

Slide 1 - Zscaler Private Access



# Zscaler Private Access

Connector Installation – VMWare

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Slide notes

Welcome to this training module on Zscaler Private Access Connector installation on VMWare.



## Slide 2 - Navigating the eLearning Module

The screenshot displays the Zscaler ZPA Basic Administration dashboard. The interface includes a sidebar with navigation options: Dashboard, Diagnostics, Live Logs, Administration, Search, and Zscaler. The main content area is titled 'Video: ZPA Basic Administration' and features a 'Zscaler' logo in the top right corner. The dashboard is divided into several sections: 'APPLICATIONS ACCESSED' (15), 'DISCOVERED APPLICATIONS' (3), 'ACCESS POLICY BLOCKS' (0), and 'SUCCESSFUL TRANSACTIONS' (884). Below these are two charts: 'APPLICATIONS ACCESSED' and 'TOP APPLICATIONS BY BANDWIDTH'. The 'TOP APPLICATIONS BY BANDWIDTH' chart lists various domains and their bandwidth usage. At the bottom of the dashboard, there are sections for 'TOP ERROR' and 'TOP POLICY BLOCKS'. Overlaid on the screenshot are several blue callout boxes with white text: 'Exit' (top right), 'Previous Slide' (left), 'Next Slide' (right), 'Play/Pause' (bottom left), 'Progress Bar' (bottom center), 'Audio On/Off' (bottom right), and 'Closed Captioning' (bottom right).

## Slide notes

Here is a quick guide to navigating this module. There are various controls for playback including **Play** and **Pause**, **Previous** and **Next** slide. You can also **Mute** the audio or enable **Closed Captioning** which will cause a transcript of the module to be displayed on the screen. Finally, you can click the **X** button at the top to exit.

## Slide 3 - Agenda



# Agenda

- Installing a Connector on VMware

## Slide notes

In this module, we will provide a step-by-step overview of how to install a Connector on VMware.

## Slide 4 - Installing a Connector Virtual Appliance




## Slide notes

The next topic that we will cover is how to install a Connector on VMware.

This section has been created as an interactive demo to give you a feel for the navigation of the VMware vCenter console. You will be asked to select the appropriate menu options to navigate the UI. You may also use the Play control to proceed to the next step.

## Slide 5 - Virtual Appliance Requirements



## VMware Requirements

### VMware Environment


- Functional VMware ESXi 5.5 or 6.0 Hypervisor and VMware vSphere Client
- Capacity for a minimum of 2 virtual machines, each with 2 x vCPUs, 4GB of RAM, and 8GB of disk space (approximately 1GB with thin provisioning)
- Image file from Zscaler (vCenter or stand-alone)

## Slide notes

To deploy a App Connector on VMware, you will need:

- A VMware ESXi 5.5 or 6.0 Hypervisor;
- With capacity for a minimum of 2 virtual machines (VM), each with two vCPUs, 4GB of RAM, and 8GB of disk space (which works out to about 1GB with thin provisioning).
- You also need the image file from Zscaler, there being one for vCenter deployments, and another for Standalone ESXi deployments.

## Slide 6 - Virtual Appliance Requirements



## VMware Requirements

### VMware Environment


- Functional VMware ESXi 5.5 or 6.0 Hypervisor and VMware vSphere Client
- Capacity for a minimum of 2 virtual machines, each with 2 x vCPUs, 4GB of RAM, and 8GB of disk space (approximately 1GB with thin provisioning)
- Image file from Zscaler (vCenter or stand-alone)

Capacity for 2 VMs is required, as we recommend that Connectors be deployed in pairs for continuous availability

## Slide notes

Note, you need capacity for 2 VMs, as we recommend that Connectors are deployed in pairs to ensure continuous availability during SW upgrades.

## Slide 7 - Virtual Appliance Requirements



## VMware Requirements

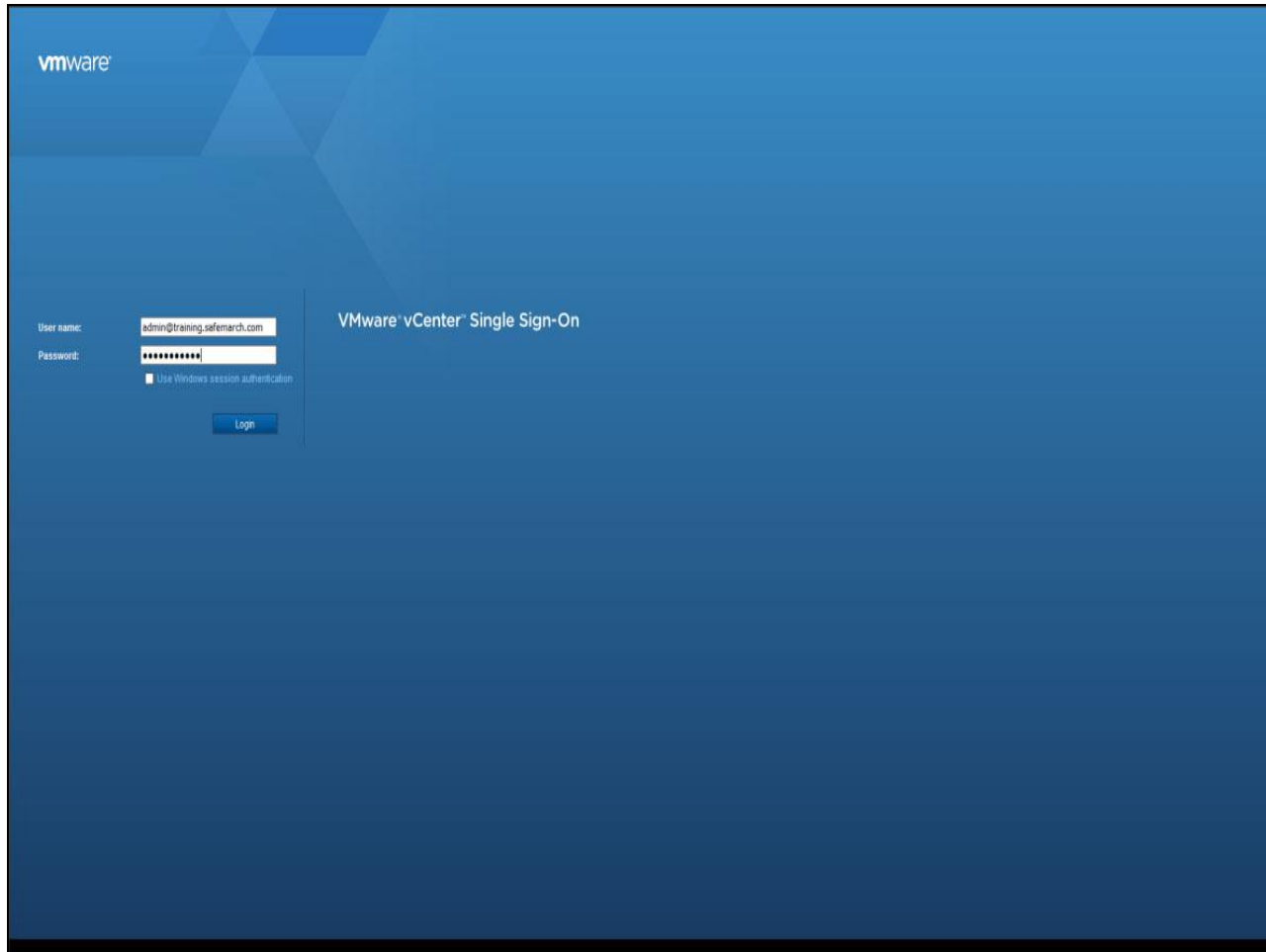
VMware Environment	Other Requirements
<ul style="list-style-type: none"><li>• Functional VMware ESXi 5.5 or 6.0 Hypervisor and VMware vSphere Client</li><li>• Capacity for a minimum of 2 virtual machines, each with 2 x vCPUs, 4GB of RAM, and 8GB of disk space (approximately 1GB with thin provisioning)</li><li>• Image file from Zscaler (vCenter or stand-alone)</li></ul>	<ul style="list-style-type: none"><li>• Connector Provisioning Key</li><li>• On a LAN segment adjacent to the private applications</li><li>• Outbound connectivity to the ZPA Cloud on port 443</li><li>• DHCP server for IP address allocation and DNS server configuration (if using dynamic IP assignments)</li><li>• Ability to resolve both internal and external DNS</li></ul>

## Slide notes

Other requirements for deploying the Connector are:

- A valid Connector Provisioning Key;
- It must be installed on a LAN segment adjacent to the private applications that you want to enable access for;
- Outbound connectivity to all Zscaler data centers containing ZPA-ZENs;
- If you plan to use dynamic IP address and DNS server assignments, then you will require a DHCP server on the LAN;
- And the Connector must be able to resolve DNS for both internal and external hosts.

## Slide 8 - Slide 8

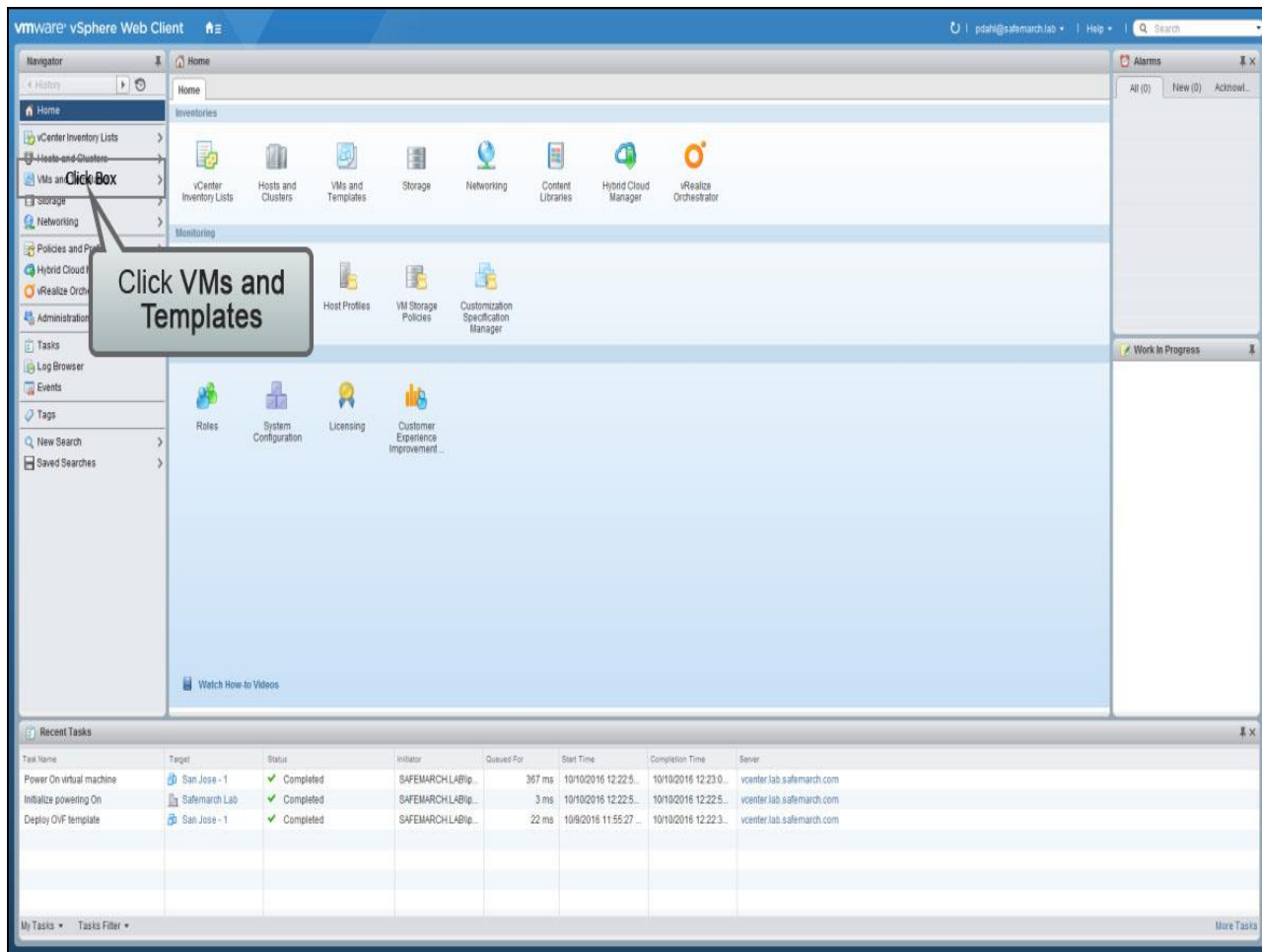


## Slide notes

Login to your VMWare ESXi 5.5 or 6.0 vSphere Web Client...



