
- We all love a nice GUI
- Inexpensive storage options

Requirements

- Internet connection
- Synology NAS
- Broadcom download token
- VCF Download Tool
- Staging server (Linux)
- Terminal
- WinSCP
- Coffee

Download VCF Download Tool

BROADCOM Products Solutions Support and Services Company How To Buy

Important: You are accessing an internal view of this application.

← VMware Cloud Foundation 9.0.1.0

Primary Downloads Open Source **Drivers & Tools**

Search

9.0.1.0 534266 English

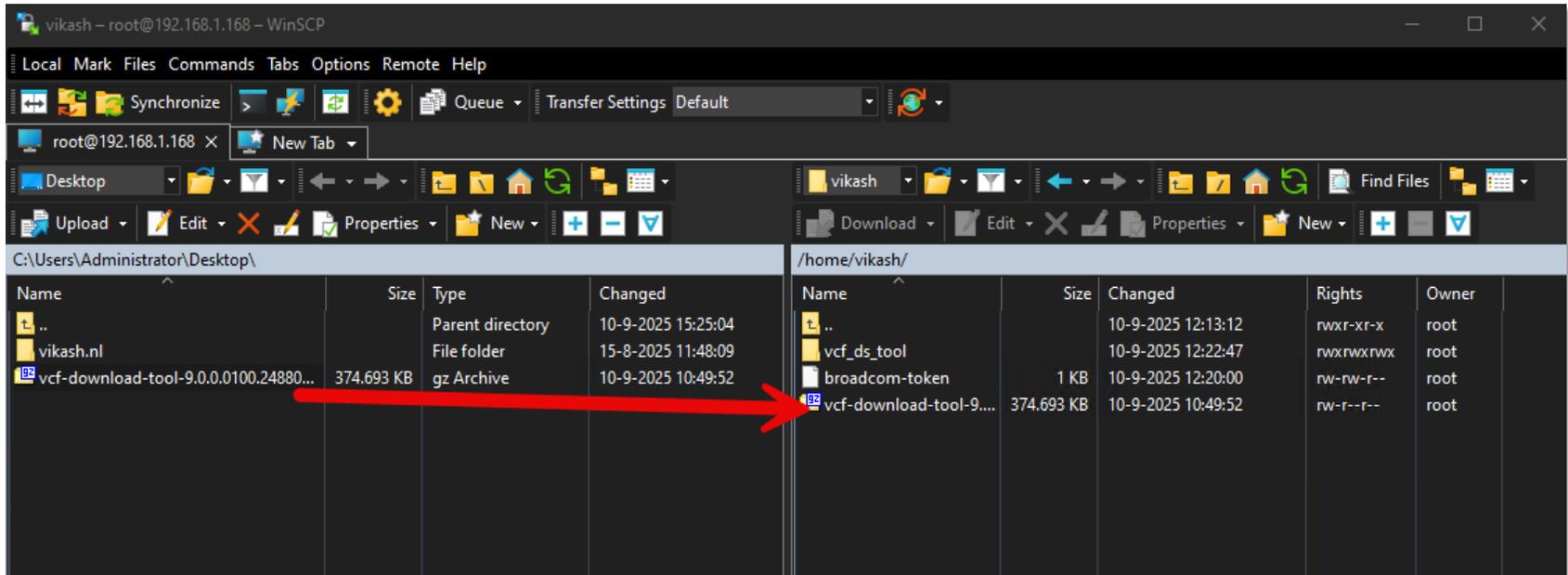
I agree to the [Terms and Conditions](#) and [Compliance Reporting Terms and Conditions](#)

VMware Tools Drivers & Tools	Release 13.0.5.0	Release Level Info 534376	Packlist ID 534376	Copy
VCF Download Tool	Release 9.0.1.0	Release Level Info 534925	Packlist ID 534925	Copy
VMware Cloud Foundation Operations for logs - Tools SDK	Release 9.0.1.0	Release Level Info 534220	Packlist ID 534220	Copy
VMware NSX Drivers and Tools	Release 9.0.1.0	Release Level Info 534361	Packlist ID 534361	Copy
VMware Virtual Disk Development Kit (VDDK)	Release 9.0.1.0	Release Level Info 534016	Packlist ID 534016	Copy
VMware vSAN File Services Appliance	Release 9.0.1.0	Release Level Info 534313	Packlist ID 534313	Copy
VMware vSAN Witness Appliance	Release	Release Level Info 534314	Packlist ID 534314	Copy

