

# OVF – Migration Tool

## Quick Guide

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# Introduction:

Open Virtualization Format (OVF) is an open standard for packaging and distributing virtual appliances or, more generally, software to be run in virtual machines. In VMware OVF Tool is a command line utility that supports importing and exporting of OVF packages, VMX files, or virtual machines from ESXi hosts and other VMware products. OVF also uses a technique called delta disk compression to achieve better compression

OVF is a file format that supports exchange of virtual appliances across products and platforms. OVA is a single file distribution of the same file package.

The OVF and OVA formats offer the following advantages:

1. OVF and OVA files are compressed, allowing for faster downloads.
2. The vSphere Web Client validates an OVF or OVA file before importing it, and ensures that it is compatible with the intended destination server.
3. If the appliance is incompatible with the selected host, it cannot be imported and an error message appears.

## GUI OVF TOOL:

The purpose behind the tool is to provide a wrapper on the top of the OVF command line tool.

This wrapper solves the following the problems for the customers.

1. Windows power users can benefit from the Simple and Intuitive User Interface provided by the tool.
2. The workflow is simple and elegant. Care was taken to make sure it's dumb down and very easy to understand and use.
3. All major functionality of the OVF command line tool has been mimicked in the Wrapper thereby eliminating the user from using the cumbersome and heavy switch commands via the command line tool.

## Pre-requisites:

## Software requirements:

- OVF Tool
- cURL application

## Note:

- Please make sure the OVF Tool is installed in the Default Location i.e. C:\ProgramFiles\VMware\VMware OVF Tool
- Maintain the cURL application Folder in specified path i.e. C:\ProgramFiles
- cURL application is available as part of the software please make sure you
- copy it in the specified path
- OVF Tool if not installed please install it and maintain it in the default location.

## How to find vCloud Air API URL:

The screenshot displays the VMware vCloud Air Migration Tool interface. At the top, a navigation flow is shown: Login to Your VCA Account → Goto MySubscriptions → Select Your Cloud Region → Select your VDC. A blue arrow points from 'Select your VDC' to a red-bordered box containing the vCloud Director API URL: `https://a11b1-vcd.vchs.vmware.com:443/cloud/org/A123567891-0111/`. Below this, the VMware vCloud Air dashboard is visible, showing the 'VIRTUAL DATA CENTER DETAILS' for 'A234 567891-0111 ON MULTI-TENANT CLOUD'. The dashboard includes a 'Usage & Allocation' section with bar charts for CPU, MEMORY, STORAGE, and SSD-Accelerated resources. On the right, there is a 'RELATED LINKS' section with a link to the 'vCloud Director API URL', which is also highlighted with a red-bordered box. A red arrow points from this link to the URL box above. The text 'Copy VCD URL' is written in red below the link.

**VCD locator URL**

Login to Your VCA Account → Goto MySubscriptions → Select Your Cloud Region → Select your VDC

**vCloud Director API URL**

`https://a11b1-vcd.vchs.vmware.com:443/cloud/org/A123567891-0111/`

**vmware vCloud Air**

Dashboard | Virtual Machines | Gateways | Data Protection | Users

DASHBOARD > VIRTUAL DATA CENTER DETAILS

A234 567891-0111 ON MULTI-TENANT CLOUD

Usage & Allocation | Virtual Machines | Gateways | Networks | Users

**CPU** 10 GHz ALLOCATED 1.6 GHz USED / 8.4 GHz FREE

**MEMORY** 20 GB ALLOCATED 12 GB USED / 8.0 GB FREE

**STORAGE** 4.0 TB ALLOCATED 2.9 TB USED / 1.1 TB FREE

**Standard** 2.0 TB ALLOCATED 1.5 TB USED / 401 GB FREE

**SSD-Accelerated** 2.0 TB ALLOCATED 1.3 TB USED / 668 GB FREE

VM QUOTA: Unlimited

RELATED LINKS

**vCloud Director API URL**

`https://a11b1-vcd.vchs.vmware.com:443/cloud/org/A123567891-0111/`

**Copy VCD URL**

## Screenshots:

The Main page of the GUI OVF Tool displays menu strip shows the different functionalities that are available for the user.