## Slide 9 - Slide 9



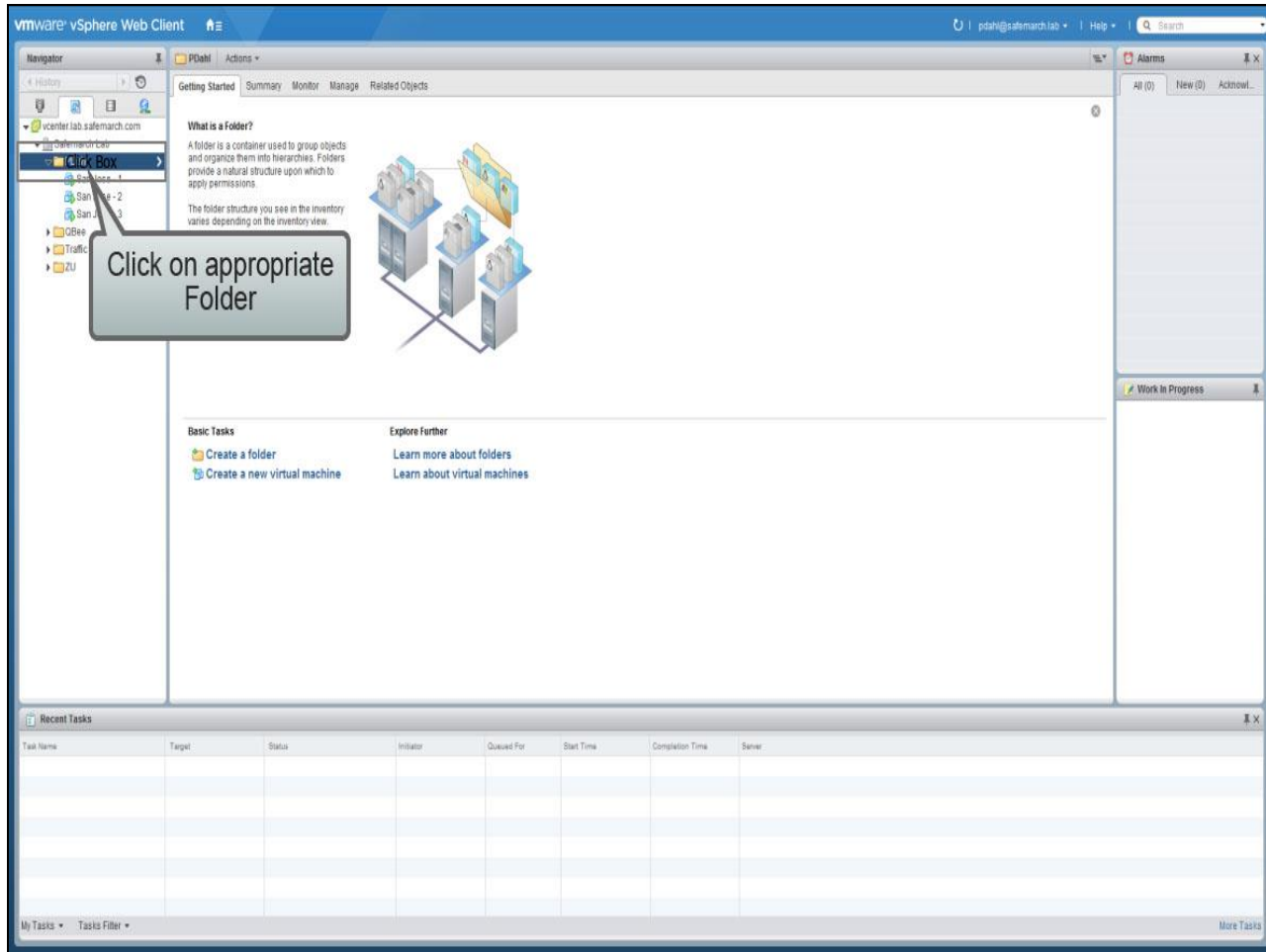
The screenshot shows the VMware vSphere Web Client interface. The left sidebar contains a 'Navigator' pane with a 'Click Box' annotation pointing to the 'VMs and Templates' link. The main content area displays the 'Home' page with various icons for 'Inventories' (vCenter Inventory Lists, Hosts and Clusters, VMs and Templates, Storage, Networking, Content Libraries, Hybrid Cloud Manager, vRealize Orchestrator) and 'Monitoring' (Host Profiles, VM Storage Policies, Customization Specification Manager). A 'Recent Tasks' table is visible at the bottom.

Task Name	Target	Status	Initiator	Queued For	Start Time	Completion Time	Server
Power On virtual machine	San Jose - 1	Completed	SAFEMARCH LAB...	367 ms	10/10/2016 12:22:5...	10/19/2016 12:23:0...	vcenter.lab.safemarch.com
Initialize powering On	Safemarch Lab	Completed	SAFEMARCH LAB...	3 ms	10/10/2016 12:22:5...	10/10/2016 12:22:5...	vcenter.lab.safemarch.com
Deploy OVF template	San Jose - 1	Completed	SAFEMARCH LAB...	22 ms	10/9/2016 11:55:27...	10/10/2016 12:22:3...	vcenter.lab.safemarch.com

## Slide notes

...then on the home page, click on **VMs and Templates**.

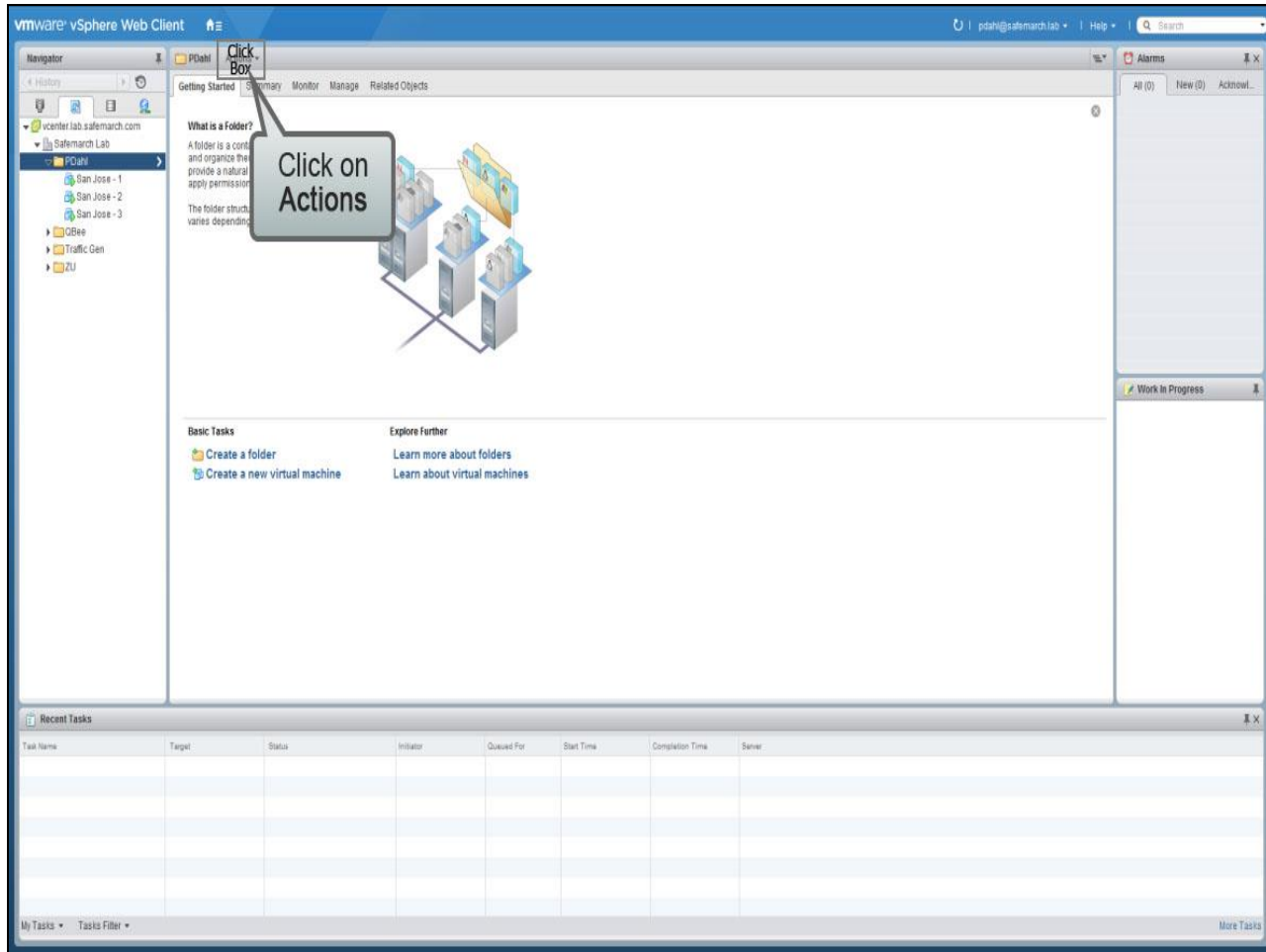
## Slide 10 - Slide 10



## Slide notes

Then click on an appropriate folder.