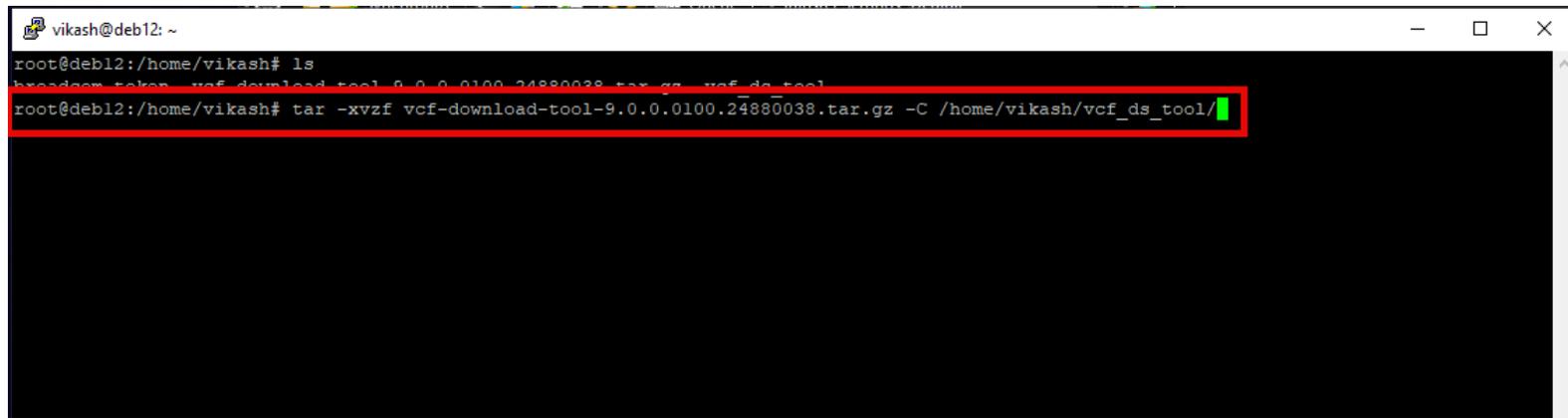
Hi! How may



Copy VCF Download Tool to staging



Extract VCF Download Tool

A terminal window titled 'vikash@deb12: ~' showing a sequence of commands. The first command is 'ls', followed by a redacted line. The third command, 'tar -xvzf vcf-download-tool-9.0.0.0100.24880038.tar.gz -C /home/vikash/vcf_ds_tool/', is highlighted with a red box. A green cursor is visible at the end of the command.

```
vikash@deb12: ~
root@deb12:/home/vikash# ls
broader token vcf-download-tool-9.0.0.0100.24880038.tar.gz vcf_ds_tool
root@deb12:/home/vikash# tar -xvzf vcf-download-tool-9.0.0.0100.24880038.tar.gz -C /home/vikash/vcf_ds_tool/
```

```
tar -xvzf vcf-download-tool-9.0.0.0100.24880038.tar.gz -C /home/vikash/vcf_ds_tool/
```

Download depot files on staging server

```
vikash@deb12: ~  
root@deb12:/home/vikash# cd vcf_ds_tool/  
root@deb12:/home/vikash/vcf_ds_tool# cd bin/  
root@deb12:/home/vikash/vcf_ds_tool/bin# ls  
lcm-bundle-transfer-util lcm-bundle-transfer-util.bat vcf-download-tool vcf-download-tool.bat  
root@deb12:/home/vikash/vcf_ds_tool/bin# ./vcf-download-tool binaries download --vcf-version 9.0.0 --type=INSTALL --depot-store /depot --depot-download-token-file /home/vikash/broadcom-token
```

```
./vcf-download-tool binaries download --vcf-version 9.0.0 --type=INSTALL --depot-store /depot --depot-download-token-file /home/vikash/broadcom-token
```

Wait for depot downloads to finish

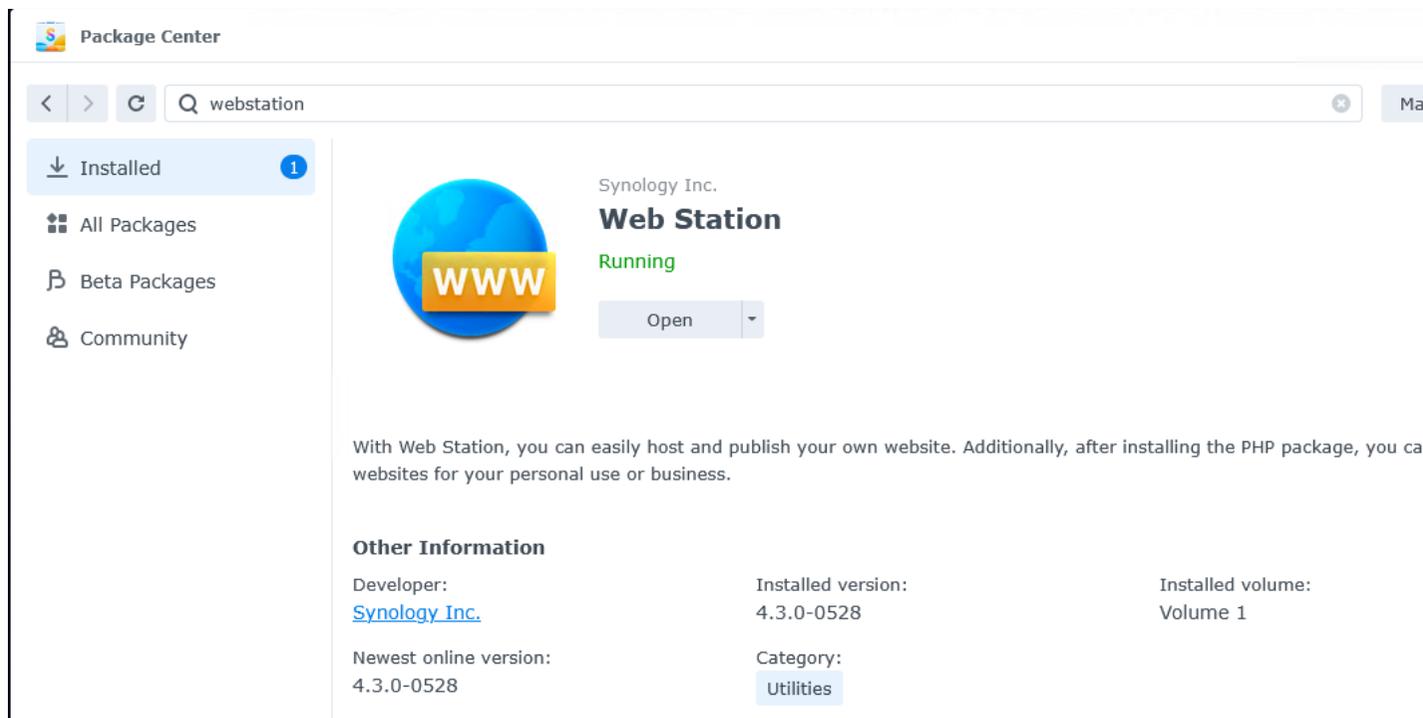
```
vikash@deb12: ~  
6/17/2025 | 365.9 MiB | INSTALL  
68b6d038-925a-5a5a-8365-2c90d08caa70 | VCFDT | VMware Cloud Foundation Download Tool | 9.0.0.0100.24880038 | 0  
8/04/2025 | 365.9 MiB | INSTALL  
05aa9ca7-0873-5b82-b5f6-c9b5601c9beb | VSAN_FILE_SERVICES | VMware vSAN File Services | 9.0.0.0.24755229 | 0  
6/17/2025 | 1.0 GiB | INSTALL  
4c209b46-cc8a-5604-978f-70d8dc1014d3 | VRSLCM | VMware Cloud Foundation Operations fleet management | 9.0.0.0.24695816 | 0  
6/17/2025 | 1.5 GiB | INSTALL  
244dcbc0-d592-540c-893a-95eb07877a23 | VRA | VMware Cloud Foundation Automation | 9.0.0.0.24701403 | 0  
6/17/2025 | 21.2 GiB | INSTALL  
dea0261e-b521-5691-ba2b-91439b7db89d | VRO | VMware Orchestrator | 9.0.0.0.24674408 | 0  
6/17/2025 | 4.3 GiB | INSTALL  
094257b5-5b54-5199-9ebb-562c59alf47a | NSX_T_MANAGER | VMware NSX | 9.0.0.0.24733063 | 0  
6/17/2025 | 10.0 GiB | INSTALL  
28ca23b6-4688-53ae-af9c-aeld4d50d9f1 | VROPS | VMware Cloud Foundation Operations | 9.0.0.0.24695812 | 0  
6/17/2025 | 2.6 GiB | INSTALL  
55459c44-5641-5c3f-b0fd-6a3082273b2b | HCX | VMware Cloud Foundation Operations HCX | 9.0.0.0.24699341 | 0  
6/17/2025 | 3.8 GiB | INSTALL  
be896bf9-3dae-5f65-be31-0149940a6a17 | VRNI | VMware Cloud Foundation Operations for networks | 9.0.0.0.24694676 | 0  
6/17/2025 | 12.9 GiB | INSTALL  
1a161174-aaa6-5c63-802e-7359019fde35 | VIDB | VMware Identity Broker | 9.0.0.0.24695128 | 0  
6/17/2025 | 9.6 GiB | INSTALL  
22f49cc3-357f-5d2d-94ad-bf78ed7c0996 | VCF_OPS_CLOUD_PROXY | VMware Cloud Foundation Operations Collector | 9.0.0.0.24695833 | 0  
6/17/2025 | 2.7 GiB | INSTALL  
5c26160e-da27-5f3e-acda-cc29769fd44d | VRLI | VMware Cloud Foundation Operations for logs | 9.0.0.0.24695810 | 0  
6/17/2025 | 1.4 GiB | INSTALL  
6da840f4-2bc7-5c6c-af21-14c1831f29ae | VMTOOLS | VMware Tools Async Release | 13.0.0.0.24696475 | 0  
6/17/2025 | 100.0 MiB | INSTALL  
-----  
16 elements  
-----  
Validating available free space.  
Required disk space: 1389.9, available disk space : 52680.1  
Successfully validated available free space.  
Starting binaries download.
```

