



DST

vCenter Server Migration VMware Team

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Version

Date	Version	Description	Modified By
10/1/2016	v1.0	Submitted	Aman Sapra
3/1/2017	V1.1	Modified	Aman Sapra

Migration of vCenter Server 5.5 to vCenter Appliance 6.0 U2

Requirements:

1. Root Password for SSO user administrator@vsphere.local
2. Reserve a static IP Address for PROD613 VLAN (10.193.160.48).
3. Database Admin Credentials.
4. AD account with permissions to add target vCenter appliance to domain.

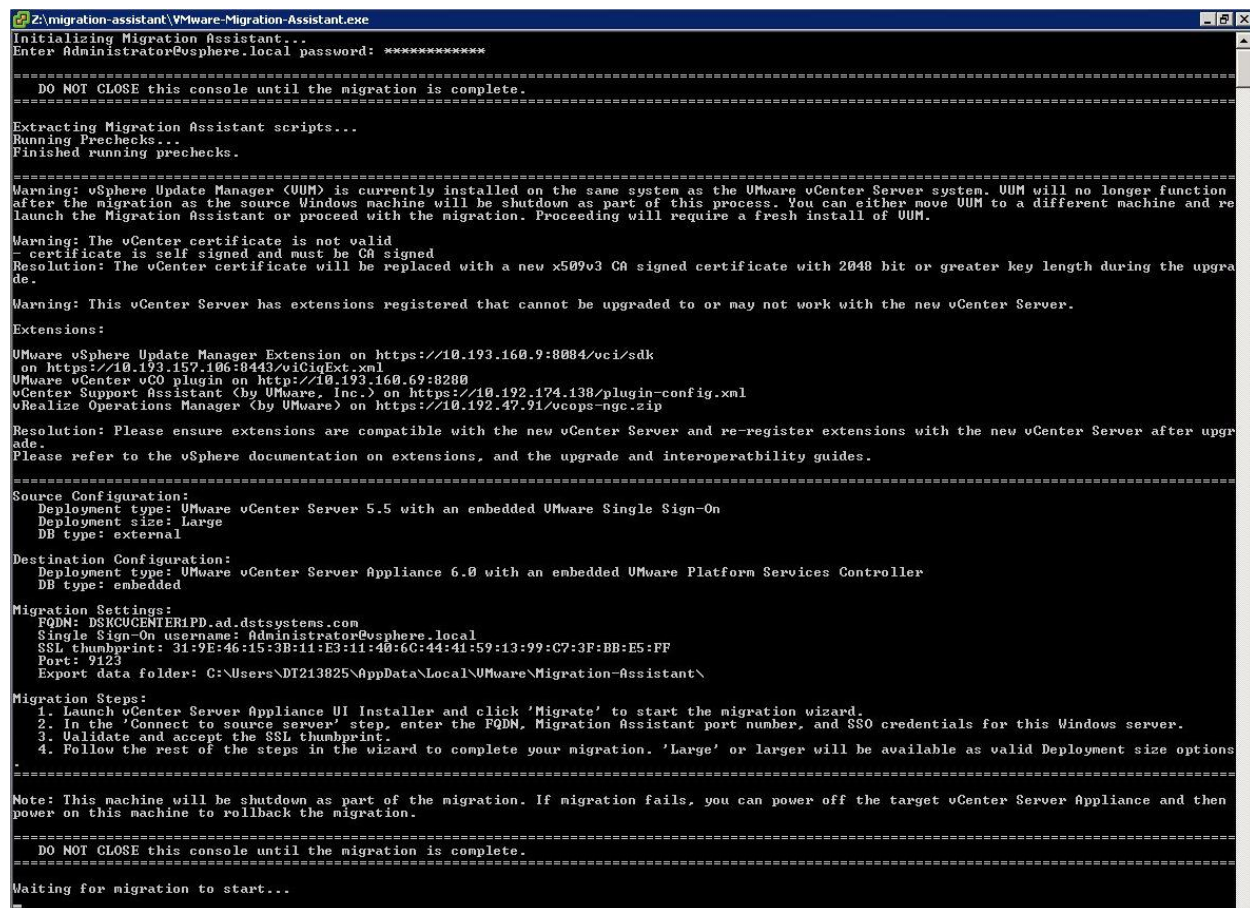
Pre-requisites:

1. Add dskcvcenter1pd server to white list so disconnect pages are not sent out
2. Snapshot vCenter Windows Server
3. Take full backup of database server after stopping the vCenter Server Service.
4. If an external database is being used, ensure that the size of database is not more than 20 GB.
5. Validate connectivity and Name resolution of NFS server with vCenter Server and ESXi hosts selected to host target vCenter Server Appliance.
6. Create a DNS record and AD object for DSKCVCENTER1PD_vcsa appliance. Check NTP settings.
7. Request Windows and Database teams to backup DSKCVCENTER1PD & DSKCVCENTER1DB.
8. Validate the below services are running on a single vCenter server:
 - a. VMWare vCenter Inventory Service
 - b. VMware Single Sign On
 - c. VMware vSphere Web Client
9. Disable DRS on clusters hosting the source and target vCenter instances.
10. Target ESXi host selected to host the Target vCenter Server Appliance should not be in Maintenance Mode or in Lockdown Mode.
11. Verify both the vCenter and database are on the same host by themselves
12. Run DB cleanup script cleanup_orphaned_data_MSSQL.sql located in ISO for migration tool.
13. Create a new standard port group (VLAN613-Temp)
14. Stop Monitoring scripts running on DSKCVCENTER1.
15. Install Client Integration Plugin on DSKCVMWARENFS server.

Migration Steps:

1. Start the VMware Migration-Assistant exe on DSKVCENTER1 Source Windows server using administrator@vsphere.local account password and perform the below steps:
 - Validate the Source & Destination Configuration
 - Note down the Migration Settings:
 - a. FQDN:
 - b. Single Sign-On username: administrator@vsphere.local
 - c. SSL Thumbprint:
 - d. Port: 9123
 - e. Export Data Folder:

Note: DSKVCENTER1 Windows Server will be shutdown as part of the migration.



```
Z:\migration-assistant\VMware-Migration-Assistant.exe
Initializing Migration Assistant...
Enter Administrator@vsphere.local password: *****

=====
DO NOT CLOSE this console until the migration is complete.
=====

Extracting Migration Assistant scripts...
Running Prechecks...
Finished running prechecks.

=====
Warning: vSphere Update Manager (VUM) is currently installed on the same system as the VMware vCenter Server system. VUM will no longer function
after the migration as the source Windows machine will be shutdown as part of this process. You can either move VUM to a different machine and re
launch the Migration Assistant or proceed with the migration. Proceeding will require a fresh install of VUM.
Warning: The vCenter certificate is not valid
- certificate is self signed and must be CA signed
Resolution: The vCenter certificate will be replaced with a new x509v3 CA signed certificate with 2048 bit or greater key length during the upgr
ade.
Warning: This vCenter Server has extensions registered that cannot be upgraded to or may not work with the new vCenter Server.
Extensions:
VMware vSphere Update Manager Extension on https://10.193.160.9:8084/vci/sdk
on https://10.193.157.106:8443/viCiExt.xml
VMware vCenter vCO plugin on http://10.193.160.69:8280
vCenter Support Assistant (by VMware, Inc.) on https://10.192.174.138/plugin-config.xml
vRealize Operations Manager (by VMware) on https://10.192.47.91/vcops-ngc.zip
Resolution: Please ensure extensions are compatible with the new vCenter Server and re-register extensions with the new vCenter Server after upgr
ade.
Please refer to the vSphere documentation on extensions, and the upgrade and interoperability guides.

=====
Source Configuration:
  Deployment type: VMware vCenter Server 5.5 with an embedded VMware Single Sign-On
  Deployment size: Large
  DB type: external
Destination Configuration:
  Deployment type: VMware vCenter Server Appliance 6.0 with an embedded VMware Platform Services Controller
  DB type: embedded
Migration Settings:
  FQDN: DSKVCENTER1PD.ad.dtsystems.com
  Single Sign-On username: Administrator@vsphere.local
  SSL thumbprint: 31:9E:46:15:3B:11:E3:11:40:6C:44:41:59:13:99:C7:3F:BB:E5:FF
  Port: 9123
  Export data folder: C:\Users\DT213825\AppData\Local\VMware\Migration-Assistant\

Migration Steps:
1. Launch vCenter Server Appliance UI Installer and click 'Migrate' to start the migration wizard.
2. In the 'Connect to source server' step, enter the FQDN, Migration Assistant port number, and SSO credentials for this Windows server.
3. Validate and accept the SSL thumbprint.
4. Follow the rest of the steps in the wizard to complete your migration. 'Large' or larger will be available as valid Deployment size options
.

=====
Note: This machine will be shutdown as part of the migration. If migration fails, you can power off the target vCenter Server Appliance and then
power on this machine to rollback the migration.
=====
DO NOT CLOSE this console until the migration is complete.
=====
Waiting for migration to start...
```