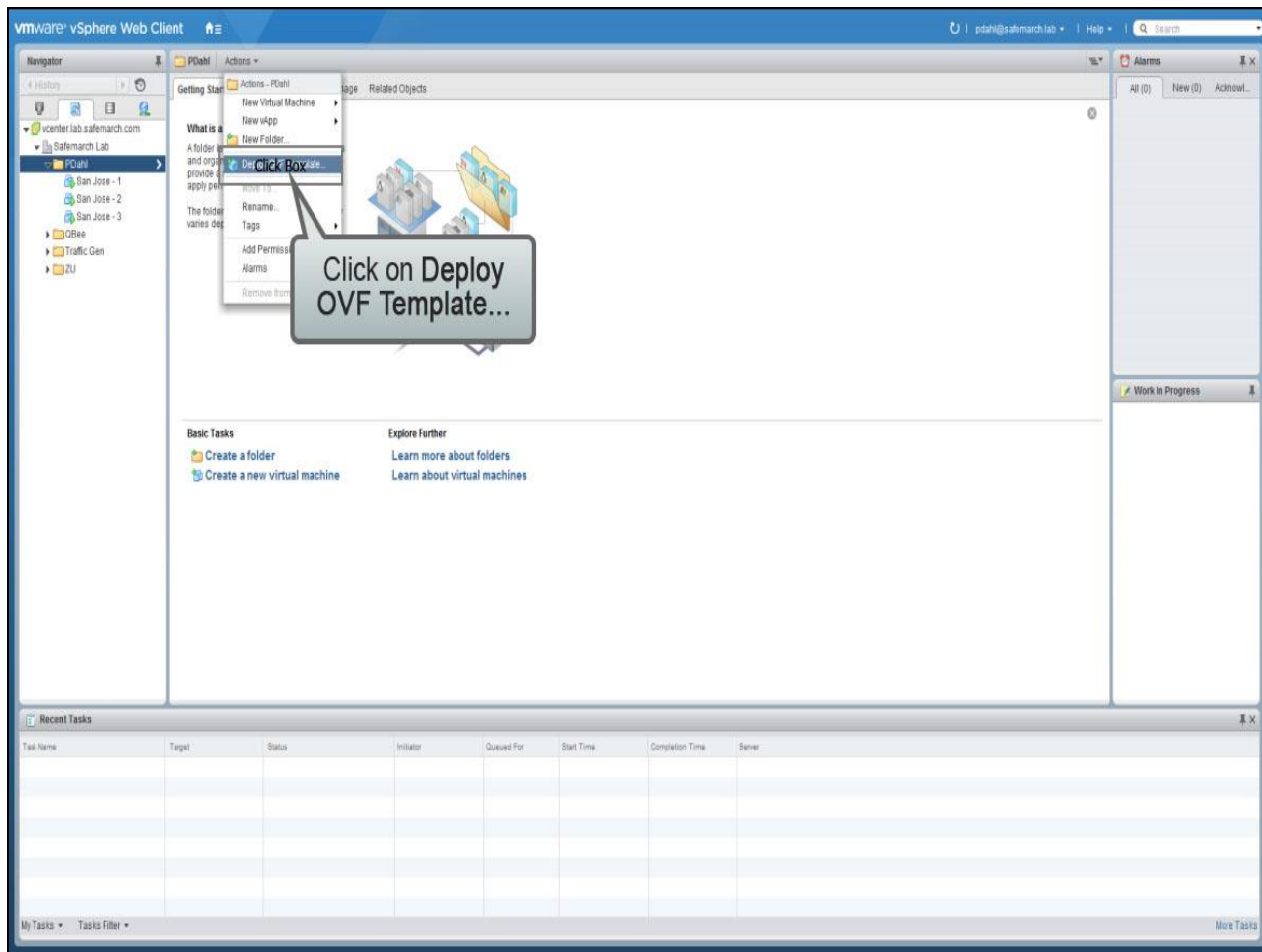
Slide 11 - Slide 11



## Slide notes

To add an OVF template, click **Actions...**

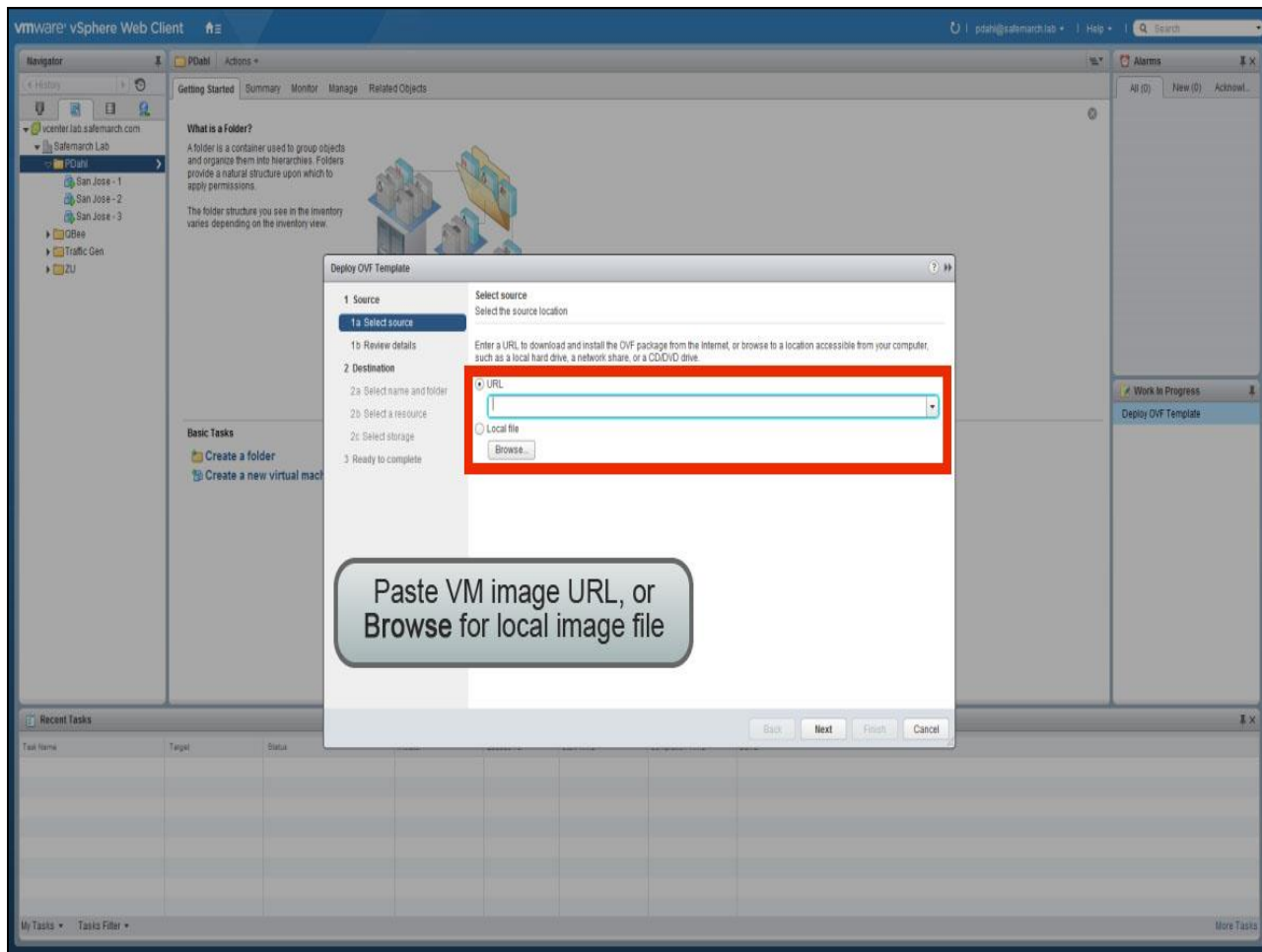
## Slide 12 - Slide 12



## Slide notes

...then click Deploy OVF Template....

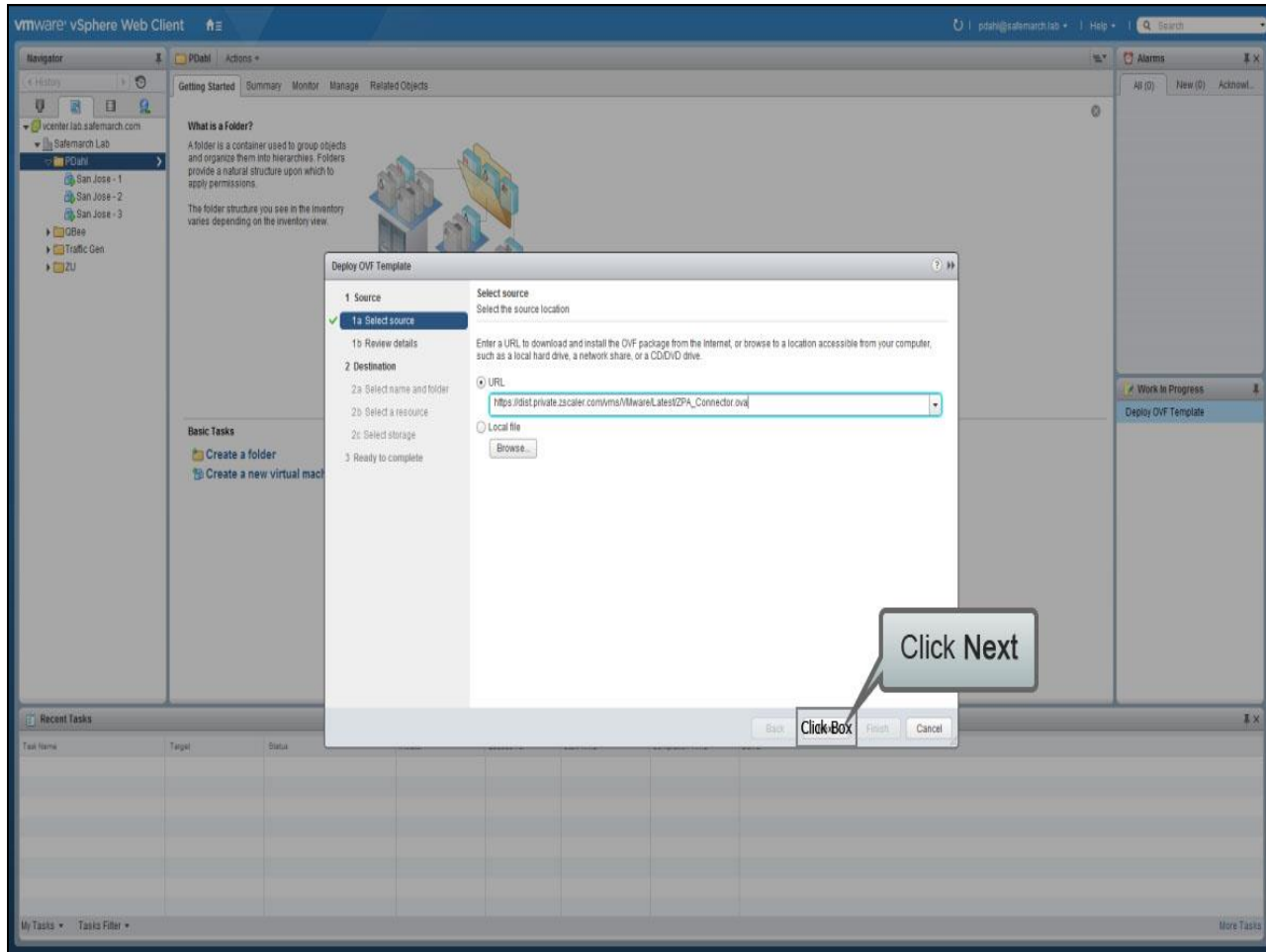
## Slide 13 - Slide 13



## Slide notes

There are two options for specifying the location for the OVF template file; you can **Browse** to locate a local copy of it or specify the URL for the file.

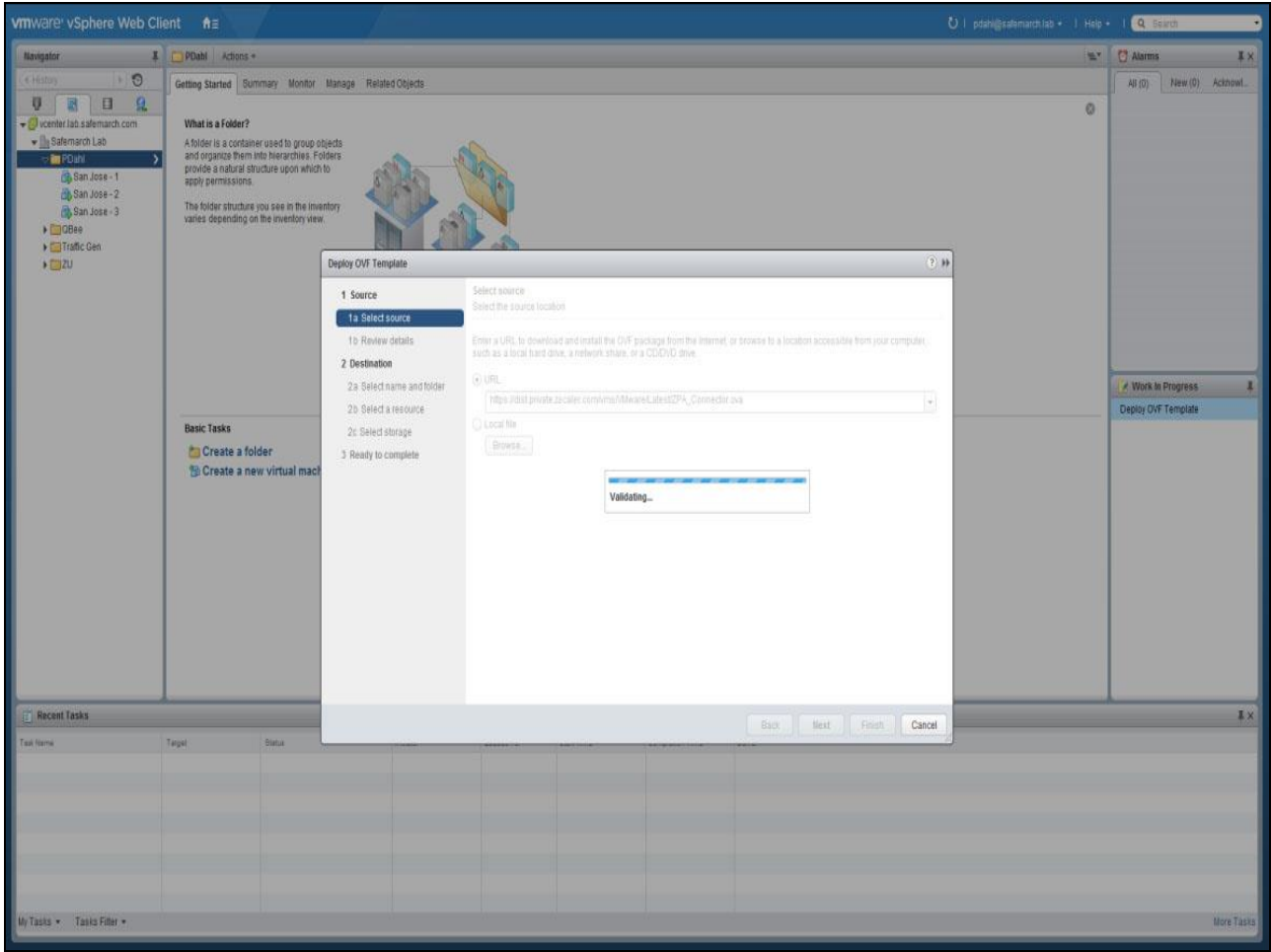
## Slide 14 - Slide 14



## Slide notes

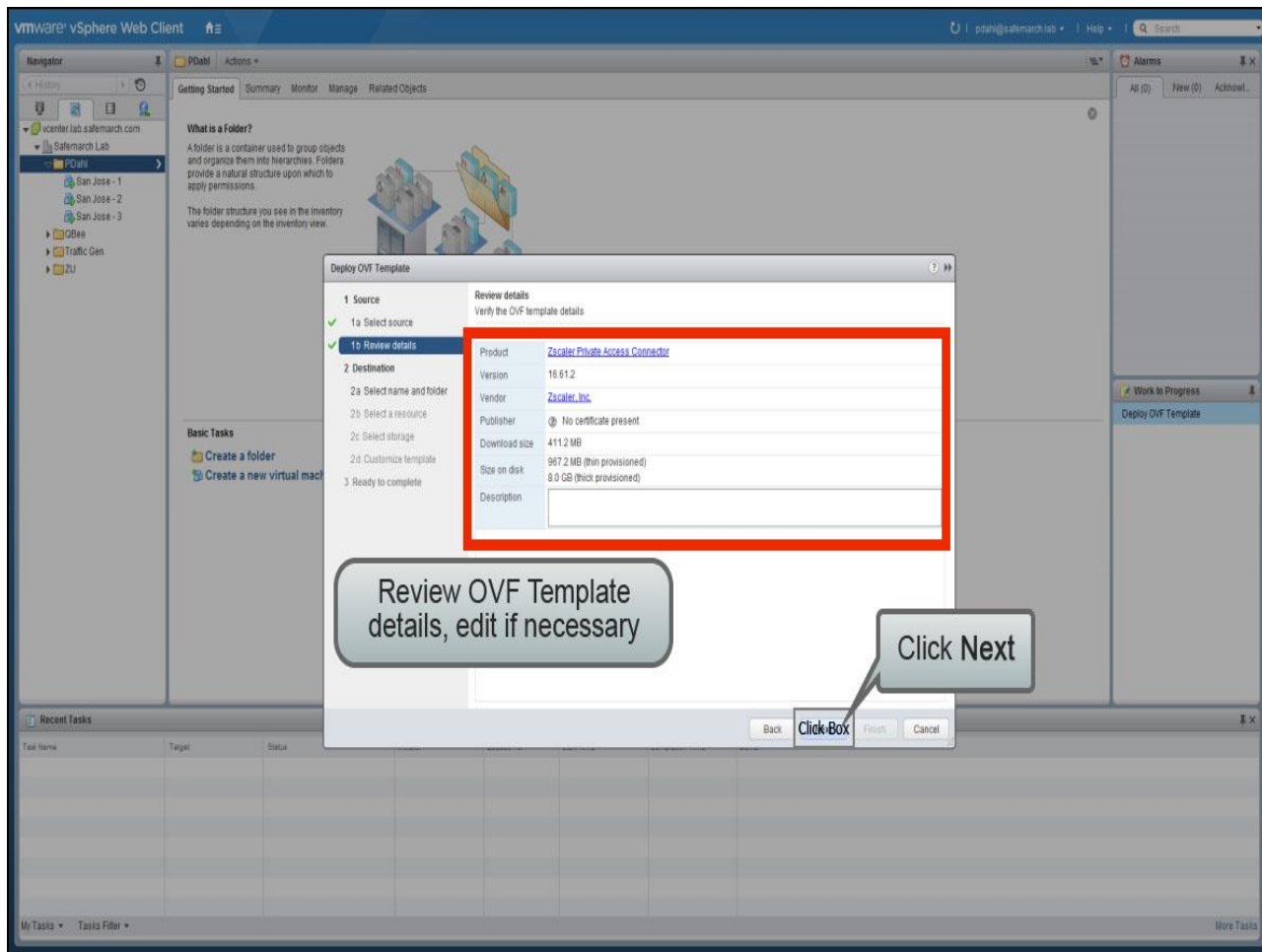
Having specified the correct location, click **Next**.