1. Conversion
2. vSphere Migration
3. vCloud Director Migration
4. Help



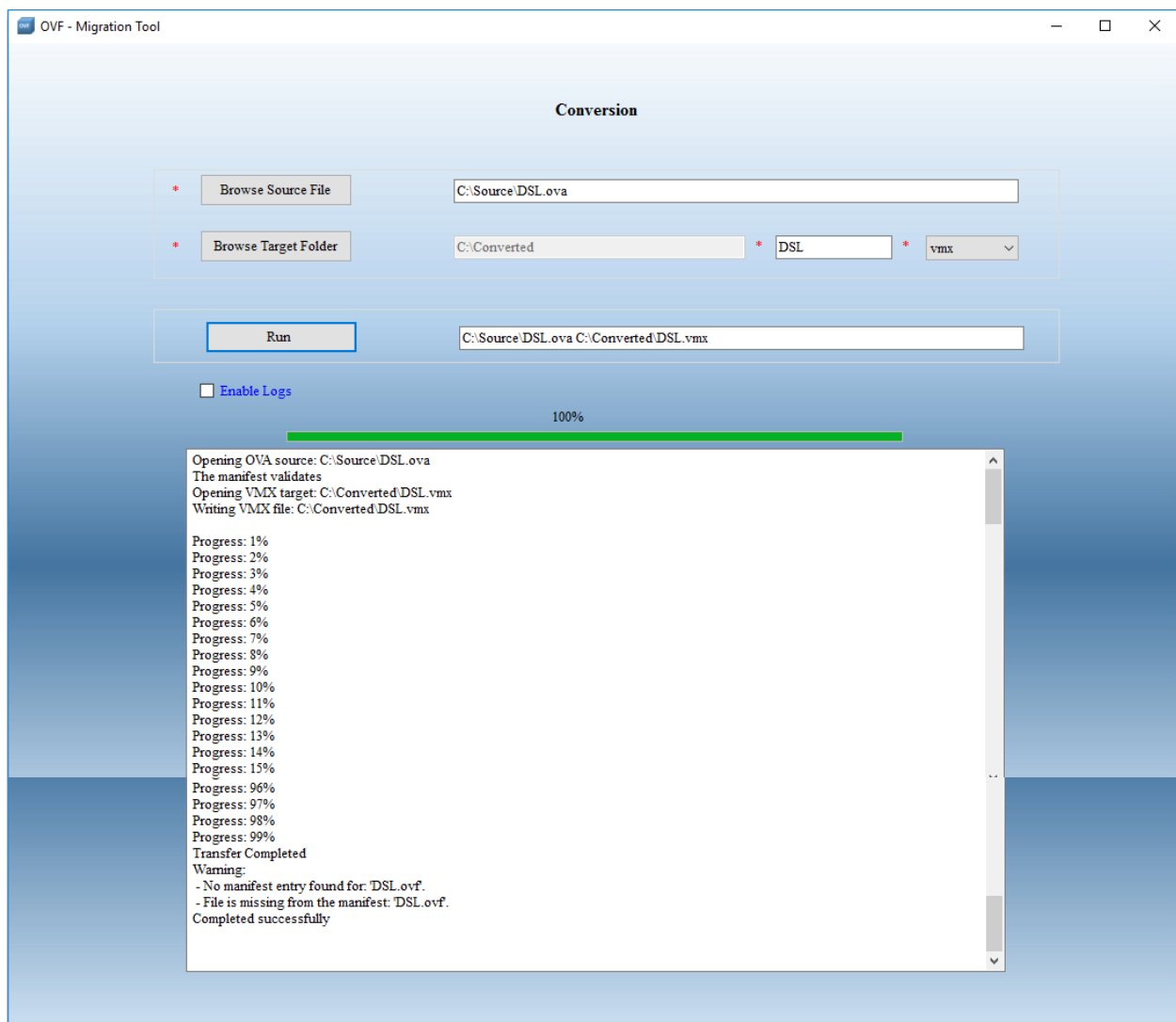
## Conversion:

Conversion includes three options, All the three does the Conversion of one of the file format to any of the two formats.