Locate downloaded files in /depot

```
vikash@deb12: ~  
├── NSX_T_MANAGER  
│   └── nsx-unified-appliance-9.0.0.0.24733065.ova  
├── SDDC_MANAGER_VCF  
│   ├── Compatibility  
│   │   └── VmwareCompatibilityData.json  
│   └── VCF-SDDC-Manager-Appliance-9.0.0.0.24703748.ova  
├── VCENTER  
│   └── VMware-VCSA-all-9.0.0.0.24755230.iso  
├── VCFDT  
│   └── vcf-download-tool-9.0.0.0.24703747.tar.gz  
├── VCF_OPS_CLOUD_PROXY  
│   └── Operations-Cloud-Proxy-9.0.0.0.24695833.ova  
├── VIDB  
│   └── vidb-external-9.0.0.0.24695128.tar  
├── VMTOOLS  
│   ├── portal_input.xml  
│   ├── VMware locker tools-light 13.0.0-0.24696475.vib  
│   └── vmw-ESXi-9-vmtools-13.0-metadata.zip  
├── VRA  
│   └── vmap-vcfa-combined-9.0.0.0.24701403.tar  
├── VRLI  
│   └── Operations-Logs-Appliance-9.0.0.0.24695810.ova  
├── VRNI  
│   ├── VMware-Cloud-Foundation-Operations-for-Networks-9.0.0.0.24694676-collector.ova  
│   └── VMware-Cloud-Foundation-Operations-for-Networks-9.0.0.0.24694676-platform.ova  
├── VRO  
│   └── O11N_VA-9.0.0.0.24674408.ova  
├── VROPS  
│   └── Operations-Appliance-9.0.0.0.24695812.ova  
├── VRSLCM  
│   └── VCF-OPS-Lifecycle-Manager-Appliance-9.0.0.0.24695816.ova  
├── VSAN_FILE_SERVICES  
│   ├── VMware-vSAN-File-Services-Appliance-9.0.0.0.24755229-cloud-components.vmdk  
│   ├── VMware-vSAN-File-Services-Appliance-9.0.0.0.24755229-log.vmdk  
│   ├── VMware-vSAN-File-Services-Appliance-9.0.0.0.24755229_OVF10.cert  
│   ├── VMware-vSAN-File-Services-Appliance-9.0.0.0.24755229_OVF10.mf  
│   ├── VMware-vSAN-File-Services-Appliance-9.0.0.0.24755229_OVF10.ovf  
│   └── VMware-vSAN-File-Services-Appliance-9.0.0.0.24755229-system.vmdk  
├── metadata  
│   ├── manifest  
│   │   └── v1  
│   │       └── vcfManifest.json  
│   └── productVersionCatalog  
│       └── v1  
│           ├── productVersionCatalog.json  
│           └── productVersionCatalog.sig  
├── vsan  
│   └── hcl  
│       ├── all.json  
│       └── lastupdatedtime.json  
└── 26 directories, 29 files
```

Name	Size	Changed	Rights	Owner
HCX		10-9-2025 12:23:06	rwXrwXr-X	root
HCX		10-9-2025 12:36:57	rwXrwXr-X	root
NSX_T_MANAGER		10-9-2025 12:31:42	rwXrwXr-X	root
SDDC_MANAGER_VCF		10-9-2025 12:36:56	rwXrwXr-X	root
VCENTER		10-9-2025 12:23:08	rwXrwXr-X	root
VCF_OPS_CLOUD_PR...		10-9-2025 12:35:05	rwXrwXr-X	root
VCFDT		10-9-2025 12:30:22	rwXrwXr-X	root
VIDB		10-9-2025 12:31:25	rwXrwXr-X	root
VMTOOLS		10-9-2025 12:23:10	rwXrwXr-X	root
VRA		10-9-2025 12:23:08	rwXrwXr-X	root
VRLI		10-9-2025 12:36:20	rwXrwXr-X	root
VRNI		10-9-2025 12:26:31	rwXrwXr-X	root
VRO		10-9-2025 12:37:02	rwXrwXr-X	root
VROPS		10-9-2025 12:30:33	rwXrwXr-X	root
VRSLCM		10-9-2025 12:23:14	rwXrwXr-X	root
VSAN_FILE_SERVICES		10-9-2025 12:36:50	rwXrwXr-X	root

Enable webserver package on Synology



The screenshot shows the Synology Package Center interface. The search bar contains 'webstation'. The left sidebar shows navigation options: 'Installed' (with a '1' badge), 'All Packages', 'Beta Packages', and 'Community'. The main content area displays the 'Web Station' package by Synology Inc., which is currently 'Running'. An 'Open' button is visible. Below the package name, there is a description: 'With Web Station, you can easily host and publish your own website. Additionally, after installing the PHP package, you can websites for your personal use or business.' The 'Other Information' section provides details: Developer: [Synology Inc.](#), Installed version: 4.3.0-0528, Installed volume: Volume 1, Newest online version: 4.3.0-0528, and Category: Utilities.