Slide 15 - Slide 15



Slide notes

## Slide 16 - Slide 16

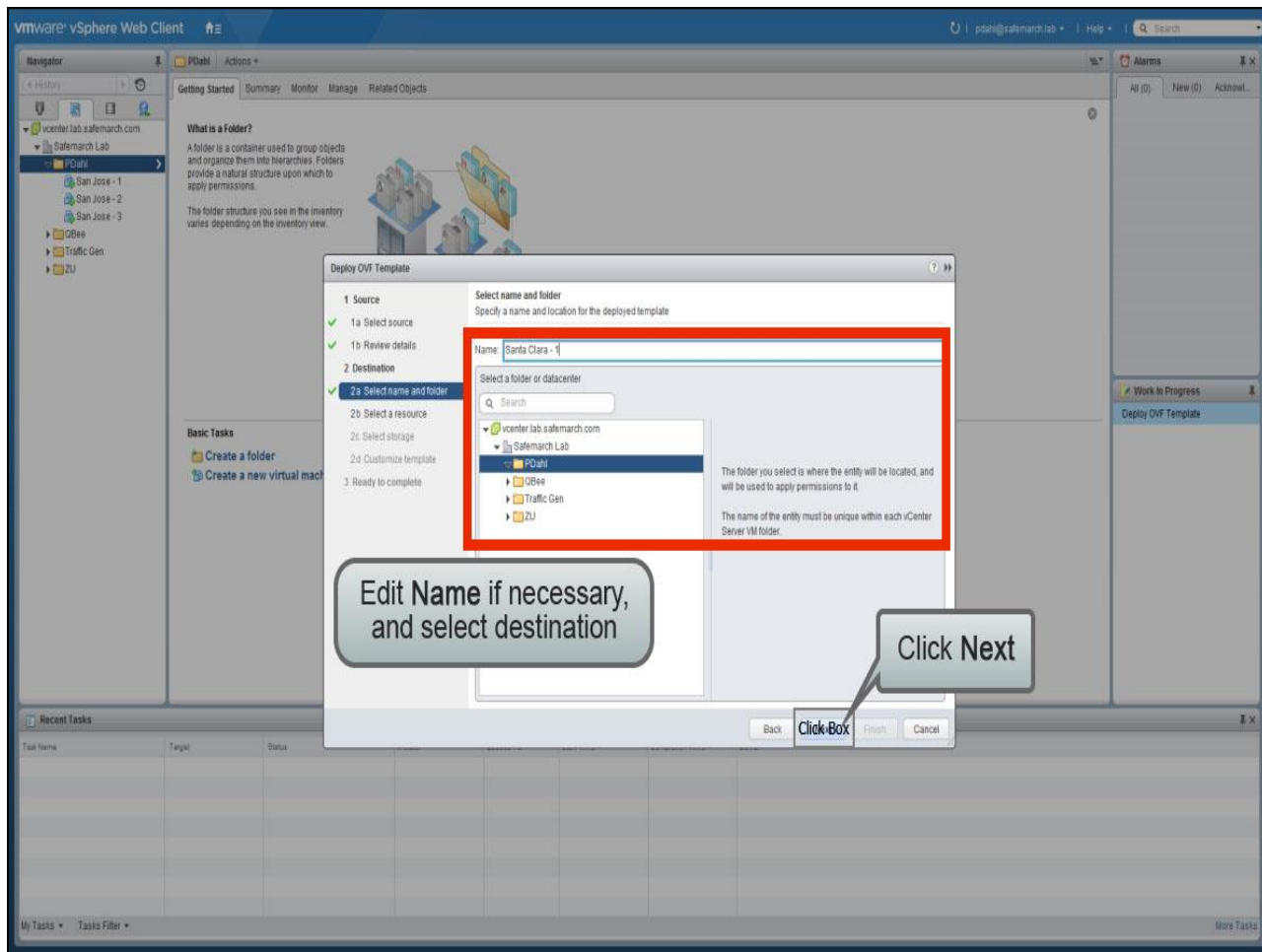


## Slide notes

Review the details for the file to verify it is the correct one, add a **Description** if necessary, then click **Next**.



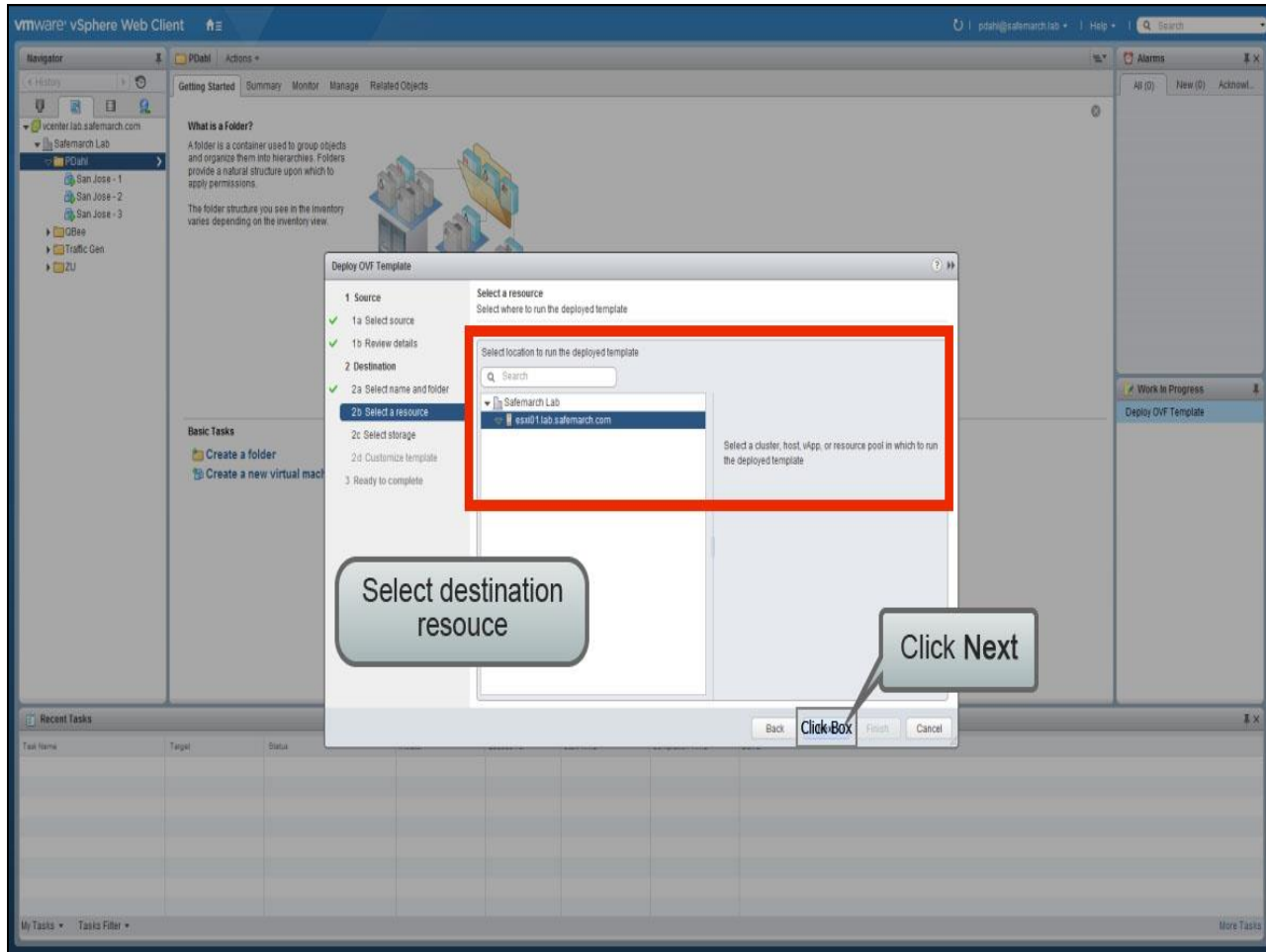
Slide 17 - Slide 17



## Slide notes

Edit the **Name** for this Connector VM if necessary, and select an appropriate destination for it, then click **Next**.