- a. OVA-OVF/VM
- b. OVF-OVA/VM
- c. VM-OVF/OVA

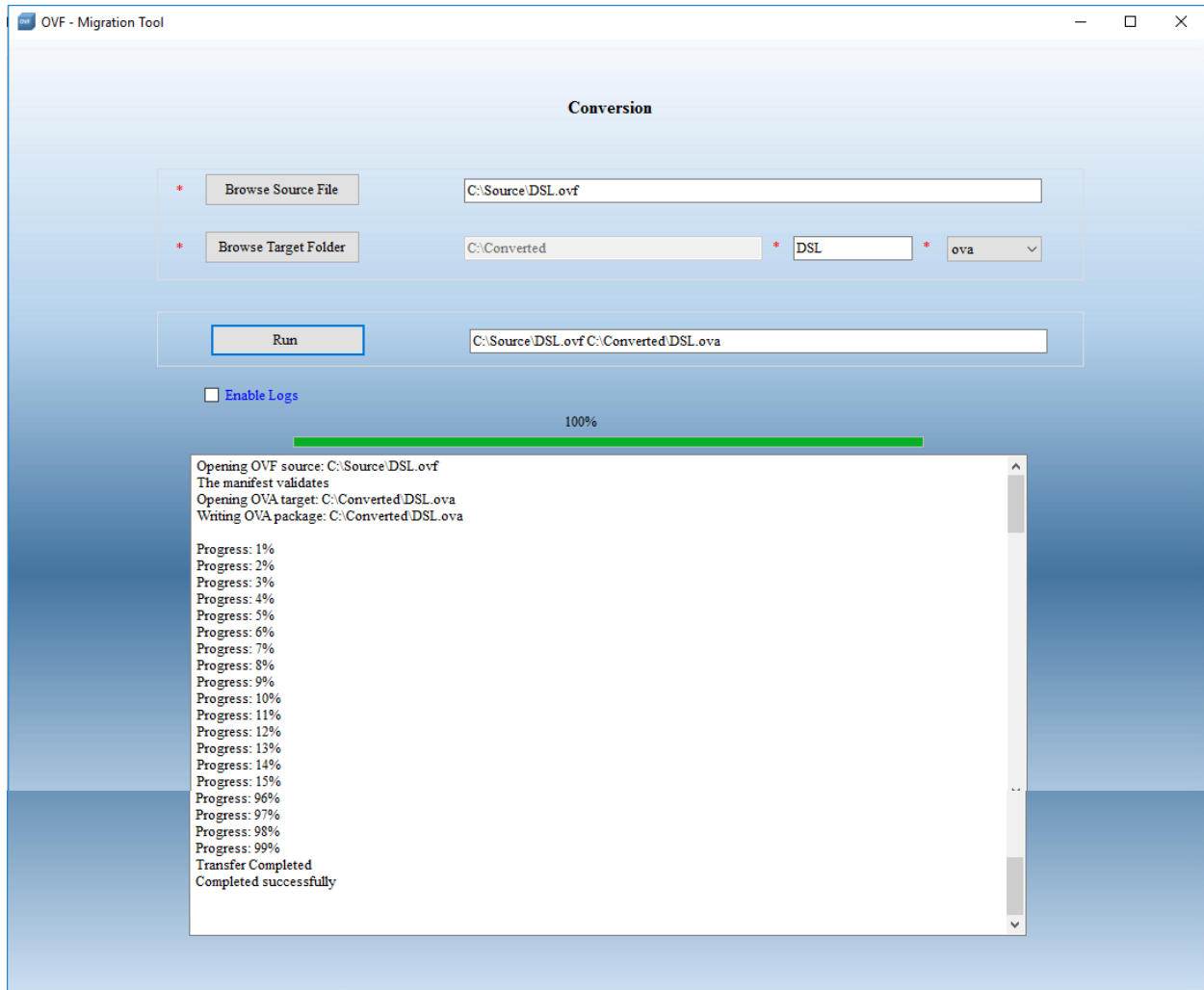
## Conversion of OVA-OVF/VM:

Conversion of OVA file format to formats like OVF or VM is shown below.



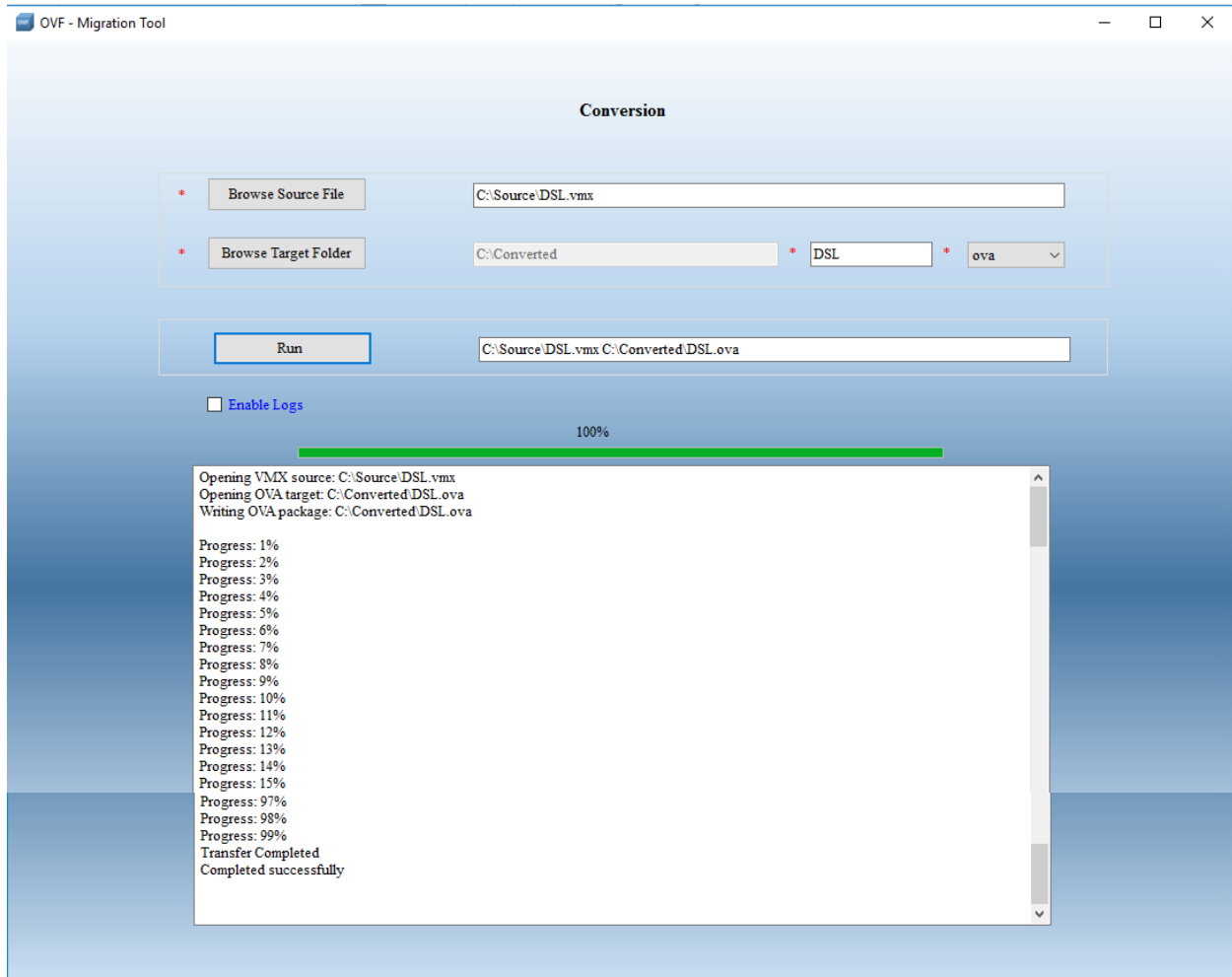
## Conversion of OVF-OVA/VM:

Conversion of OVF file format to formats like OVA or VM is shown below.



## Conversion of VM-OVF/OVA :

Conversion of VM file format to formats like OVF or OVA is shown below.

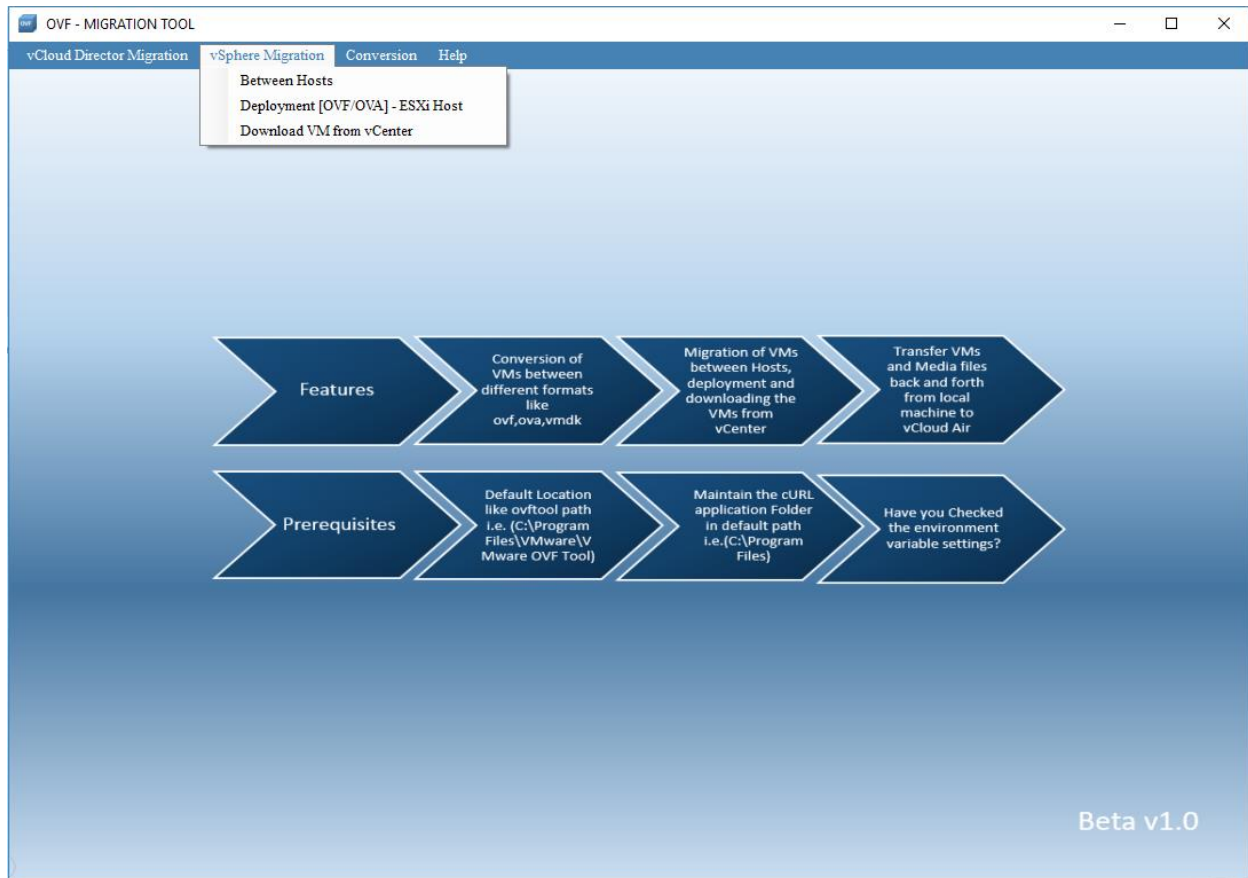




## vSphere Migration:

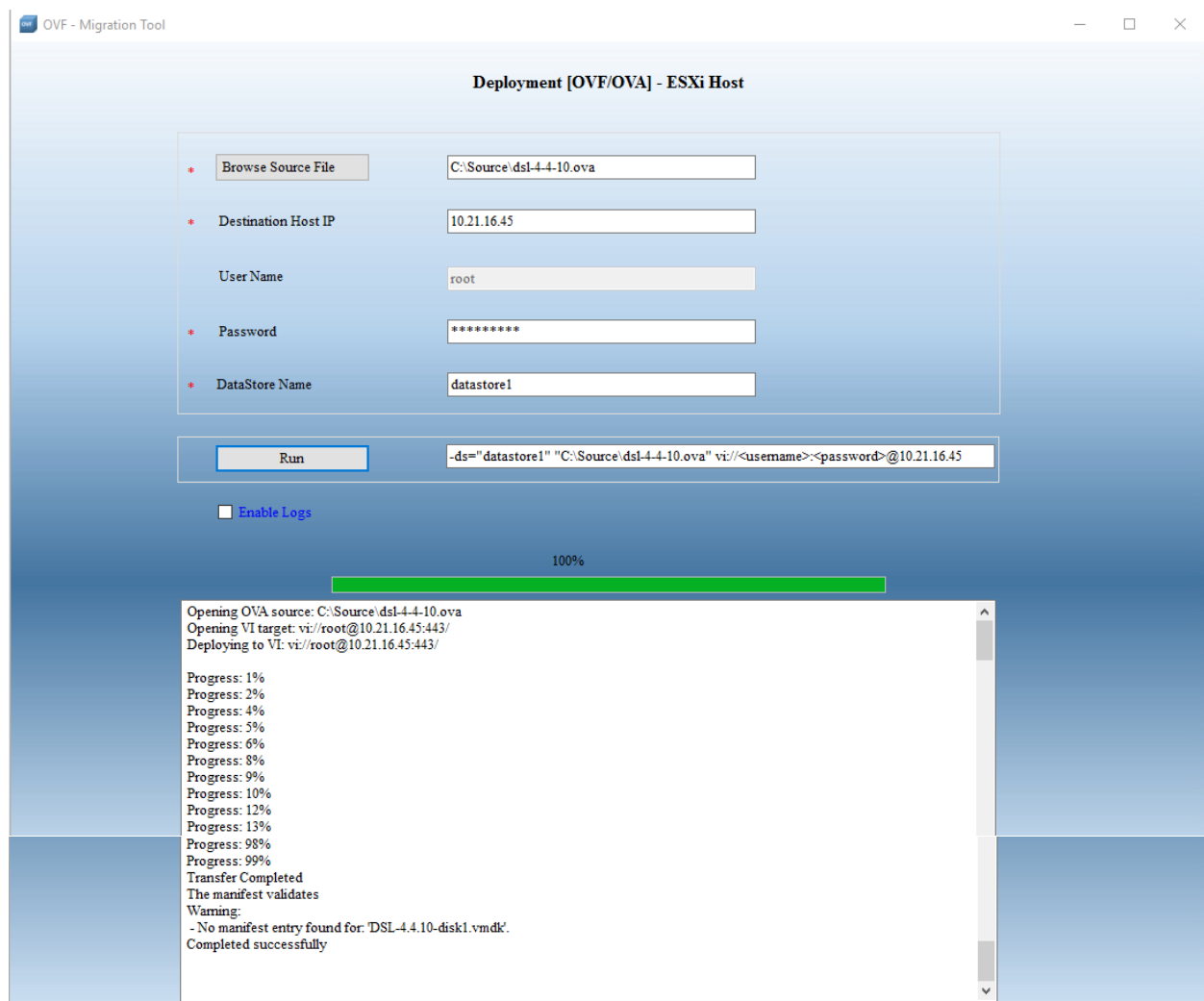
vSphere Migration has three options:

1. Deployment [OVF/OVA]-ESXi Host.
2. Between Hosts
3. Download from vCenter.

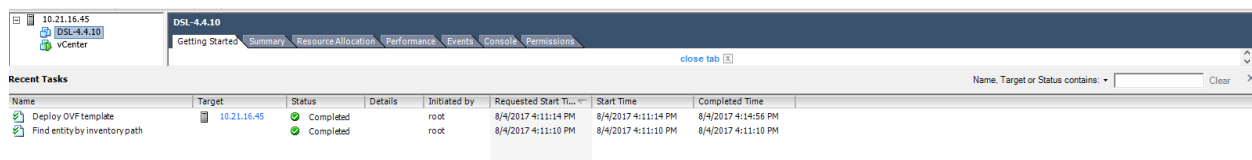


## Deploying OVF/OVA templates on a ESXi host:

Deployment of OVF template from Local Machine to ESXi Host can be done by providing the source location and the target Host details.



Verify the deployment in the ESXi host.



## Migration between Hosts:

The Migration of the OVF and OVA files can be done between one Host to the other Host by providing Source and Destination Host details.