Package Center

Q webstation

Installed 1

All Packages

Beta Packages

Community

Synology Inc.
Web Station
Running

Open

With Web Station, you can easily host and publish your own website. Additionally, after installing the PHP package, you can websites for your personal use or business.

Other Information

Developer: [Synology Inc.](#)

Installed version: 4.3.0-0528

Installed volume: Volume 1

Newest online version: 4.3.0-0528

Category: Utilities

Change HTTP back-end server to Apache

The screenshot displays the 'Web Station' management console. On the left sidebar, the 'Web Service' option is highlighted with a red box. In the main area, the 'Edit' button is also highlighted with a red box and an arrow. Below this, a table lists the 'Default Service' with columns for 'Service type', 'Name', 'Status', 'Service/Database Version', and 'Description'. The 'Default Service' row is selected. An 'Edit Default Service' dialog box is open, showing configuration options. The 'HTTP back-end server' dropdown is set to 'Apache HTTP Server 2.4', highlighted with a red box and an arrow. The 'PHP' dropdown is set to 'Nginx'. The 'Enable personal website' checkbox is checked, and its dropdown is also set to 'Apache HTTP Server 2.4', highlighted with a red box. Below this, another 'HTTP back-end server' dropdown is set to 'Apache HTTP Server 2.4', also highlighted with a red box. The 'PHP' dropdown for this section is set to 'Not configured'. At the bottom of the dialog, there are 'Cancel' and 'Save' buttons. A note at the bottom of the dialog reads: 'Note: You can go to **Script Language Setting** > **PHP** to add PHP profiles.'

Service type	Name	Status	Service/Database Version	Description
^ Default Service				
Default Service	WebStation Default Ser...	Normal	--	

Edit Default Service

HTTP back-end server: Apache HTTP Server 2.4

PHP: Nginx

Enable personal website: Apache HTTP Server 2.4

Enable this option to allow local users to create a personal website by uploading web pages to the self-created "www" folder in the user home directory.

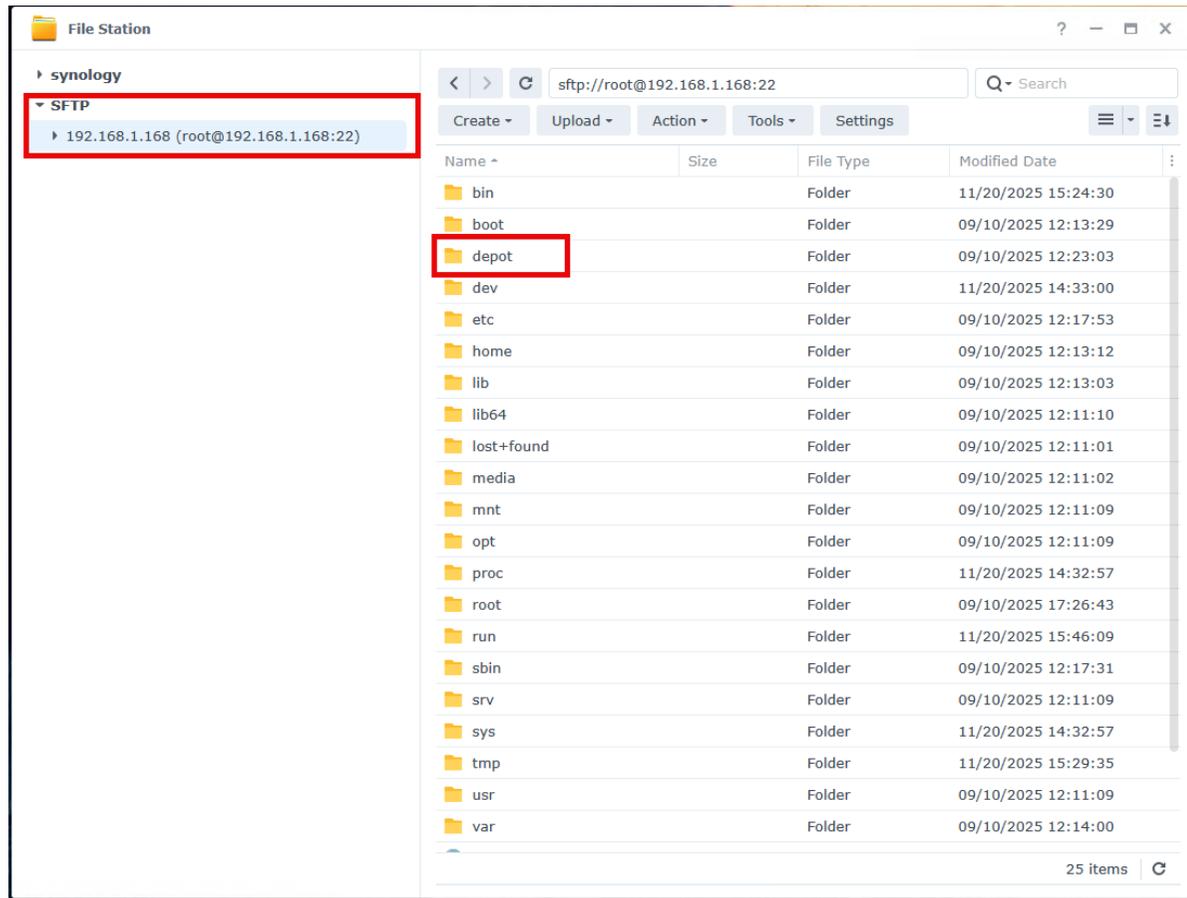
HTTP back-end server: Apache HTTP Server 2.4