2. Open vcsa-setup.html using a Web Browser. Install Client Integration Plugin on DSKVCMWARENFS server and then click on Migrate. Select ok to continue the migration process.

3. Enter the below details in the Migration Wizard:

a. Accept End User License Agreement.

The screenshot displays the 'vCenter Server Appliance 6.0 Migrate' window. On the left, a vertical list of steps is shown, with '1 End User License Agreement' highlighted in blue. The main area is titled 'End User License Agreement' and contains the text: 'Please read the following license agreement before proceeding.' Below this is a scrollable text box containing the 'VMWARE END USER LICENSE AGREEMENT'. The agreement text includes a disclaimer, important terms, an evaluation license notice, and definitions. At the bottom of the text box, there is a checkbox labeled 'I accept the terms of the license agreement:' which is currently unchecked. To the right of the checkbox is a 'Print' button. At the very bottom of the window, there are four buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

1 End User License Agreement

2 Appliance deployment target

3 Set up virtual machine

4 Connect to source server

5 Select appliance size

6 Select datastore

7 Set up temporary network

8 CEIP

9 Ready to complete

End User License Agreement
Please read the following license agreement before proceeding.

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1. DEFINITIONS.

1.1 "Affiliate" means, with respect to a party at a given time, an entity that then is directly or indirectly controlled by is under common control with, or controls that party, and here "control" means an ownership, voting or

☐ I accept the terms of the license agreement.

Print

Back Next Finish Cancel

- b. Appliance Deployment Target:** Enter the details for the Target ESXi host where the new vCenter Server Appliance will be deployed. *Note – Deploy vcsa to same host as the vcenter
1. Target ESXi Host IP address/Hostname
 2. Root username and Password

Validate SHA1 Thumbprint of Target ESXi Host and click Yes to Continue.

The screenshot shows the 'vCenter Server Appliance 6.0 Migrate' wizard. On the left, a list of steps is shown: 1. End User License Agreement (checked), 2. Appliance deployment target (selected), 3. Set up virtual machine, 4. Connect to source server, 5. Select appliance size, 6. Select datastore, 7. Set up temporary network, 8. CEIP, and 9. Ready to complete. The main area is titled 'Appliance deployment target' with the instruction 'Specify the ESXi host or vCenter Server on which to migrate the existing Windows vCenter Server.' It contains four input fields: 'Target server or host name' with the value 'dskcvhpdssv01.dstcorp.net', 'HTTPS port' with the value '443', 'User name' with the value 'root', and 'Password' which is masked with asterisks. Below these fields is a warning icon and text: 'Before proceeding, if the source or target is an ESXi host:'. This is followed by a bulleted list of instructions: 'Make sure the ESXi host is not in lock down mode, or maintenance mode.', 'If the source or the new target vCenter instance is deployed on an ESXi host in a cluster, ensure that the DRS settings prevent vMotion of either vCenter instance during the migration process.', and 'When deploying to a vSphere Distributed Switch (VDS), the appliance must be deployed to an ephemeral portgroup. After deployment, it can be moved to a static or dynamic portgroup.' At the bottom right, there are four buttons: 'Back', 'Next' (highlighted with a mouse cursor), 'Finish', and 'Cancel'.