The screenshot shows the 'OVF - Migration Tool' window with the title 'Migration Between Hosts'. It contains two main sections: 'Source Host Details' and 'Destination Host Details'. The 'Source Host Details' section includes fields for 'Target Datastore Name' (datastore1), 'Source Host ID' (10.21.16.45), 'User Name' (root), 'Password' (masked with asterisks), and 'Name of the VM' (DSL-4.4.10). The 'Destination Host Details' section includes fields for 'Destination Host ID' (10.21.16.43), 'User Name' (root), and 'Password' (masked with asterisks). Below these sections is a 'Run' button and a command line field containing the command: `-ds="datastore1" vi://<username><password>@10.21.16.45/DSL-4.4.10 vi://<username><password>@10.21.16.43`. There is also an 'Enable Logs' checkbox. At the bottom, a progress bar shows 100% completion, and a log window displays the following text:   
Progress: 32%  
Progress: 33%  
Progress: 34%  
Progress: 35%  
Progress: 36%  
Progress: 38%  
Progress: 39%  
Progress: 40%  
Progress: 41%  
Progress: 42%  
Progress: 43%  
Transfer Completed  
Completed successfully

Verify the migration task on both source and destination Hosts.

## Source Host:

The screenshot shows the 'Source Host' interface for host 10.21.16.45. The left sidebar shows a tree view with 'DSL-4.4.10' selected. The main area shows the 'Summary' tab for the task 'DSL-4.4.10'. Below the tabs is a 'Recent Tasks' table.

Name	Target	Status	Details	Initiated by	Requested Start Time	Start Time	Completed Time
Export OVF template	DSL-4.4.10	Completed		root	8/4/2017 4:21:23 PM	8/4/2017 4:21:23 PM	8/4/2017 4:25:24 PM

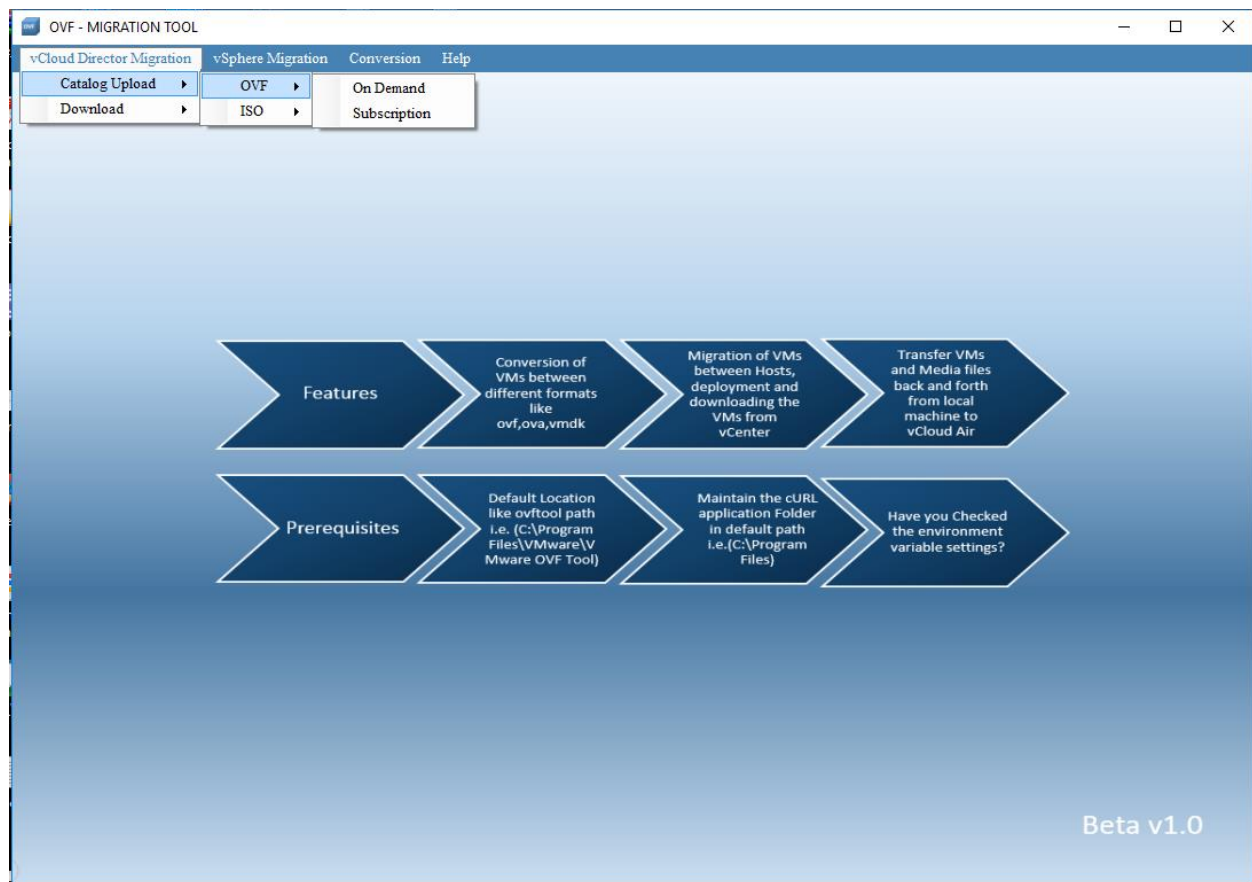
## Destination Host:

The screenshot shows the 'Destination Host' interface for host 10.21.16.43. The left sidebar shows a tree view with 'DSL-4.4.10' selected. The main area shows the 'Summary' tab for the task 'DSL-4.4.10'. Below the tabs is a 'Recent Tasks' table.

