Upgrade to vSphere 8.0

Best practices, tips and tricks to guide you on the way to success

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Agenda

- vCenter 7.0 EoGS October 2, 2025

- What's new? (8.0 U3)

- Considerations before upgrading (HCL, 3rd party compatibility, deprecated features you should have on your roadmap to remove)

- Health checks before kickoff (ELM considerations, VDT)

- The upgrade

- After the upgrade

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What's New

What's New

- ## vCenter Reduced Downtime

  - Reduced Downtime Upgrade (RDU) is a new mechanism introduced for upgrading the self-managed vCenter Servers with decreased downtime. Self-managed vCenter Server is one that manages its own ESXi host and its own virtual machine. Only for versions 8.0 and later.
- ## vSphere Lifecycle manager
- Enhanced Image Customization
- vSphere configuration Profiles
- Live Patch of host
- Partial Maintenance mode
- GPU Profiles
- Embedded vSphere Cluster Service
- PingFederate support as external identity provider
- Dual DPU Support with vSphere Distributed Services Engine

  - High Availability DPU configuration

  - Increase Network Offload Capacity

Pre-Upgrade Considerations

Pre-Upgrade Considerations: vCenter

1. vSphere 6.5 hosts can no longer be managed by vCenter 8.0. Legacy clusters must be moved to 7.0
2. Update Sequence for VMware vSphere 8.0 and Compatible VMware Products. (NSX, vCenter, ESXi, Aria (Formally vRealize), vSAN, Horizon, Tanzu and any other VMware products deployed against the vSphere and vCenter stack.)
3. Upgrading vCenter with tanzu

    1. VMware Cloud Foundation 4.x to 5.x upgrade dependency on vSphere with Tanzu/WCP

    2. TKGs – Managing End of Service of Kubernetes versions
4. Confirm any 3rd party software support and upgrade requirements
This may include things such as Backup solutions, DR solutions, Monitoring Software, custom scripts, external automation tools, clusters leveraging the VMware SCSI driver and any other tools that may be tied in.
5. Remove VCHA if configured
6. Enhanced Linked Mode vCenters require offline snapshots (powered off graceful shutdown) taken simultaneously before making SSO changes during upgrades.
7. Reboot your vCenter to confirm all necessary services startup successfully.

Pre-Upgrade Considerations: ESXi

1. Ensure if the vCenter resides on a distributed switch that it is placed within an ephemeral bound port group.

2. Ensure the ESXi install device is at least 32GB in size. (Local disk, boot lun or usb (sd) flash media) (128GB size is preferred)

3. Ensure all vSphere hardware will have firmware and drivers that can support an 8.0 stack.

4. If the hosts have high uptime, it would be a good idea to attempt a reboot before attempting to patch to ensure there isn't anything pre-existing that would impact the patching process. (APD/PDL, network issues, pending VIB modifications or other behaviors that have happened in the past that while not having direct impact on day-to-day operations could impact patching)

vCenter Health check

vSphere Diagnostic Tool for vSphere

vSphere Diagnostic Tool is a python script that runs diagnostic commands on the vCenter Server Photon Appliance to return useful troubleshooting data while running within the confines of the local environment without upstream dependencies.

lsdoctor

Lookup Service Doctor (lsdoctor) is a tool used to address issues with data stored in the PSC database, as well as data local to a vCenter.

vCert

vCert.py is a menu-driven tool that provides management capability for most certificate-related operations on the vCenter Server versions 7.0/8.0.