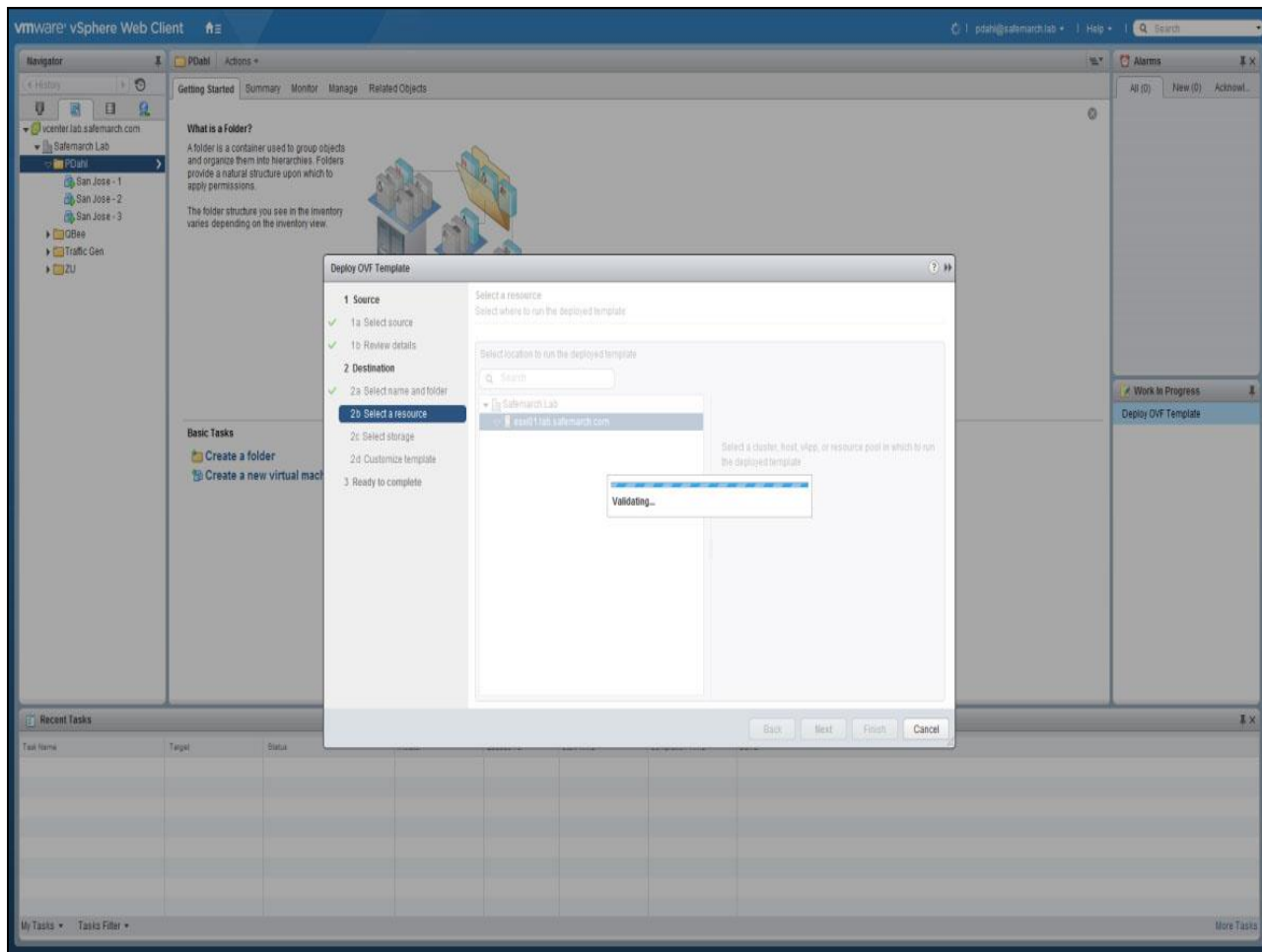
## Slide 18 - Slide 18



## Slide notes

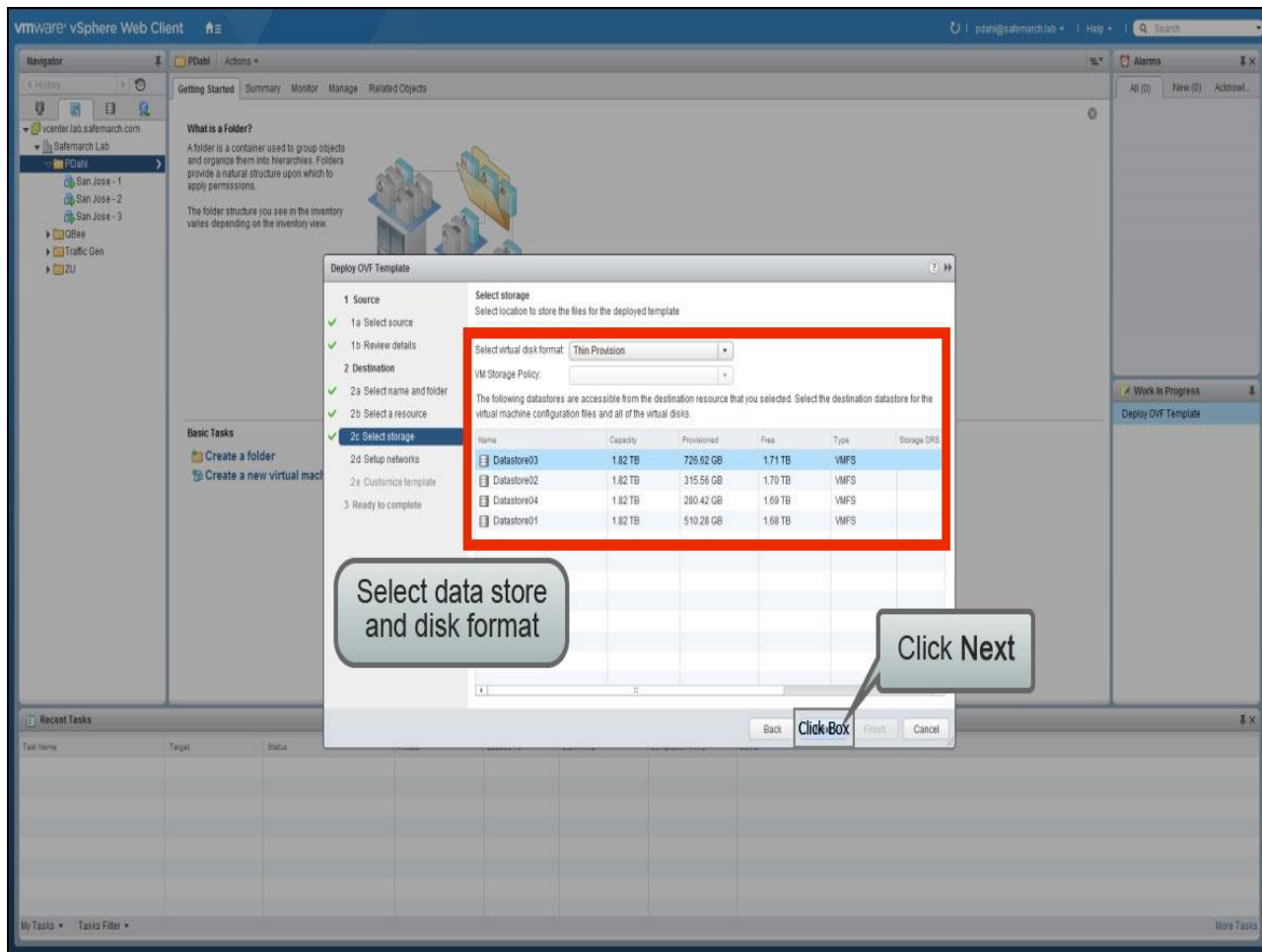
Select the destination resource (**cluster, host, vApp, or resource pool**), and click **Next**.

## Slide 19 - Slide 19



## Slide notes

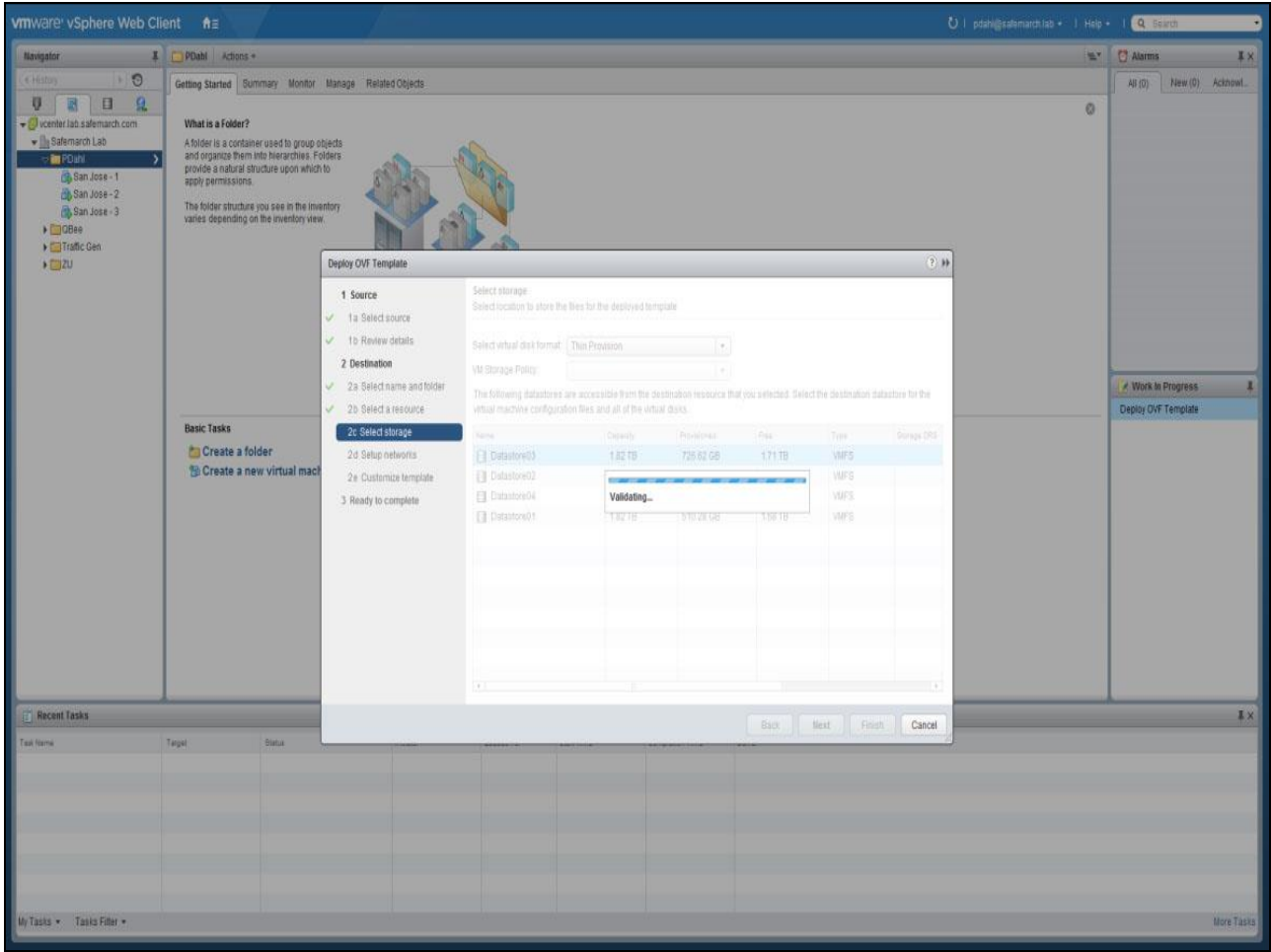
## Slide 20 - Slide 20



## Slide notes

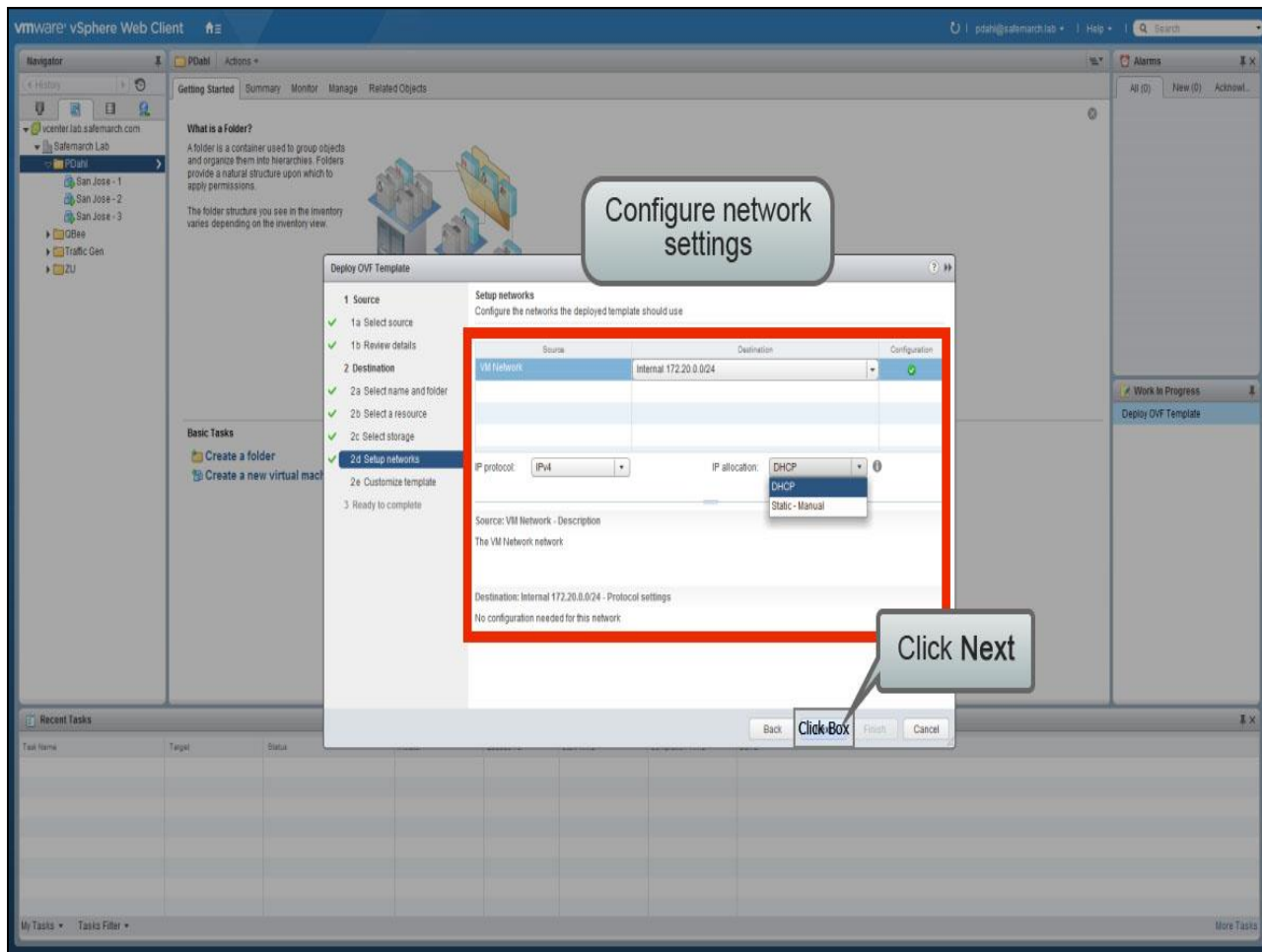
Select an appropriate **data store**, and select the **virtual disk format**, then click **Next**.

Slide 21 - Slide 21



Slide notes

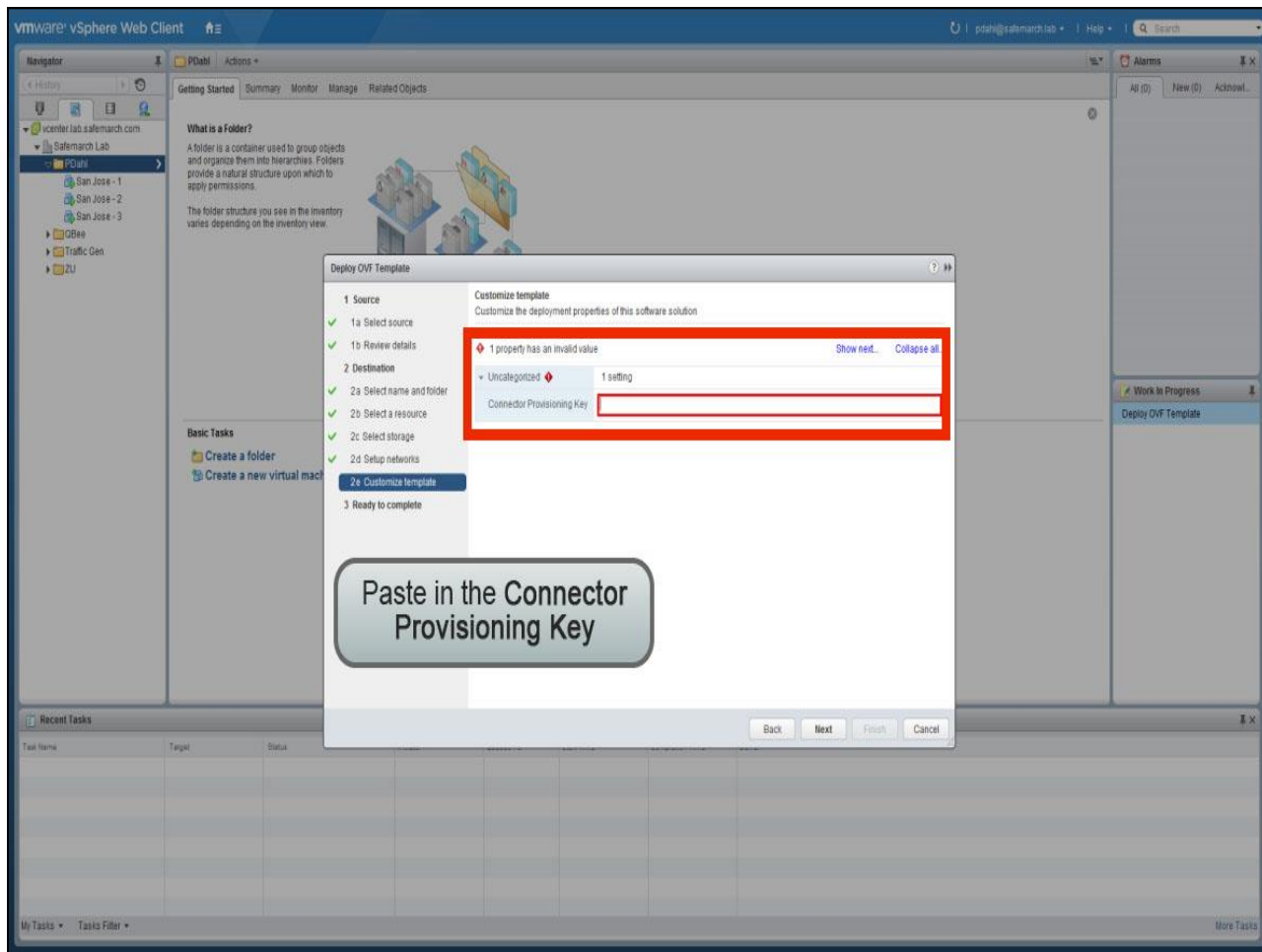
## Slide 22 - Slide 22



## Slide notes

Configure network settings as necessary, in this case we will select **DHCP** for the **IP Allocation** setting, then click **Next**.