Name	Target	Status	Details	Initiated by	Requested Start Time	Start Time	Completed Time
Deploy OVF template	10.21.16.43	Completed		root	8/4/2017 4:17:40 PM	8/4/2017 4:17:40 PM	8/4/2017 4:21:30 PM
Find entity by inventory path		Completed		root	8/4/2017 4:17:36 PM	8/4/2017 4:17:36 PM	8/4/2017 4:17:36 PM

## vCloud Director Migration:

1. Catalog Upload
2. Downloading VM from VCD



## Uploading an OVF to a vCloud Air On-Demand Environment:

Uploading an OVF to vCloud Air On-Demand Environment can be done by providing vCloud Air API URL and vCA User Credentials.

The screenshot displays the 'OVF - Migration Tool' window, specifically the 'Upload OVF - On Demand' tab. The interface includes several input fields and buttons for configuring the upload process.

**Fields and Values:**

- Browse Source File:** C:\Source\DSL.ovf
- Org ID:** [Redacted]
- vCloud Air User ID:** [Redacted]
- vCloud Air Password:** [Redacted]
- Destination URL:** ps://us-virginia-1-4.vchs.vmware.com/api/compute
- vApp Template name:** dsl
- Name of the Catalog:** abc
- VDC ID:** ABC

**Buttons:** 'Run', 'Get VDC and Catalog', 'Export Diagnostic Logs'.

**Log Output:**

```
--XlogFile=C:\ProgramData\VMware\upload.log --XlogLevel=verbose --sourceType="OVF" "C:\Source\DSL.ovf" "vcloud://<username>:<pass>@us-virginia-1-4.vchs.vmware.com:443/api/compute"

Opening OVF source: C:\Source\DSL.ovf
The manifest validates
Opening vCloud target: vcloud://<username>:<pass>@us-virginia-1-4.vchs.vmware.com:443/api/compute
Deploying to vCloud vApp template: vcloud://<username>:<pass>@us-virginia-1-4.vchs.vmware.com:443/api/compute

Progress: 1%
Progress: 2%
Progress: 4%
Progress: 5%
Progress: 6%
Progress: 8%
Progress: 9%
Progress: 10%
Progress: 12%
Progress: 13%
Progress: 14%
Progress: 16%
Progress: 91%
Progress: 92%
Progress: 94%
Progress: 95%
Progress: 97%
Progress: 98%
Progress: 99%
Transfer Completed
Completed successfully
```

## Uploading an OVF to a vCloud Air Subscription Environment:

Uploading an OVF to vCloud Air Subscription Environment can be done by providing vCloud Air API URL and vCA User Credentials.

**OVF - Migration Tool**

**Upload OVF - Subscription**

\* Browse Source File: C:\Source\DSL.ovf

\* Destination URL: vchs.vmware.com:443/cloud/org/

\* vCloud Air User ID:

\* vApp name: DSL

\* vCloud Air Password: \*\*\*\*\*

VCD ID: M

\* Name of the Catalog: abc

Org ID: M

Run: --X:logFile=C:\ProgramData\VMware\upload.log --X:logLevel=verbose --sourceType="OVF" "C:\Source\DSL.ovf" "vcloud://<username>:<pass>

☒ Enable Logs verbose 100% Export Diagnostic Logs

Opening OVF source: C:\Source\DSL.ovf  
The manifest validates  
Opening vCloud target: vcloud://<username>:<password>@vcd.vchs.vmware.com:443/cloud/org/<orgid>  
Deploying to vCloud vApp template: vcloud://<username>:<password>@vcd.vchs.vmware.com:443/cloud/org/<orgid>

Progress: 1%  
Progress: 2%  
Progress: 4%  
Progress: 5%  
Progress: 6%  
Progress: 8%  
Progress: 9%  
Progress: 10%  
Progress: 12%  
Progress: 13%  
Progress: 14%  
Progress: 16%  
Progress: 94%  
Progress: 95%  
Progress: 97%  
Progress: 98%  
Progress: 99%  
Transfer Completed  
Completed successfully

## Uploading an ISO to a vCloud Air On-Demand Environment:

Uploading an ISO to vCloud Air On-Demand Environment can be done by providing vCloud Air API URL and vCA User Credentials.