Common issues

Root password has expired

NTP and Domain Name Resolution issues

Temporary IP address in use

DNS entry for temporary IP

Network connectivity

Certificate(s) expired (Machine/Solution)

Disk usage (df –h)

Vmdir status

No backup

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Run the vCenter upgrade

Run the vCenter upgrade (non-vCF)

1. Download the Installer - Obtain the vCenter Server 8.0 installer ISO from https://support.broadcom.com by following the kb [VMware vSphere downloads, VMware Converter, OEM custom images, patches and addons in the Broadcom Support Portal](#)
2. Find a jump box which resides on the same subnet as the vCenter/ESXi.
3. Stage 1: Deploy select "Upgrade"
- Some pre-checks
- Deployment of the appliance VM – same host as current VC
- Configuration of the Guest OS and networking
- RPMs are installed but not configured
4. Stage 2: Configure
- Check VM placement to be same as current VC
- Pre-Upgrade Checks completed
- Data Exported from source VC
- Firstboot configures and starts each service for the first time
- Joins the SSO domain
- Temporary IP is changed to the original IP
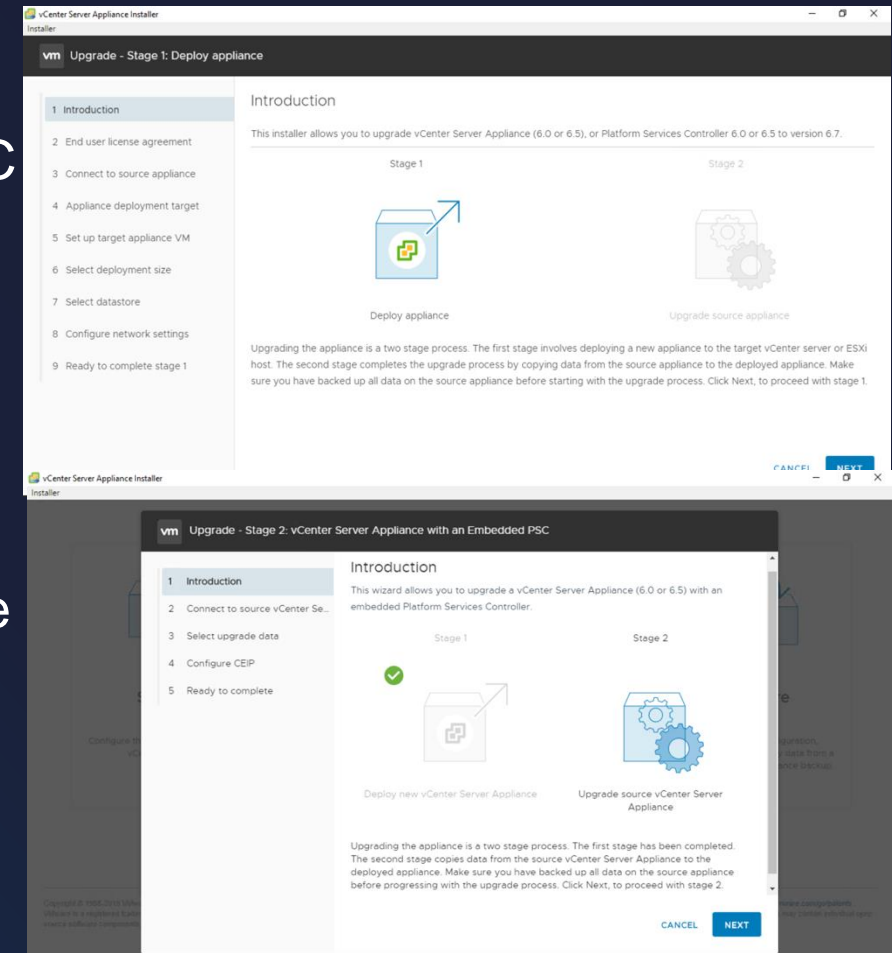
Run the ESXi upgrade (non-VCF)