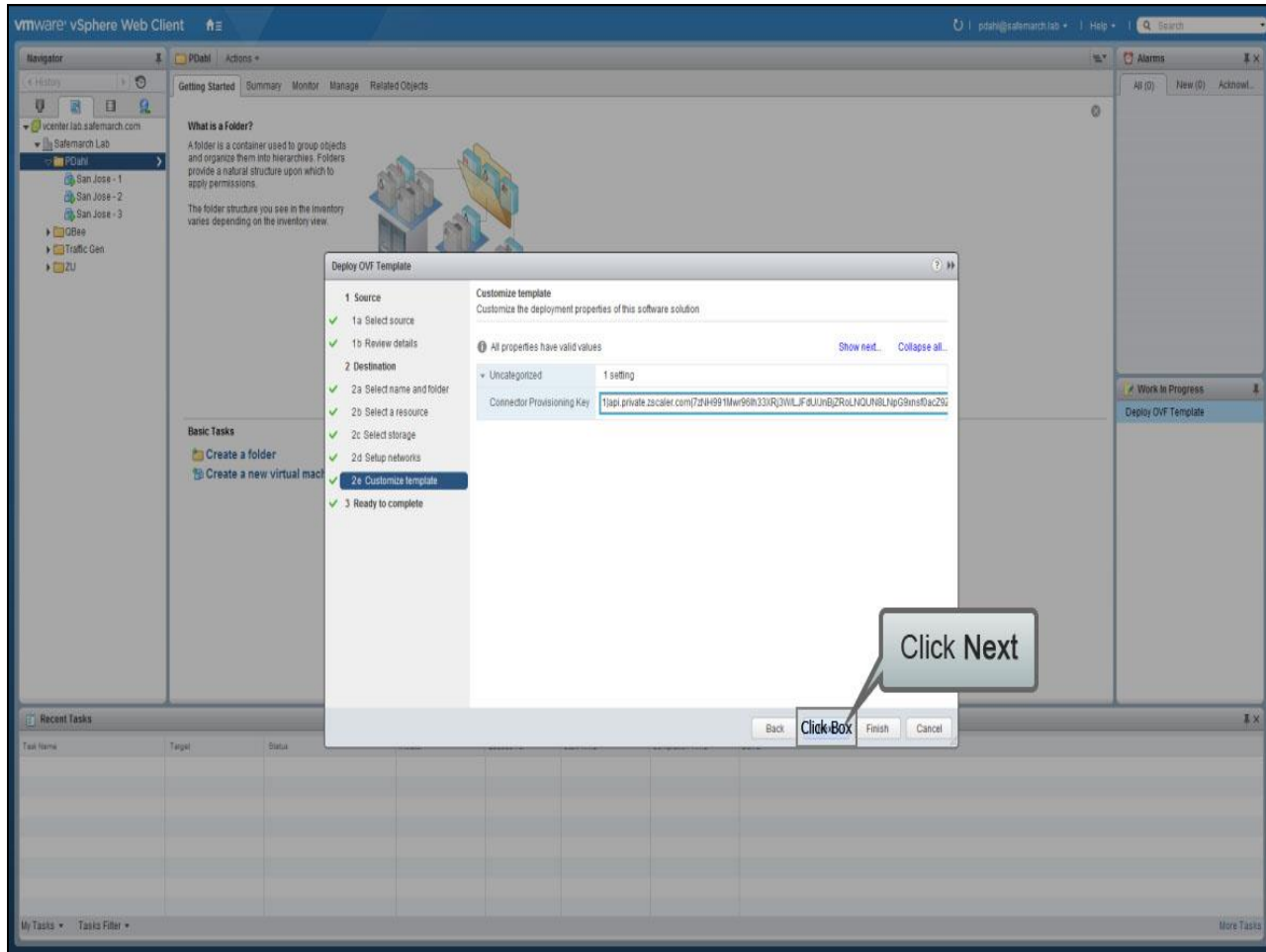
## Slide 23 - Slide 23



## Slide notes

Paste in the Connector **Provisioning Key** value, that you saved when provisioning it in the ZPA Admin Portal...

## Slide 24 - Slide 24

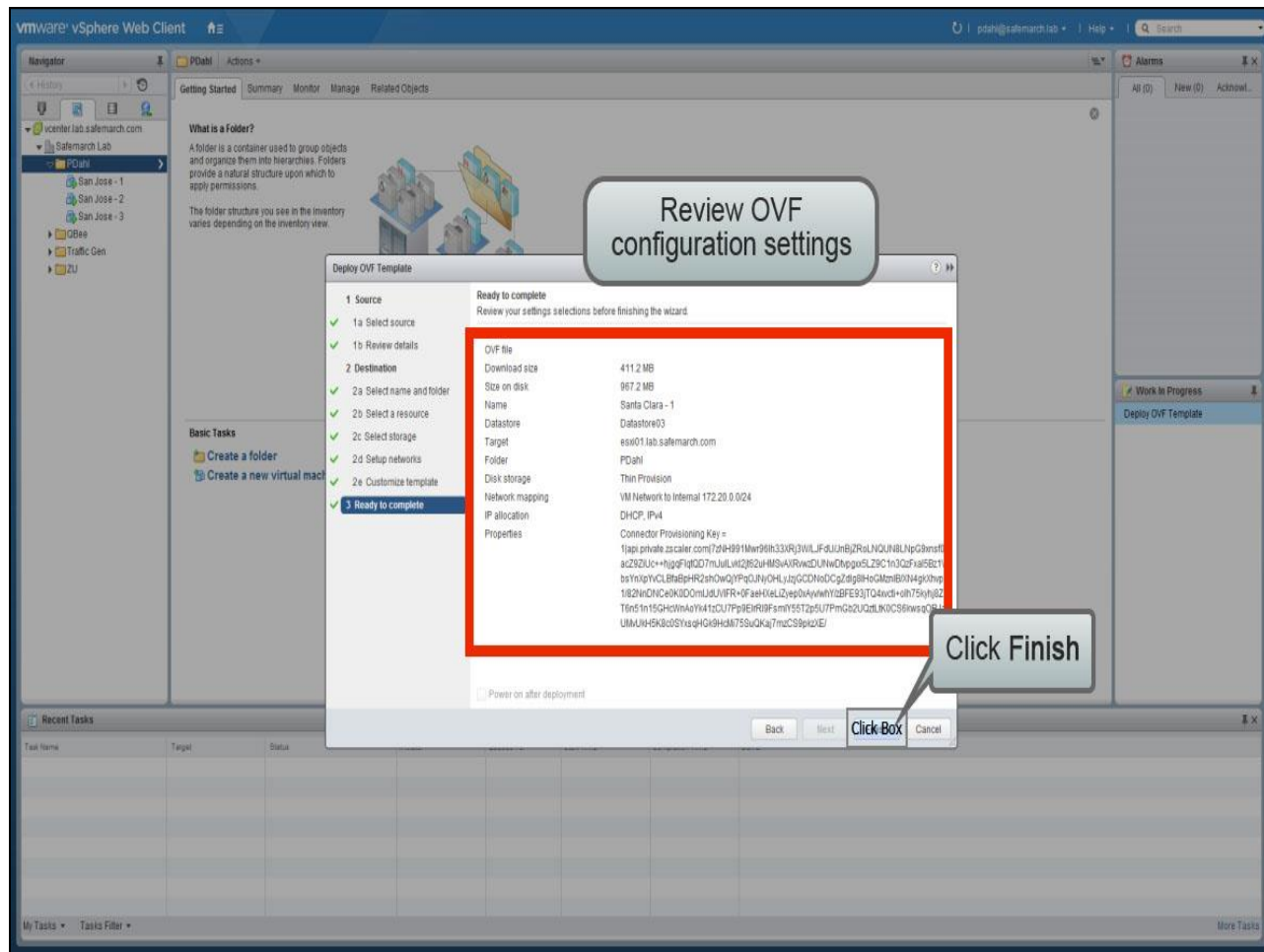


## Slide notes

...and click **Next**.



## Slide 25 - Slide 25



## Slide notes

Review the OVF settings, then click **Finish**...

## Slide 26 - Slide 26

The screenshot displays the VMware vSphere Web Client interface. The main content area shows the 'Getting Started' page for folders, which includes a 'What is a Folder?' section with a diagram of folder hierarchy and a 'Recent Tasks' table at the bottom. A red box highlights the first row of the 'Recent Tasks' table, which shows the 'Initialize OVF deployment' task.

**What is a Folder?**

A folder is a container used to group objects and organize them into hierarchies. Folders provide a natural structure upon which to apply permissions.

The folder structure you see in the inventory varies depending on the inventory view.

**Basic Tasks**

- Create a folder
- Create a new virtual machine

**Explore further**

- Learn more about folders
- Learn about virtual machines

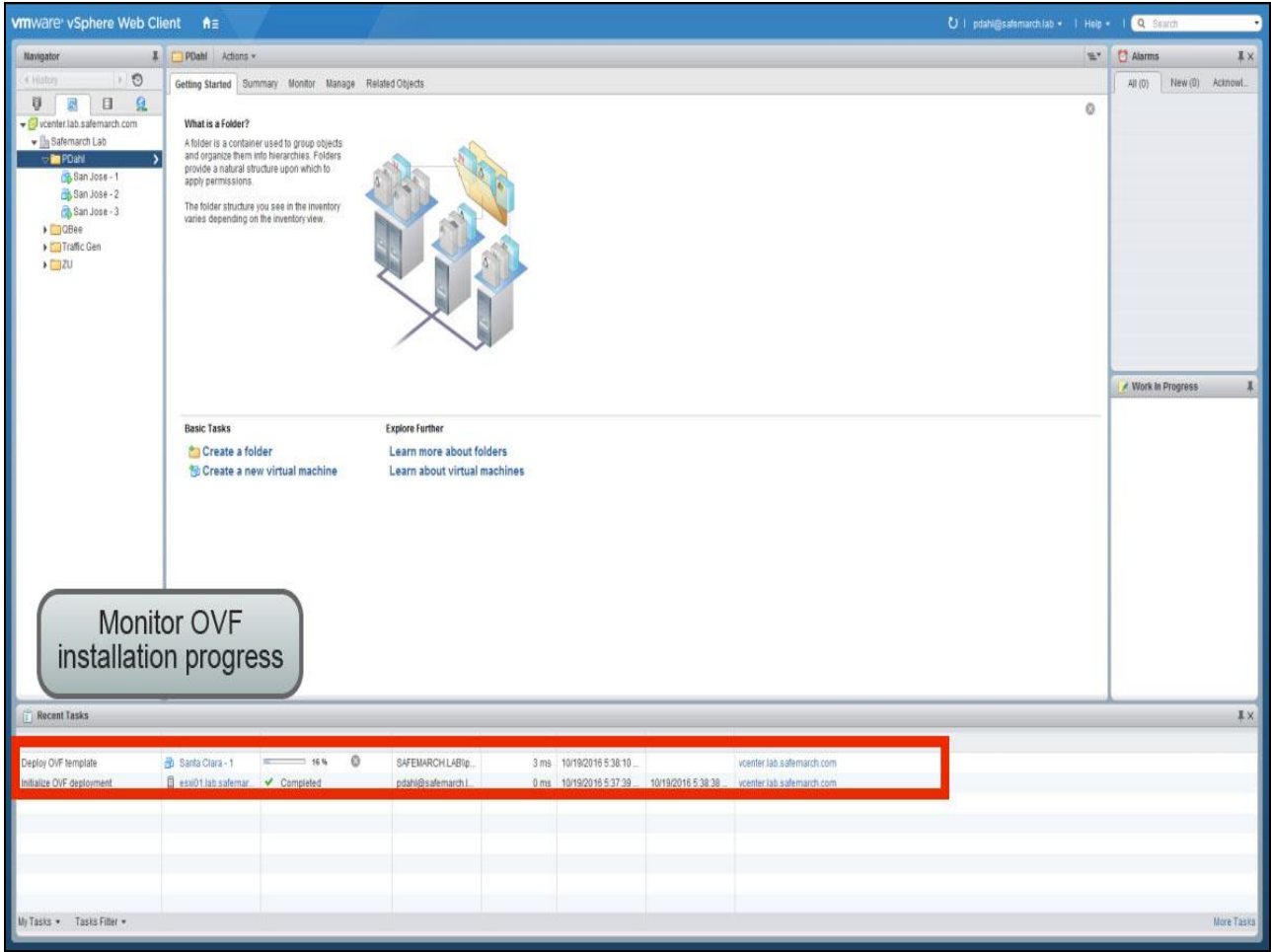
**Recent Tasks**

Task Name	Task ID	Progress	Status	Start Time	End Time	URL	
Initialize OVF deployment	esxi01 lab safemar...	<div></div>	0	pdahl@safemarch...	0 ms	10/19/2016 5:37:39 ...	vcenler lab safemarch.com