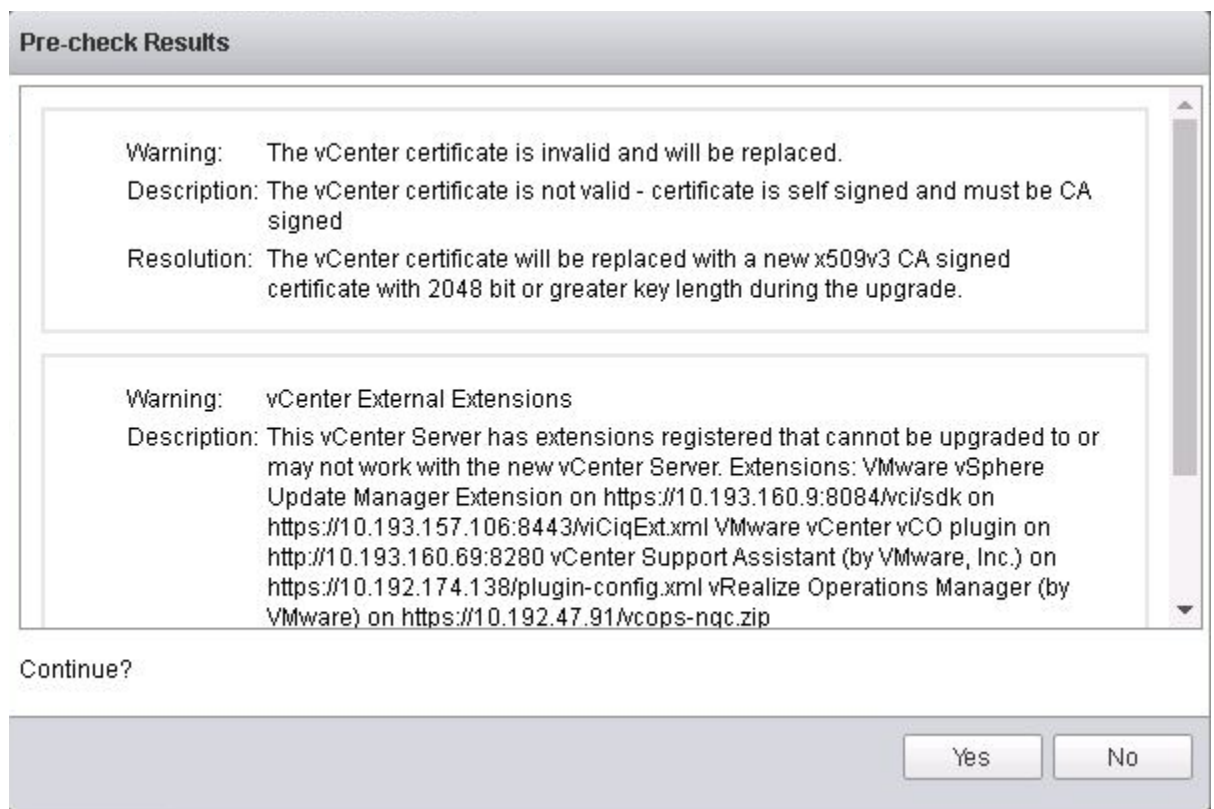
- c. Setup virtual machine:** Enter the details of the new vCenter Server Appliance.
1. Appliance name: DSKVCENTER1_vcsa
 2. Create an OS password for the appliance and confirm the same in confirm box.
 3. Enable SSH.

d. Connect to Source Server:

1. Enter IP address/Hostname of Source vCenter Windows Server.
2. Password for SSO username administrator@vsphere.local
3. Uncheck the checkbox for migration of Optional Performance data.

Validate SHA1 Thumbprint of Source Windows vCenter Server. Wizard will prompt for plugins registered with existing vCenter Server which cannot be migrated to vCenter Appliance. Carefully validate the plugins and click Yes if you want to proceed with the migration.

Note: Do not run this installer from source Windows vCenter Server. You may receive a prompt for vCenter Update Manager Extension as Update Manager is not supported with vCenter Server Appliance. Click Yes to continue.