- Recommended method: vLCM Single Image– This can be used with clusters or now in standalone mode. Just select the new version and apply. This will also keep your host software homogonous (baselines are deprecated in8.0 and will be removed in a future release). Additional vendor add-ons and software can also be added accordingly
- ESXi is not able to resolve the FQDN of the vCenter where LCM resides. This prevents ESXi from downloading the requested update. Check port 9084 is not blocked from ESXi towards vCenter. This prevents the host from downloading the requested update.
- All previous methods still available: ISO, Auto-deploy, scripted, etc.
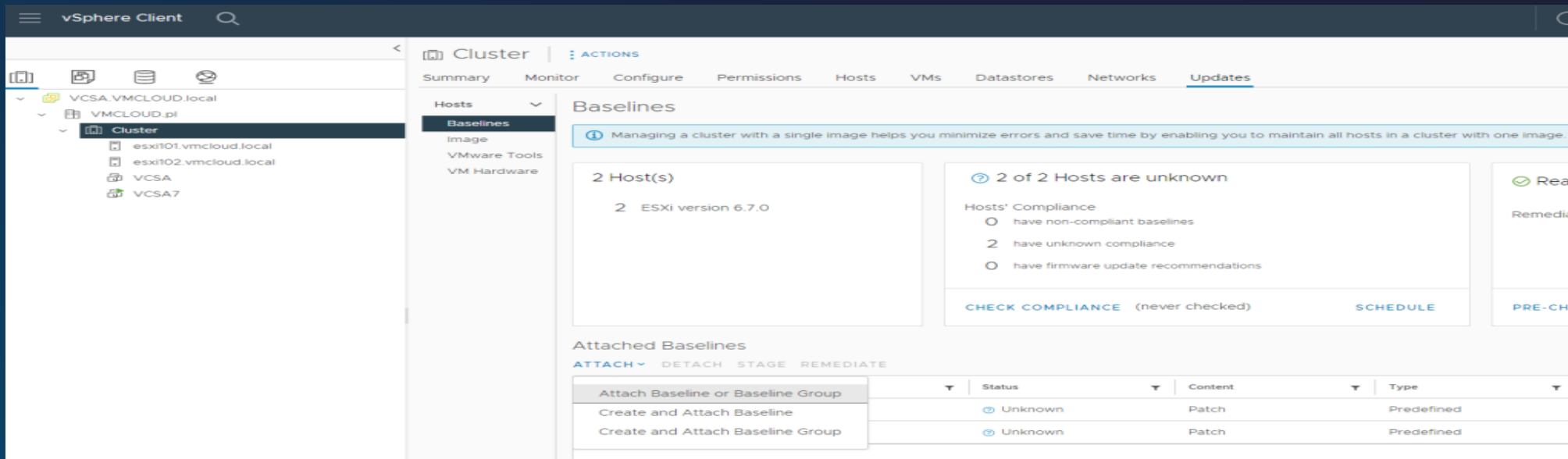
Run the vCenter upgrade (vCF)

1. **Download log bundles in SDDC manager:**
   Lifecycle Management > Bundle Management -> Download All the 5.2.1 Bundles i.e. SDDC Manager , SDDC Drift Bundle , NSXT , vCenter & finally ESXI .
2. **Upgrade SDDC Manager**
3. **Upgrade NSX-T**
4. **vCenter uprade**

   1. From the SDDC Manager UI, Select Domain -> Updates -> Prechecks -> configure upgrade ->

   2. Enter the Temp IP for VC and proceed to finish .

   3. Monitor the process and verify vCenter accessibility post-upgrade.

5. **ESXi host upgrade**

   1. Run Prechecks Make sure everything is green and then proceed.

   2. Select Domain -> Updates -> Prechecks -> configure upgrade -> Select Cluster -> upgrade now -> review -> finish

   3. Monitor the process and verify ESXI accessibility post-upgrade.

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After the vCenter upgrade

After Upgrade Considerations:

1. Backup vCenter using VAMI
2. Export ESXi configuration
3. Reconfigure/re-register vSphere products (SRM/VRMS/NSX/Aria)
4. Setup Skyline Health Diagnostics (SHD)
5. Enable CEIP for Skyline health
6. Verify authentication process and/or identify identity sources
7. Change DRS cluster automation level
8. Test your 3rd party plugins/ workflows/ operations (Backups, replications, automations, etc.)
9. Update licenses in vCenter or SDDC manager
10. Upgrade vSphere Distributed Switch
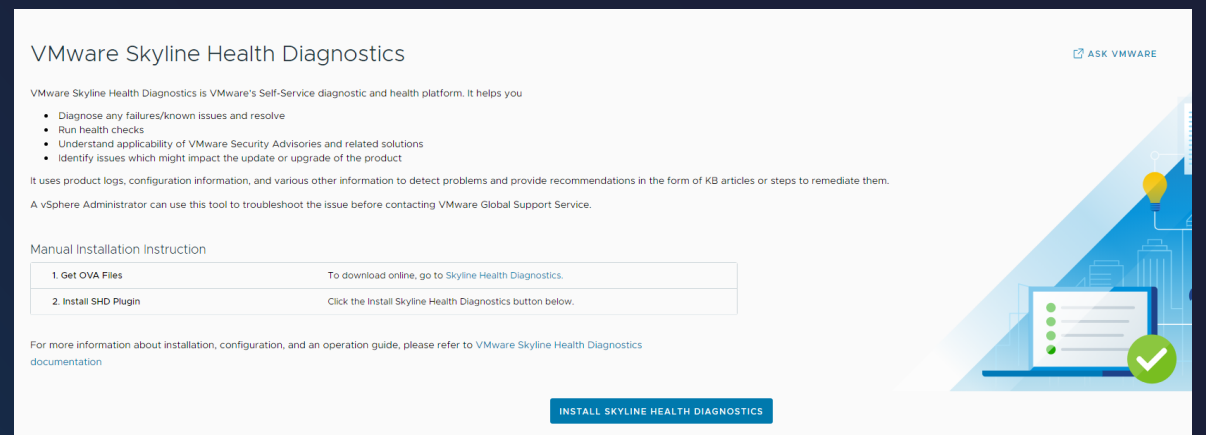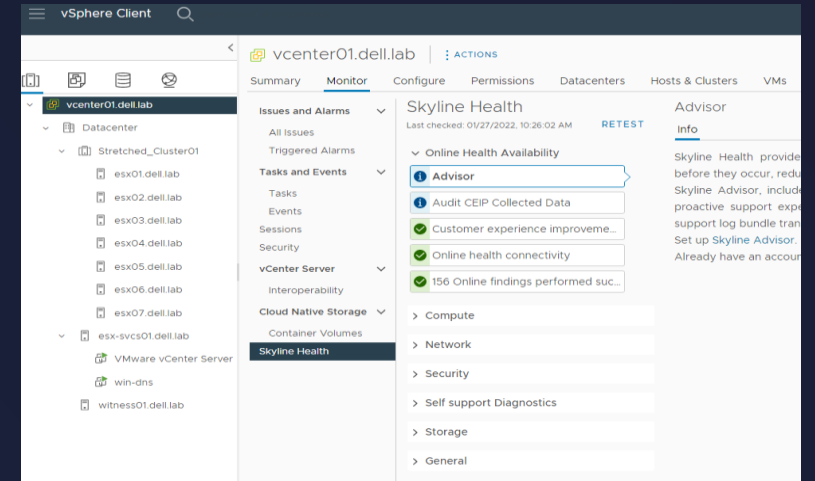
VMware Software Download Guideline

What's Changing? Beginning March 24, 2025, we'll move from our current binary download process to a new method. This change will:
- Centralize to a Single Download Site: All software binaries will be downloaded from a single download site vs several different download sites. This is available for both online and air-gapped environments.
- Introduce Download Verification: Downloads will be authorized through a unique token. The new URLs are embedded with the token to verify that you, as an authorized user/party, are the one downloading the file.
- [VCF Authenticated downloads Configuration Update Instructions](#)

Please note: Existing download URLs will remain available for one month to assist with the transition. After April 24, 2025, these URLs will no longer be valid.

Questions

Thank You