## Slide notes

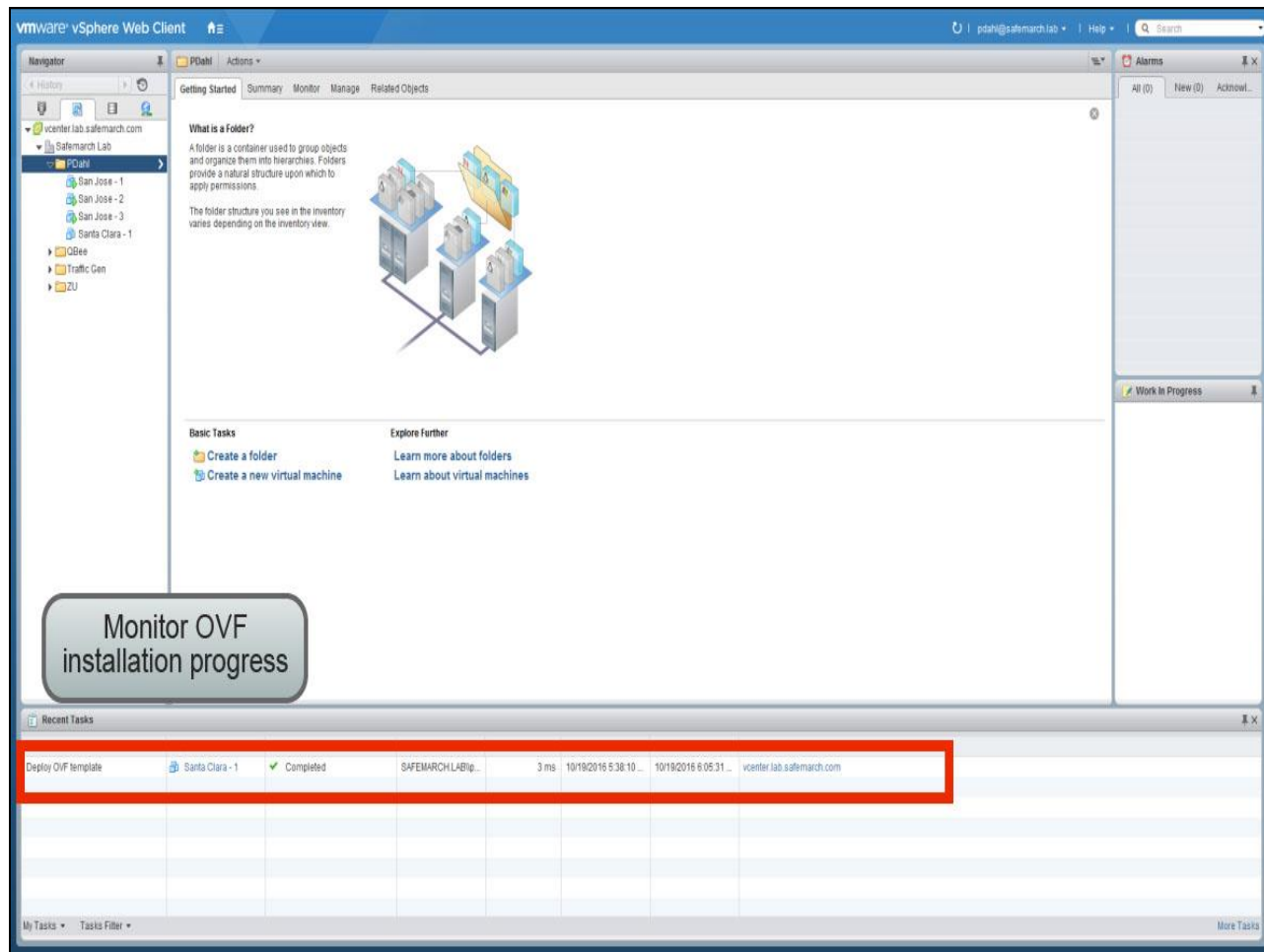
...and monitor the OVF install process.

Slide 27 - Slide 27



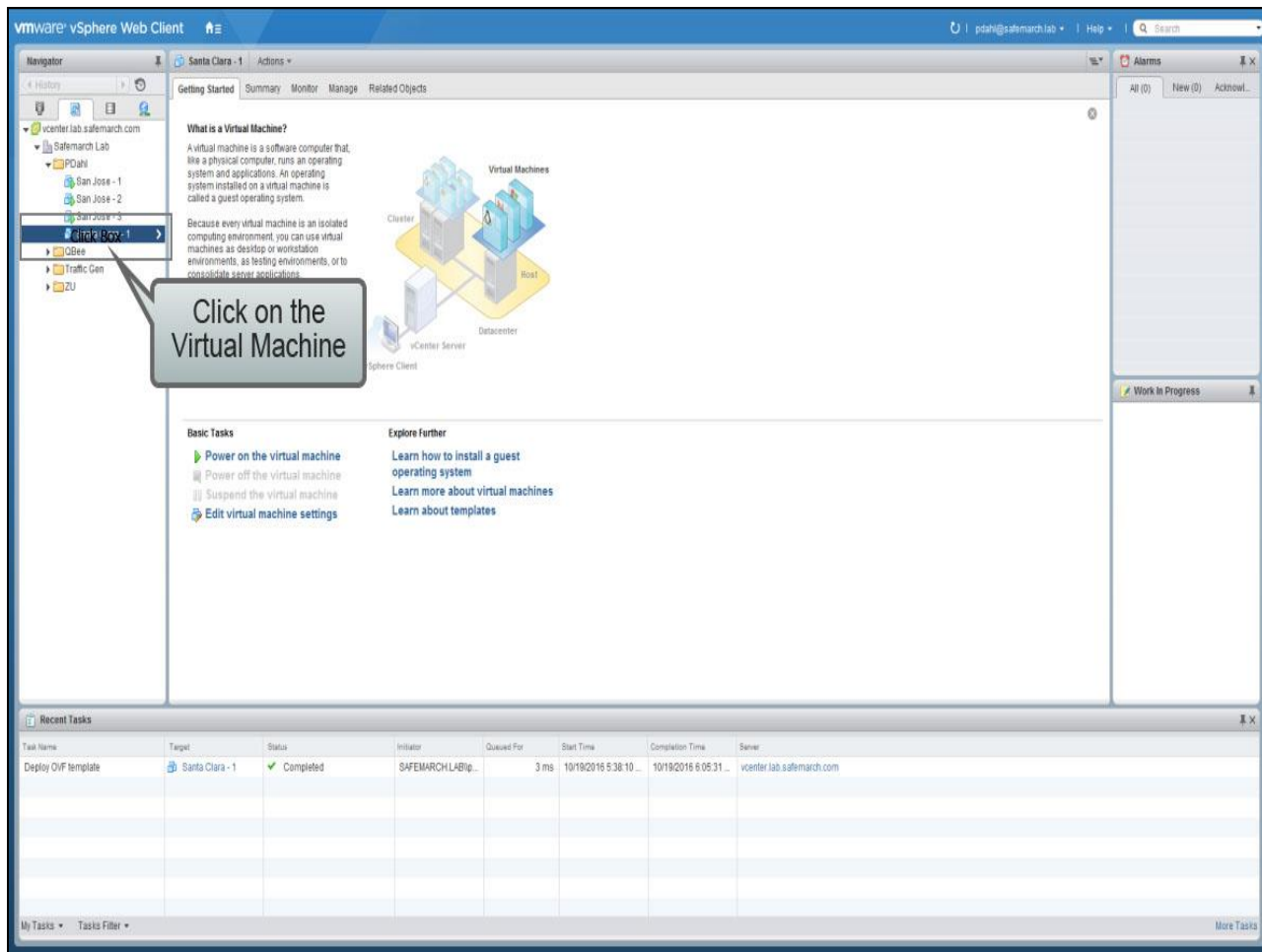
Slide notes

Slide 28 - Slide 28



## Slide notes

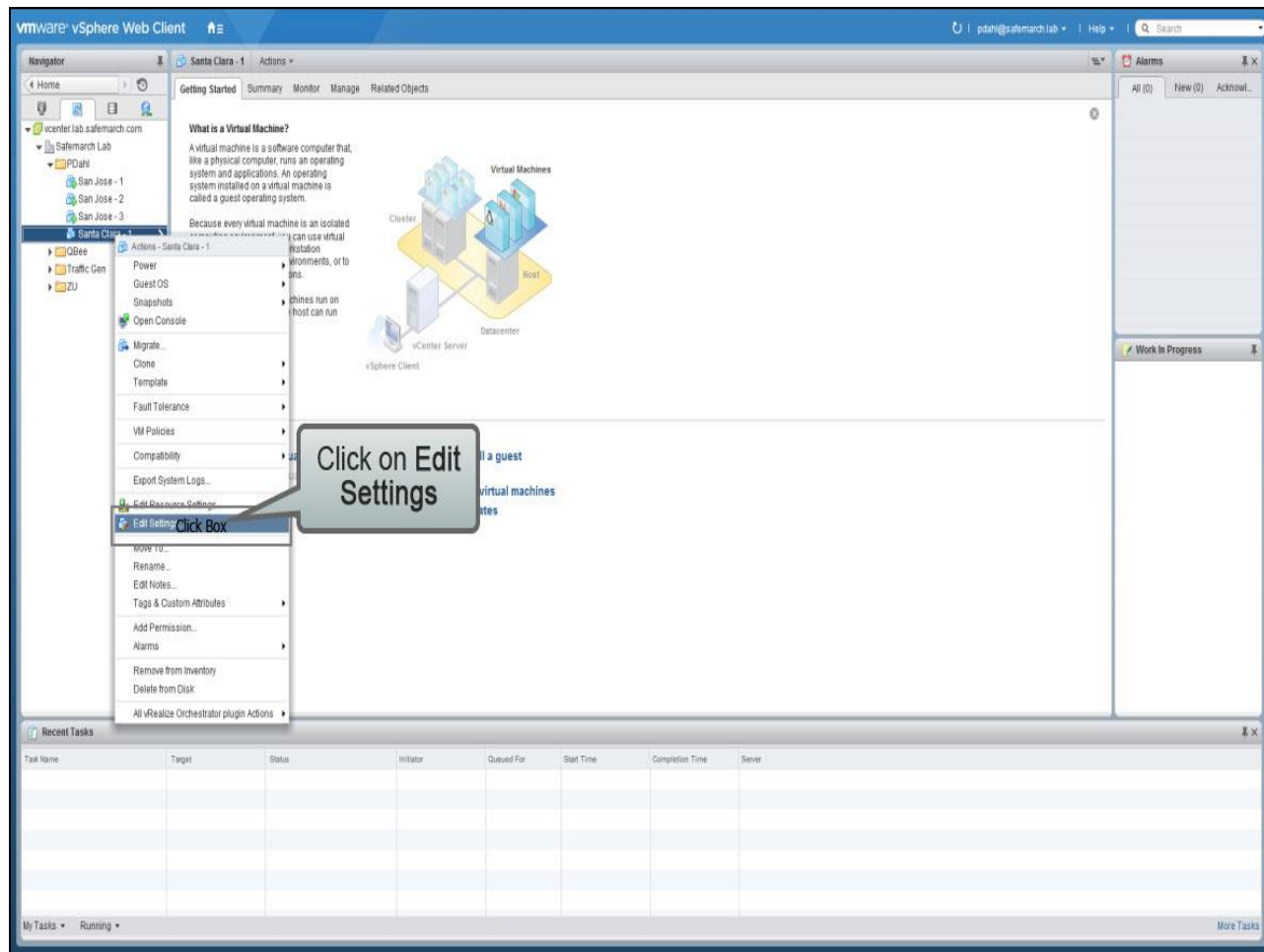
## Slide 29 - Slide 29



## Slide notes

Once the VM is installed, select it...