- e. Join AD Domain:** Enter username and password for AD account to join the appliance to AD.
- f. Select Appliance Size:** Select the size as Large more storage (up to 1000 hosts, 10,000 VMs, 900 GB)

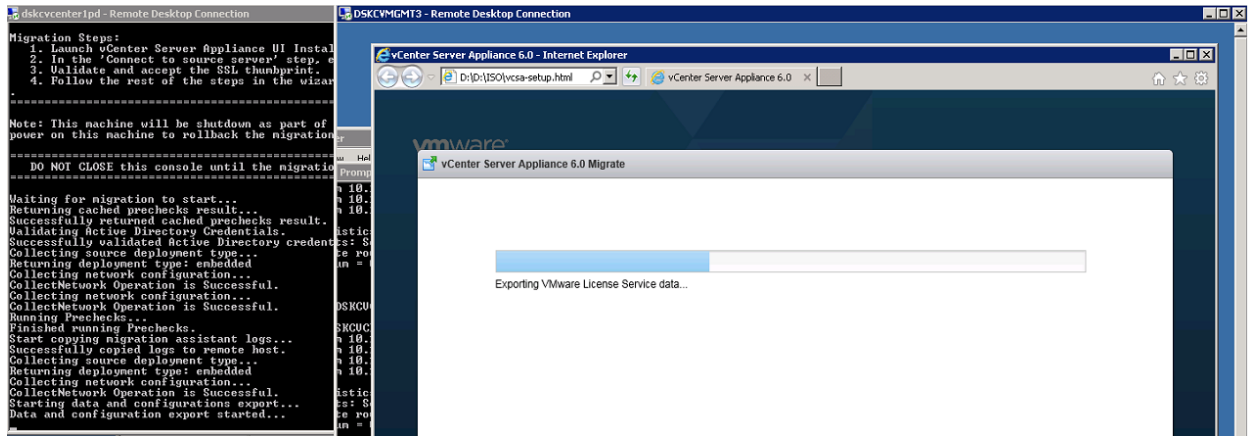
- g. **Select Datastore:** Select the datastore where Target vCenter Appliance will be hosted.
- h. **Setup Temporary Network:** During migration, the new appliance requires temporary network settings during the migration. After the migration completes, the new appliance acquires the network identity of the existing Source instance and stops the temporary network settings.
1. Temporary Network:
 2. IP Address:
 3. Subnet Mask:
 4. Network Gateway:
 5. Network DNS Servers:
- i. **Customer Experience Improvement Program:** Uncheck Join the Customer Experience Improvement Program.
- j. **Ready to Complete:** Check the Summary of the task at Ready to complete screen and click Finish. Monitor the migration process until completion.

vCenter Server Appliance 6.0 Migrate

Ready to complete
Please review your settings before starting the installation.

Target server info:	dskcvhpdssrv01.dstcorp.net
Name:	DSKVCENTER1VC
Installation type:	Migrate
Deployment type:	Embedded Platform Services Controller
Deployment configuration:	Large (up to 1000 hosts, 10,000 VMs, large storage)
Datastore:	PD-6445-PDSSRV-4115
Disk mode:	thick
Network:	PROD613-TEMP
IP allocation:	IPv4 , static
Source vCenter Server:	dskcvcenter1pd.ad.dstsystems.com
Properties:	SSH enabled = True Customer Experience Improvement Program = Disabled Network 1 IP address = 10.193.160.48 Network 1 netmask = 255.255.255.128 Default gateway = 10.193.160.1 DNS = 10.193.163.15, 10.192.163.15

Back Next Finish Cancel



4. Login to vSphere Web Client and verify the version information.
5. License the new vCenter Server Appliance with version 6.0 license.
6. Request all teams to validate the functionality of 3rd Party Plugins.

Estimated Completion Time: Migration process takes around 5-6 hours without performance data depending upon the size of the database

Back Out/Rollback:

1. Power off the newly deployed vCenter Server Appliance 6.x.
2. Bring the old vCenter Server instance online:
 - a. If the old vCenter Server instance is powered off, power on the instance.
 - b. If the old vCenter Server instance is powered on, restart the instance.
3. If the vCenter Single Sign-On server was joined to an Active Directory domain, it may need to be joined again.
4. vCenter Windows Server needs to be restarted to kill running migration processes
5. Wait for all vCenter Server services to start and log in to the vSphere Web Client to verify the vSphere inventory.