PHP: Not configured

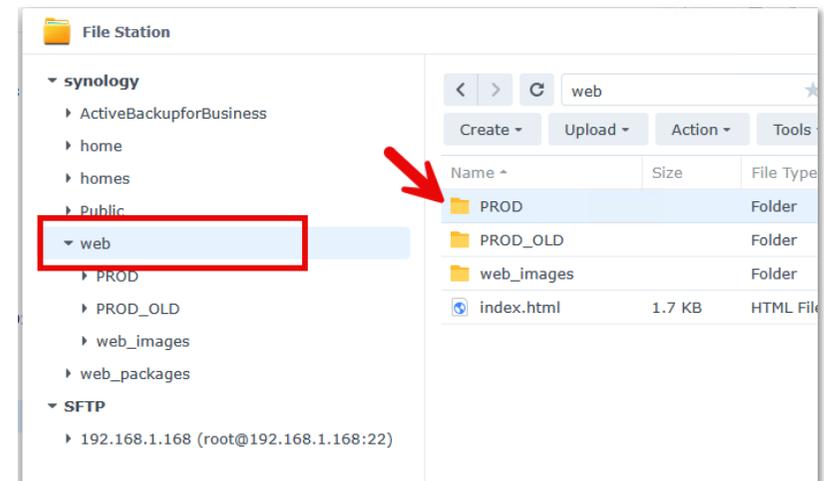
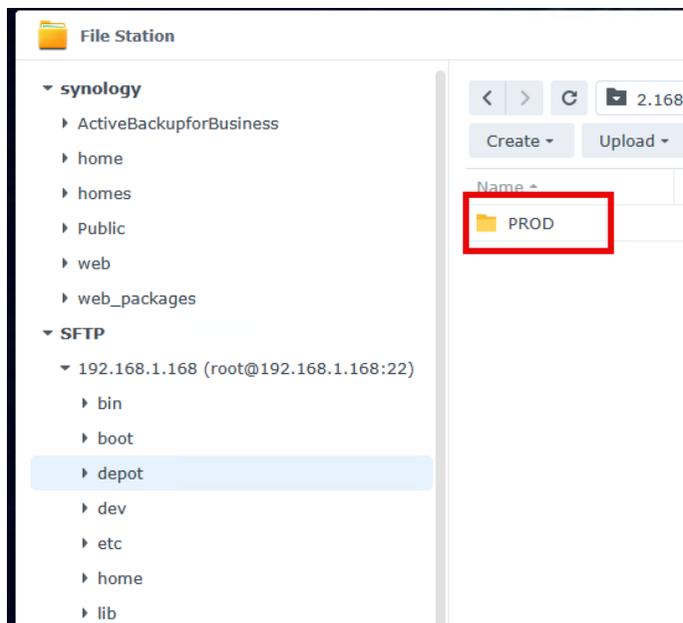
Note: You can go to **Script Language Setting** > **PHP** to add PHP profiles.

Cancel Save

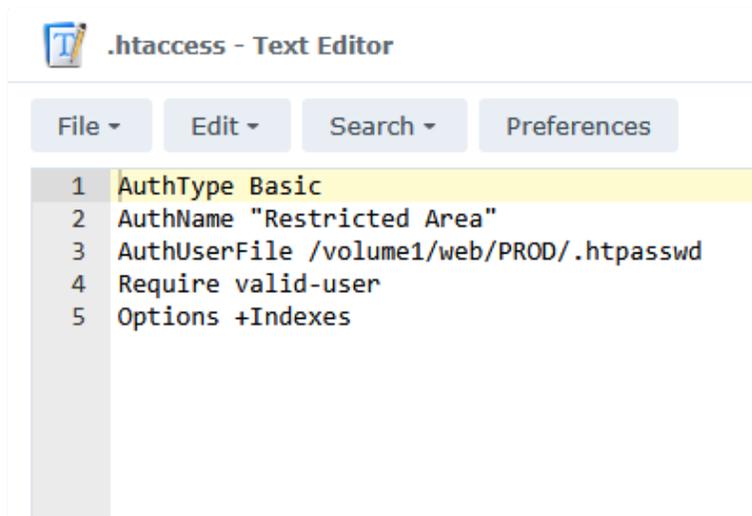
Connect to staging server using File Station



Copy content of /depot to Synology webroot

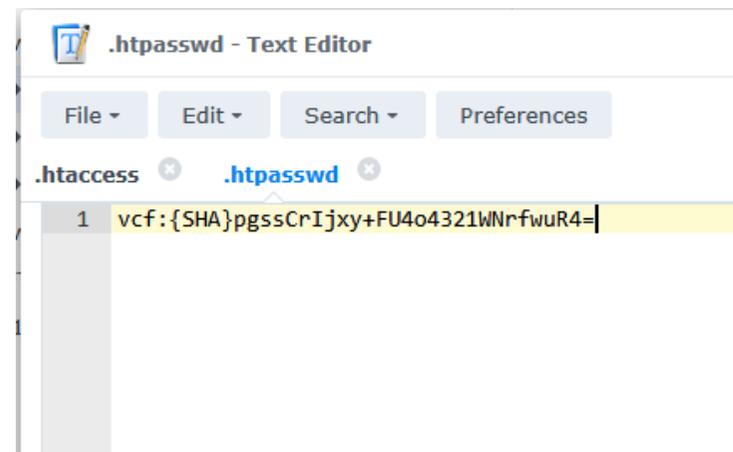


Create .htaccess file and .htpasswd file



The screenshot shows a text editor window titled ".htaccess - Text Editor". The editor has a menu bar with "File", "Edit", "Search", and "Preferences". The main text area contains the following configuration:

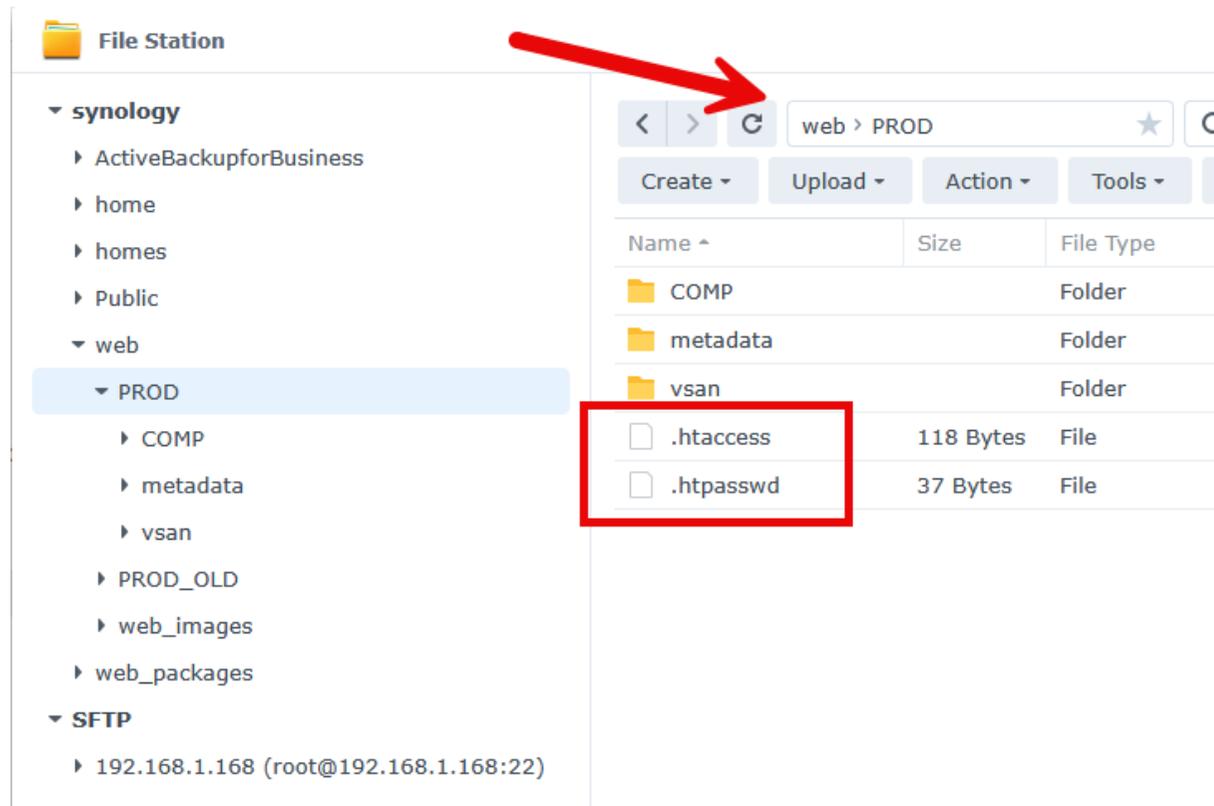
```
1 AuthType Basic
2 AuthName "Restricted Area"
3 AuthUserFile /volume1/web/PROD/.htpasswd
4 Require valid-user
5 Options +Indexes
```



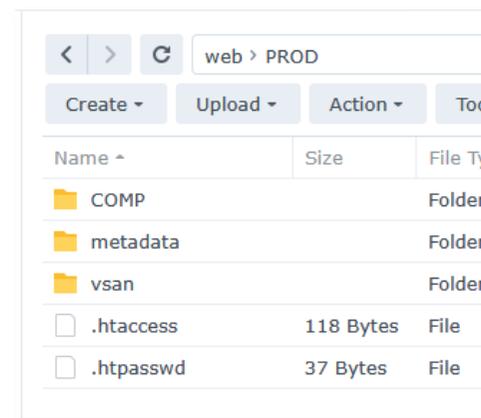
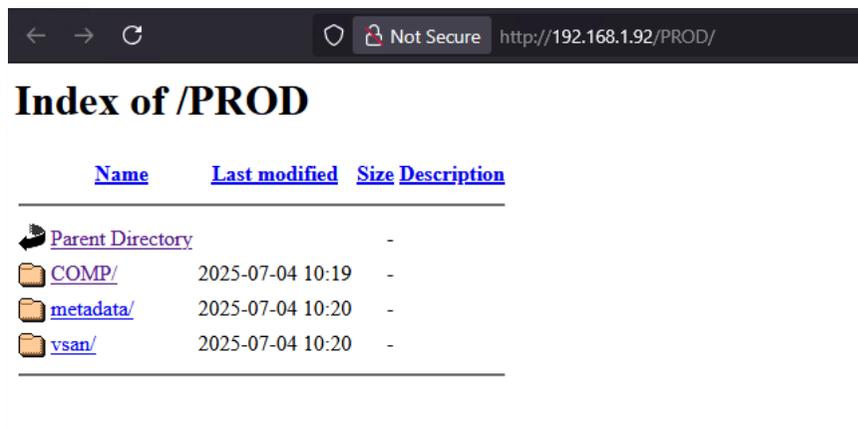
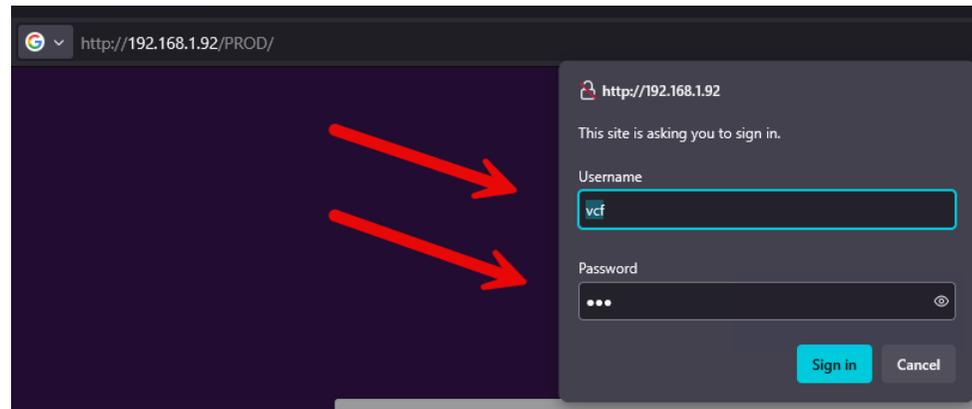
The screenshot shows a text editor window titled ".htpasswd - Text Editor". The editor has a menu bar with "File", "Edit", "Search", and "Preferences". The main text area contains the following password entry:

```
1 vcf:{SHA}pgssCrIjxy+FU4o4321WNrfwuR4=
```

Place .htaccess file and .htpasswd file in /web/PROD



Test Synology depot via web browser



Disable SSL depot requirement on VCF Installer – why?