The screenshot shows the 'Upload ISO - On Demand' window in the OVF - Migration Tool. The window contains the following fields and controls:

- Browse ISO Source File:** C:\Source\dsl-4.4.10.iso
- vCloud Air User ID:** [Redacted]
- vCloud Air Password:** [Redacted]
- Destination URL:** ps://us-virginia-1-4.vchs.vmware.com/api/compute
- Org ID:** [Redacted]
- Media name:** DSL
- Catalog Name:** abc
- VDC ID:** ABC
- Run button:** --XlogFile=C:\ProgramData\VMware\upload.log --XlogLevel=verbose --sourceType="ISO" --vCloudTemplate="false" "C:\Source\dsl-4.4.10.iso"
- Enable Logs:** ☒ verbose
- Export Diagnostic Logs:** [Button]
- Progress Bar:** 100%
- Log Output:**

```
Opening Media source: C:\Source\dsl-4.4.10.iso
Opening vCloud target: vcloud://[Redacted]@us-virginia-1-4.vchs.vmware.com:443/api/compute
Progress: 1%
Progress: 2%
Progress: 3%
Progress: 4%
Progress: 5%
Progress: 6%
Progress: 7%
Progress: 8%
Progress: 9%
Progress: 10%
Progress: 11%
Progress: 12%
Progress: 13%
Progress: 14%
Progress: 15%
Progress: 16%
```

## Uploading an ISO to a vCloud Air Subscription Environment:

Uploading an ISO to vCloud Air Subscription Environment can be done by providing vCloud Air API URL and vCA User Credentials.

OVF - Migration Tool

### Upload ISO - Subscription

* Browse ISO Source File	C:\Source\dsl-4.4.10.iso	* Destination URL	chs.vmware.com:443/cloud/org/M[REDACTED]
* vCloud Air User ID	[REDACTED]	* Catalog Name	abc
* vCloud Air Password	*****	VDC ID	M[REDACTED]
* Media name	DSL	Org ID	M[REDACTED]

**Run** --XLogFile=C:\ProgramData\VMware\upload.log --XLogLevel=verbose --sourceType="ISO" --vCloudTemplate="false" "C:\Source\dsl-4.4.10.iso"

☒ **Enable Logs** verbose 100% **Export Diagnostic Logs**

Progress: 77%  
Progress: 78%  
Progress: 79%  
Progress: 80%  
Progress: 81%  
Progress: 82%  
Progress: 83%  
Progress: 84%  
Progress: 85%  
Progress: 86%  
Progress: 87%  
Progress: 88%  
Progress: 89%  
Progress: 90%  
Progress: 91%



## Downloading a vAPP template from vCloud Air On-Demand Environment:

Downloading a vAPP template from vCloud Air On-Demand by providing vCloud Air API URL and vCA User Credentials.

**Download VM - On Demand**

\* vCloud Air User ID:  \* Browse Target Location:

\* vCloud Air Password:  \* Org ID:

\* Full Source URL:  ? Get VDC and Catalog

\* vApp Name:  VCD ID:

Catalog Name:

--XlogFile=C:\ProgramData\VMware\upload.log --XlogLevel=verbose "vcloud://<username>:<password>@us-virginia-1-4.vchs.vmware.com/api/compute?vdc=ABC&org=

☒ Enable Logs

100%

Opening vCloud source: vcloud://kdhanusu@vmware.com@us-virginia-1-4.vchs.vmware.com:443/api/compute  
Waiting for task on server ...done  
Opening OVF target: C:\Users\kdhanusu\Desktop\Newfolder  
Writing OVF package: C:\Users\kdhanusu\Desktop\Newfolder\dsl.dsl.ovf

Progress: 1%  
Progress: 2%  
Progress: 3%  
Progress: 4%  
Progress: 5%  
Progress: 6%  
Progress: 7%  
Progress: 8%  
Progress: 9%  
Progress: 10%  
Progress: 11%  
Progress: 12%  
Progress: 13%  
Progress: 14%  
Progress: 15%  
Progress: 16%

## Downloading a vAPP template from vCloud Air Subscription Environment

Downloading a vAPP template from vCloud Air Subscription by providing vCloud Air API URL and vCA User Credentials

The screenshot displays the 'Download VM - Subscription' window in the OVF - Migration Tool. The interface includes the following fields and controls:

- vCloud Air User ID:** [Redacted]
- vCloud Air Password:** [Redacted]
- Full Source URL:** v1-vcd.vchs.vmware.com:443/cloud/org/[Redacted]
- vApp Name:** DSL1
- Catalog Name:** abc
- Browse Target Location:** C:\Users\kdhamasu\Desktop\Newfolder
- VCD ID:** [Redacted]
- Org ID:** [Redacted]

A **Run** button is located below the input fields. Below the button, there is a checkbox for **Enable Logs** (checked) and a dropdown menu set to **verbose**. To the right of these is an **Export Diagnostic Logs** button. A green progress bar indicates the download progress, which is currently at 100%.

The log output at the bottom of the window shows the following sequence of events:

```
Progress: 83%
Progress: 84%
Progress: 85%
Progress: 86%
Progress: 87%
Progress: 88%
Progress: 89%
Progress: 90%
Progress: 91%
Progress: 92%
Progress: 93%
Progress: 94%
Progress: 95%
Progress: 96%
Progress: 97%
Progress: 98%
Progress: 99%
Transfer Completed
Completed successfully
```

## Troubleshooting:

When the log file option is checked, there comes an option to export the log file, the users can open read and save the log file to the specific location (C:\Program Data\VMware\Upload.log) for troubleshooting purpose.

It is recommended to increase the timeout value of OVFtool for large workload migration to vCloud Air, the default timeout value for OVFtool is 60 mins. To increase the timeout valve please follow the KB article:

<https://kb.vmware.com/kb/2082152>