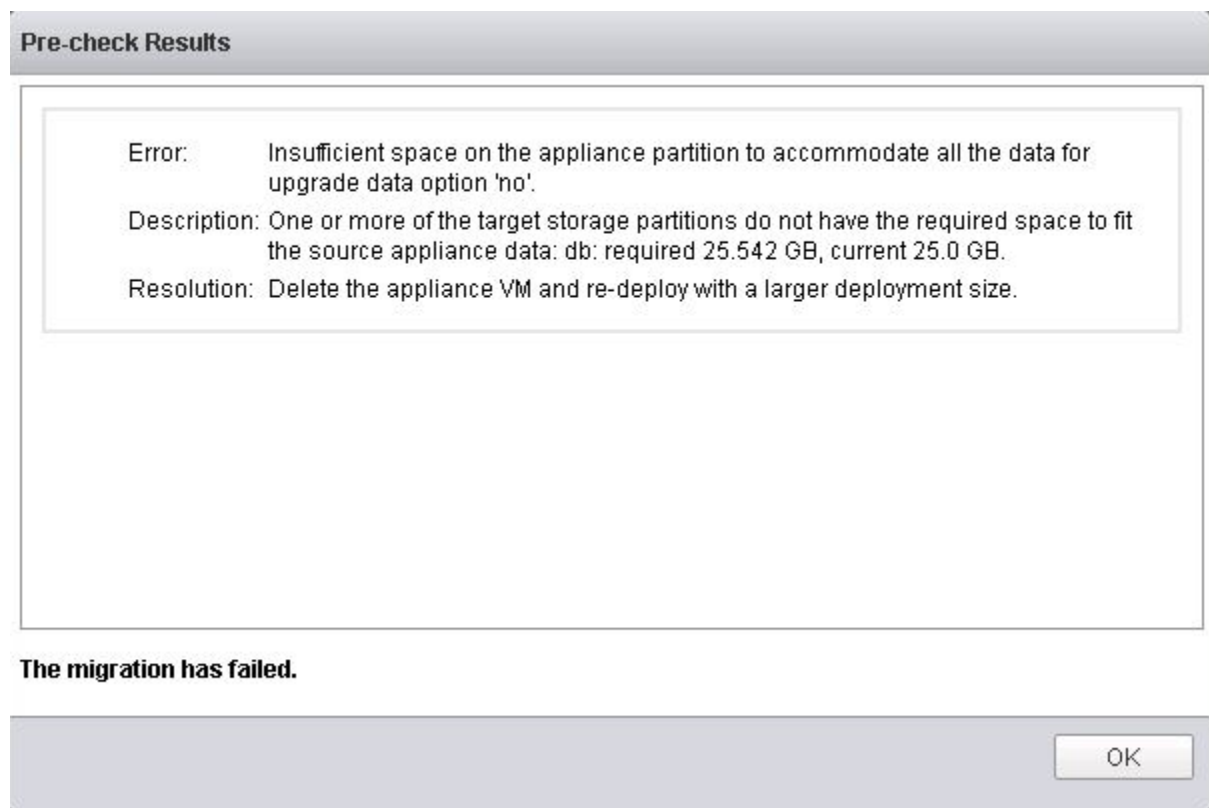
Known Issues:

1. **Error: Insufficient space on the appliance partition to accommodate all the data for upgrade data option 'no'.**

Description: One or more of the target storage partitions do not have the required space to fit the source appliance data: db: required 25.542 GB, current 25.0 GB.

Resolution: Delete the appliance VM and re-deploy with a larger deployment size.

If the migration fails with the error mentioned above and vCenter server is using an external database, verify the size of vCenter database and ensure that the size of vCenter database is not more than 20 GB. If the size of database is more than 20 GB, engage DB team to shrink the size of the database.



2. **Error while exporting core data: pyodbc.Error: ('08S01', '[08S01] [Microsoft][SQL Server Native Client 10.0]TCP Provider: The semaphore timeout period has expired.\r\n (121) (SQLGetData); [08S01] [Microsoft][SQL Server Native Client 10.0]Communication link failure (121)'). Read the log files and address the issues found in your source VCDB.**

If the migration fails with above error, disable TCP Chimney Offload feature in NIC settings for vCenter Windows Server. For more information refer to: <https://support.microsoft.com/en-us/help/942861/-general-network-error,-communication-link-failure,-or-a-transport-level-error-message-when-an-application-connects-to-sql-server>