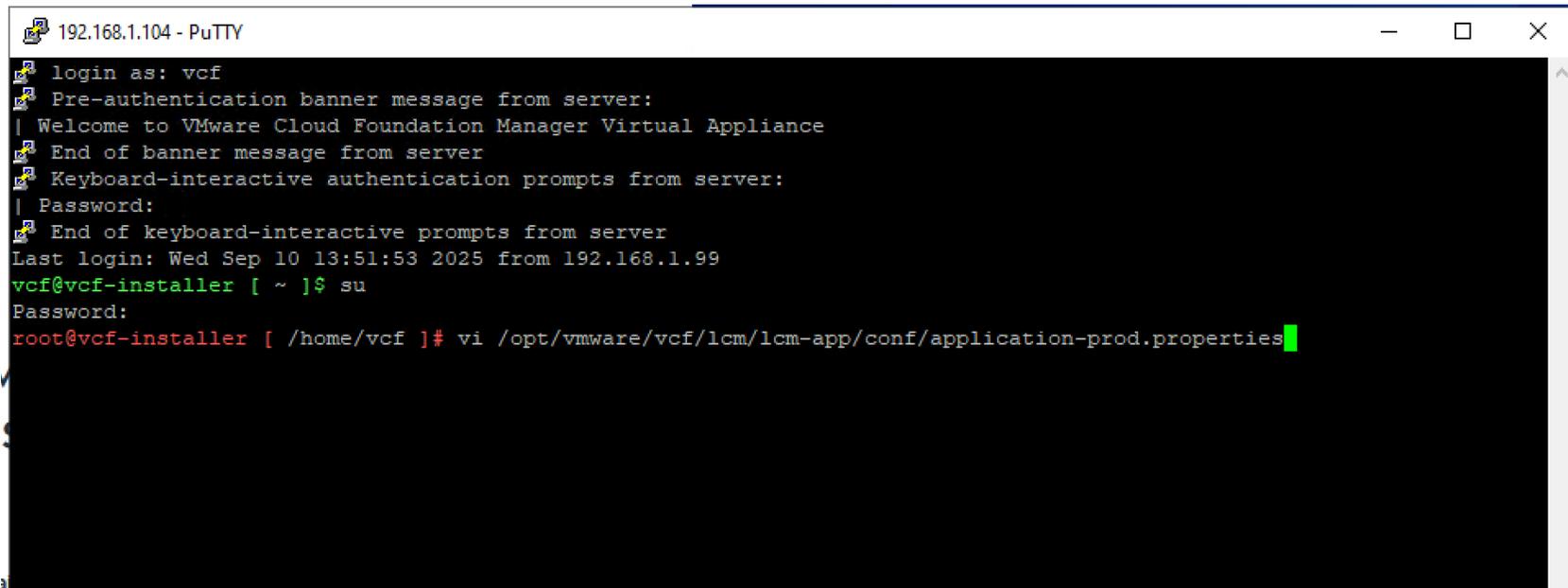
- It's a LAB
- It's an offline site (dark site) – secure by design
- K.I.S.S principle

Login to VCF Installer appliance using SSH

```
192.168.1.104 - PuTTY
login as: vcf
Pre-authentication banner message from server:
| Welcome to VMware Cloud Foundation Manager Virtual Appliance
End of banner message from server
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server
Last login: Wed Sep 10 13:51:53 2025 from 192.168.1.99
vcf@vcf-installer [ ~ ]$ su
Password:
root@vcf-installer [ /home/vcf ]#
```



Edit the application-prod.properties file



```
192.168.1.104 - PuTTY
login as: vcf
Pre-authentication banner message from server:
| Welcome to VMware Cloud Foundation Manager Virtual Appliance
End of banner message from server
Keyboard-interactive authentication prompts from server:
| Password:
End of keyboard-interactive prompts from server
Last login: Wed Sep 10 13:51:53 2025 from 192.168.1.99
vcf@vcf-installer [ ~ ]$ su
Password:
root@vcf-installer [ /home/vcf ]# vi /opt/vmware/vcf/lcm/lcm-app/conf/application-prod.properties
```

```
vi /opt/vmware/vcf/lcm/lcm-app/conf/application-prod.properties
```

Add property and save file

```
192.168.1.104 - PuTTY
##### Config Drift Bundle Options #####
lcm.skip.config.drift.bundle=true

lcm.announcement.message.enabled=true

### Vsan Witness Host Sync Service Options ###
lcm.core.vsan.witness.host.info.poll.interval:300000
lcm.core.vsan.witness.host.info.poll.initial.delay:60000

#vsan witness host upgrade configuration
lcm.vsan.witness.host.upgrade.disable=false

##### UMDS #####
lcm.umds.default.timeoutInSecs=36000
lcm.umds.sddcm.patch-store.path=/nfs/vmware/vcf/nfs-mount/umds/patch-store
lcm.umds.default.location=/opt/vmware/vmware-umds/bin
lcm.umds.sync.task.history.limit=50

# poll 24 hours
lcm.core.umds.enablePolling=true
lcm.core.umds.poll.interval=86400000
lcm.core.umds.poll.initial.delay=60000

#policy setting for autoapply config drift fixes
lcm.config.drift.autoapply.fixes=true

#lcm serviceId generated during rpm install
lcm.serviceId=1f7ff8ba-dad7-4502-97c3-93fdc6fad4d7

lcm.depot.adapter.httpsEnabled=false
:wq!
```

`lcm.depot.adapter.httpsEnabled=false`

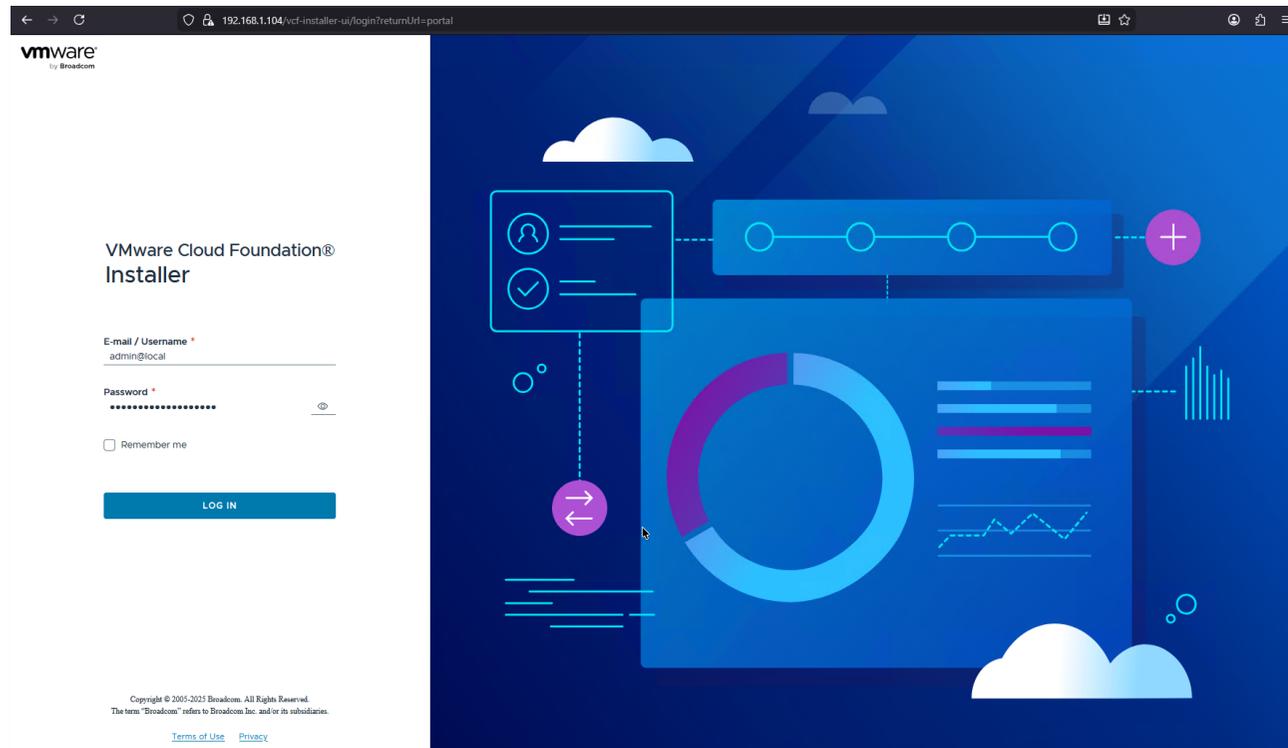
Restart LCM service

```
192.168.1.104 - PuTTY
login as: vcf
Pre-authentication banner message from server:
| Welcome to VMware Cloud Foundation Manager Virtual Appliance
| End of banner message from server
Keyboard-interactive authentication prompts from server:
| Password:
| End of keyboard-interactive prompts from server
Last login: Wed Sep 10 13:51:53 2025 from 192.168.1.99
vcf@vcf-installer [ ~ ]$ su
Password:
root@vcf-installer [ /home/vcf ]# vi /opt/vmware/vcf/lcm/lcm-app/conf/application-prod.properties
root@vcf-installer [ /home/vcf ]# systemctl restart lcm
```



```
systemctl restart lcm
```

Login to VCF Installer



Configure Depot settings

VMware Cloud Foundation Installer

VMware Cloud Foundation installer deploys and performs the initial configuration of a new VMware Cloud Foundation or VMware Cloud Foundation environment. The installation process automates the configuration of the various components in each solution.

[LEARN MORE](#)[REVIEW PREREQUISITES](#)

Get Started

Download Binaries

Online depot connection active ✓

You can edit your depot connection and/or download additional software binaries

VMware vSphere Foundation 9.0.0.0 Downloaded

VMware Cloud Foundation 9.0.0.0 Downloaded

[DEPOT SETTINGS](#)

Configure Offline Depot settings

[RETURN HOME](#)

Depot Settings

You can only connect the VCF Installer to one depot at a time. Configuring another depot connection deactivates and deletes any existing configuration.

 Alternatively, you can use the Binary Transfer utility to manually download the binaries from the depot to your local computer and then upload them to the VMware Cloud Foundation Installer appliance.

Connect to the online depot

Online depot connection not set up. Authenticate using your support.broadcom.com account to configure.

[CONFIGURE](#)

Offline Depot

 Depot connection active

Hostname 192.168.1.92

Port 80

Username vcf

[EDIT DEPOT CONNECTION](#)

[DISCONNECT](#)

Configure Offline Depot settings

Offline Depot ✕

Enter your offline depot credentials.

FQDN or IP Address *	192.168.1.92
	<small>Must support HTTPS protocol</small>
Port *	80 ⌵
Username *	vcf
Password *	••• 👁

CANCEL CONFIGURE

Binaries should now be available

Connect to the online depot ☹

Online depot connection not set up. Authenticate using your support.broadcom.com account to configure.

[CONFIGURE](#)

Offline Depot ✔

✔ Depot connection active

Hostname 192.168.1.92
Port 80
Username vcf

[EDIT DEPOT CONNECTION](#) [DISCONNECT](#)

Binary Management

Download Summary

Version: 9.0.0.0 VMware vSphere Foundation Downloaded VMware Cloud Foundation Downloaded

Filter the list by product and version and download the required component binaries. For additional guidance, refer to the [Product Interoperability Matrix](#)

Product VMware Cloud Foundation Version 9.0.0

DOWNLOAD DELETE

<input type="checkbox"/>	Component	Version	Size	Download Status
<input type="checkbox"/>	» SDDC Manager	9.0.0.0	2.00 GB	Success
<input type="checkbox"/>	» VMware Cloud Foundation Automation	9.0.0.0	21.17 GB	Success
<input type="checkbox"/>	» VMware Cloud Foundation Operations	9.0.0.0	2.63 GB	Success
<input type="checkbox"/>	» VMware Cloud Foundation Operations Collector	9.0.0.0	2.68 GB	Success
<input type="checkbox"/>	» VMware Cloud Foundation Operations fleet management	9.0.0.0	1.49 GB	Success
<input type="checkbox"/>	» VMware NSX	9.0.0.0	9.99 GB	Success



Check the video here:



Questions?