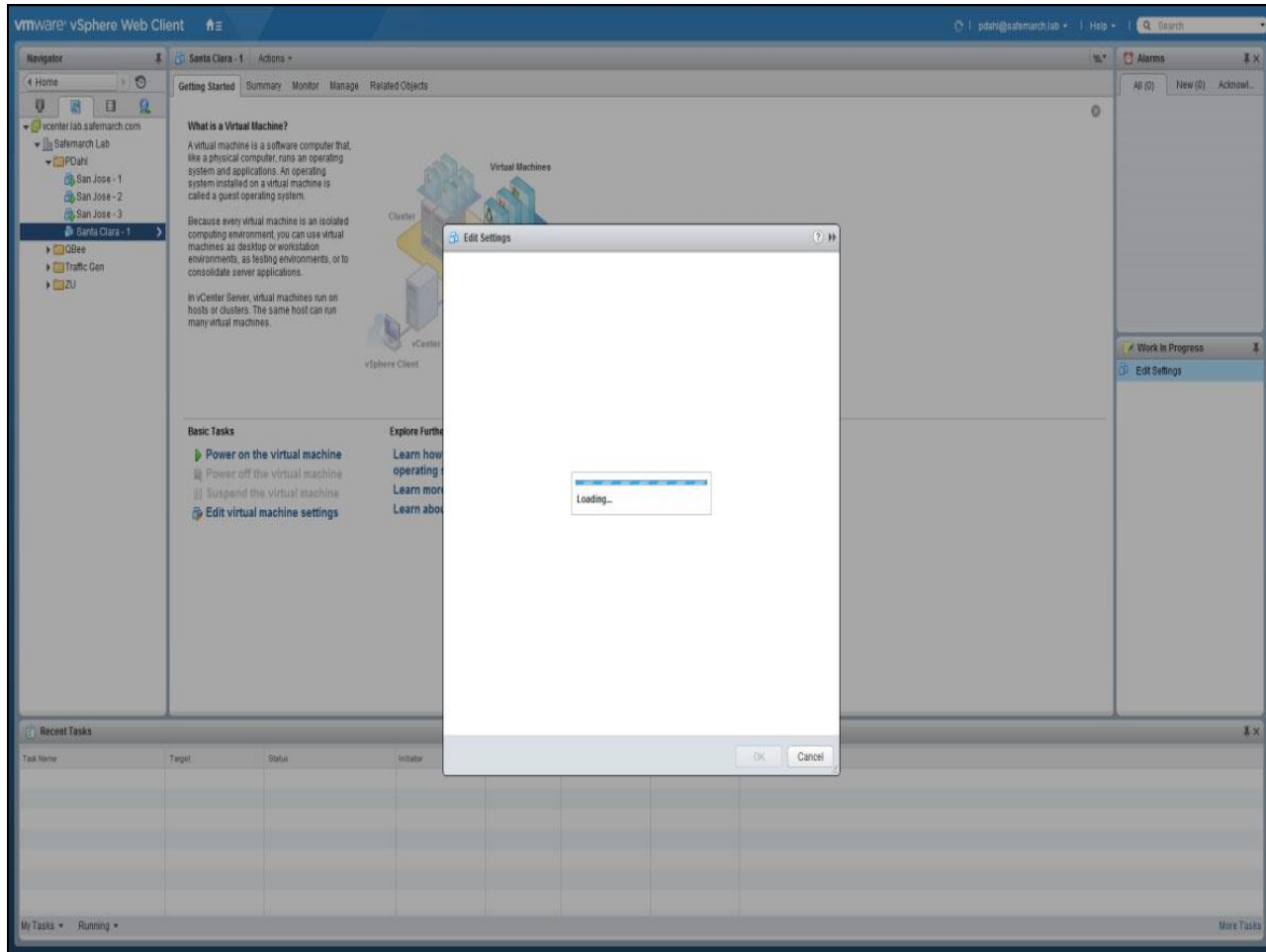
## Slide 30 - Slide 30



## Slide notes

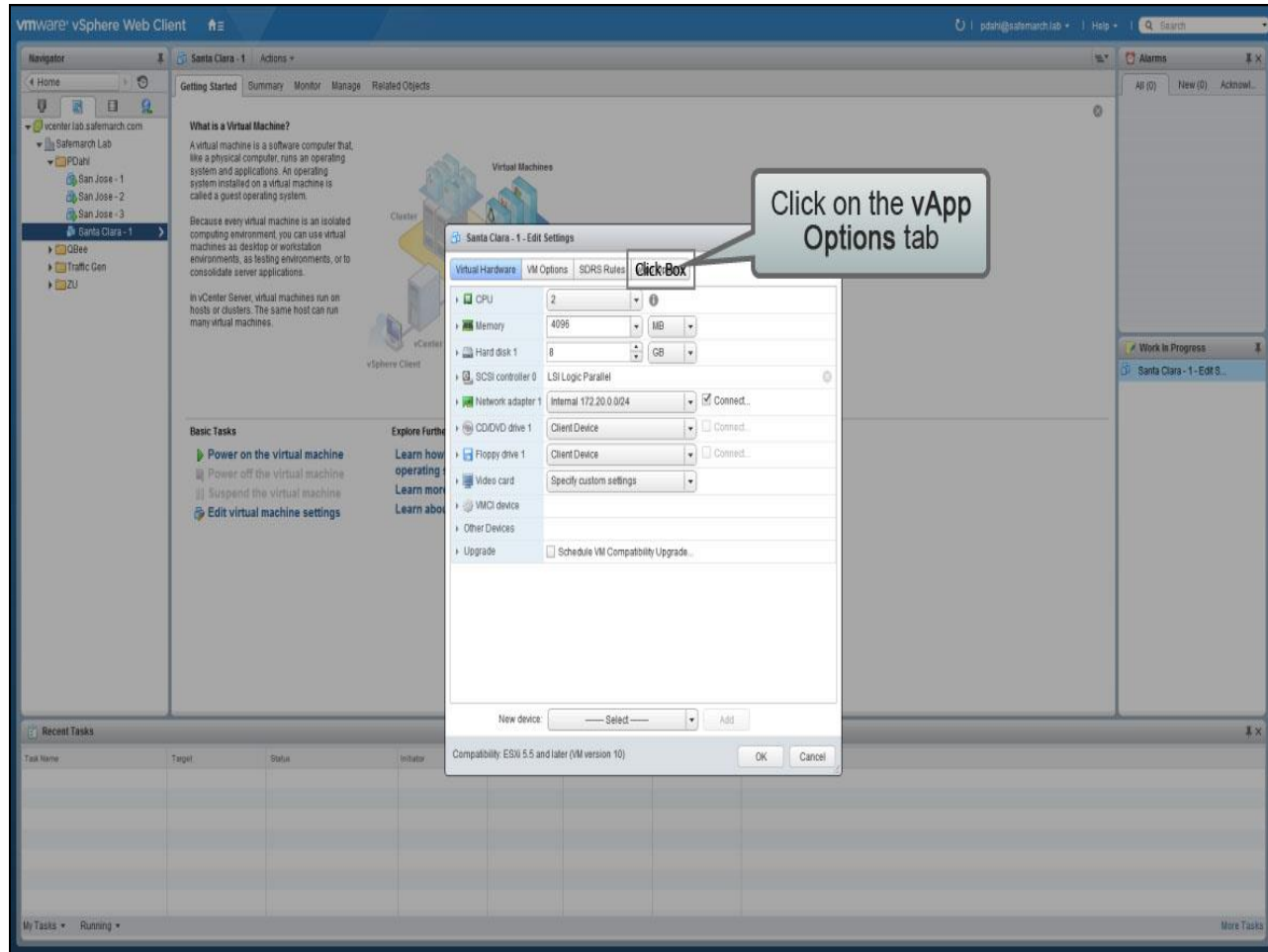
...right click and select the **Edit Settings** option. Note this can also be found under the **Actions** menu at the top

## Slide 31 - Slide 31



## Slide notes

Slide 32 - Slide 32

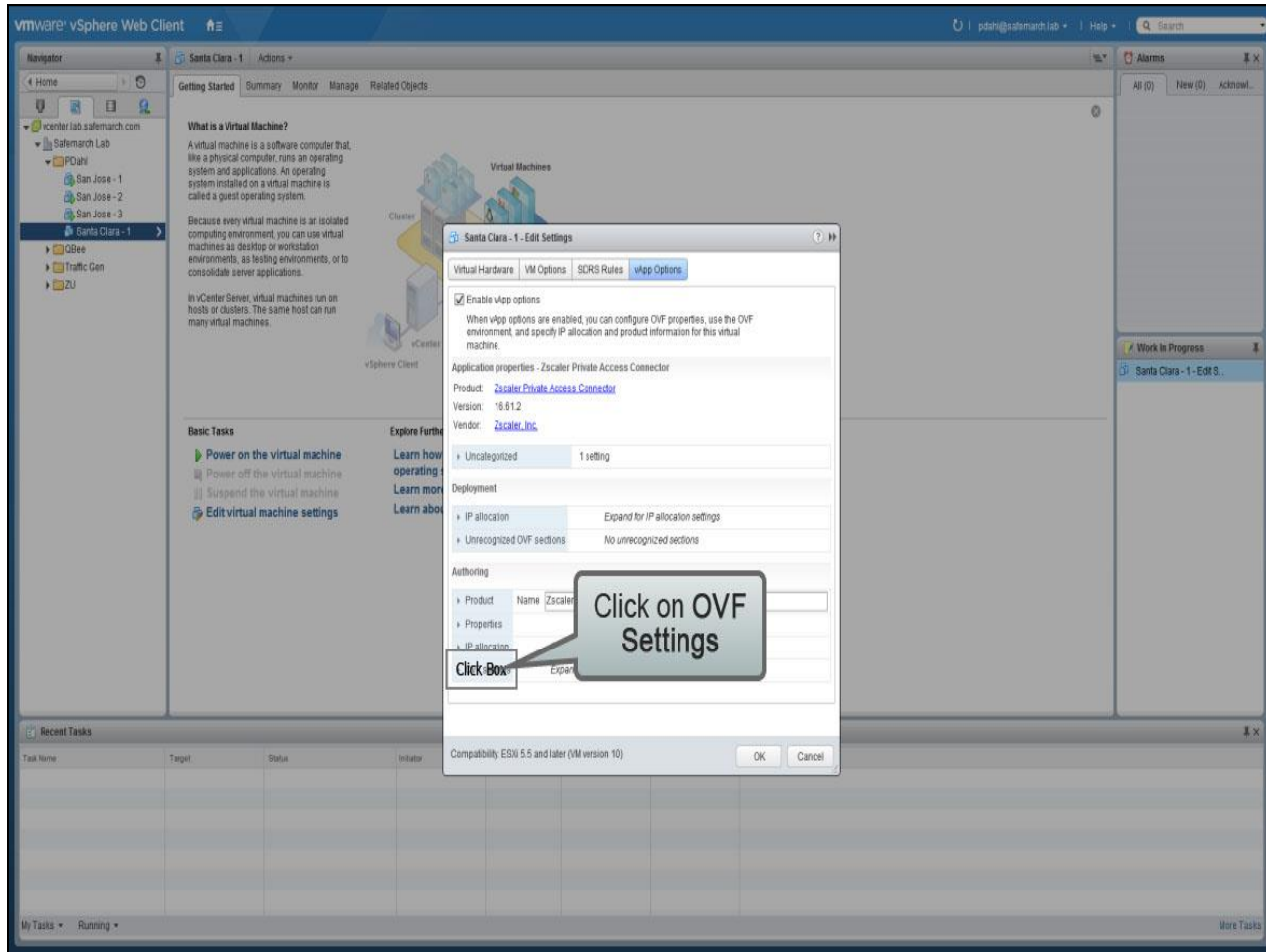


## Slide notes

To edit OVF settings, click on the **vApp Options** tab...



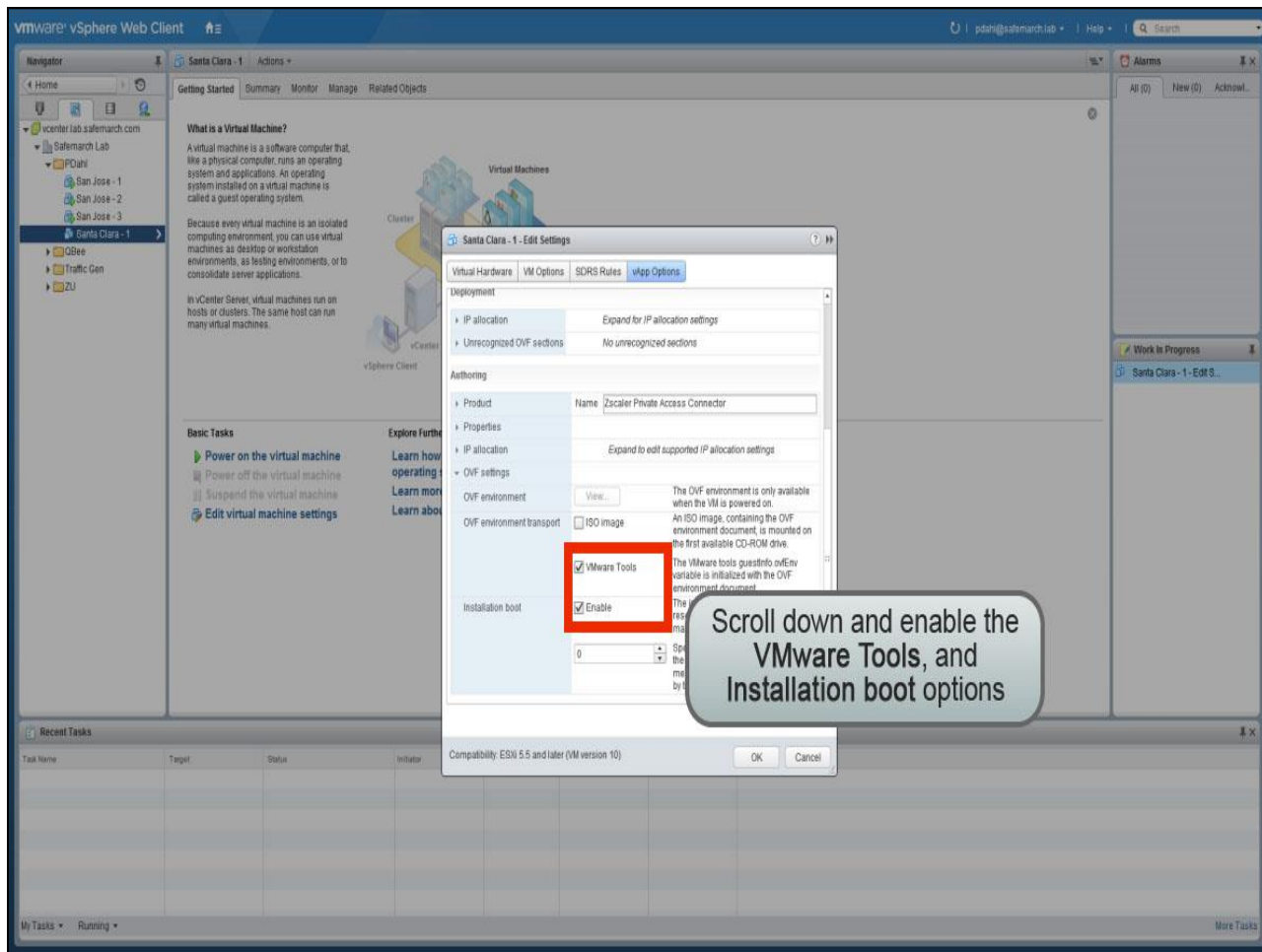
## Slide 33 - Slide 33



## Slide notes

...then click on **OVF Settings**.

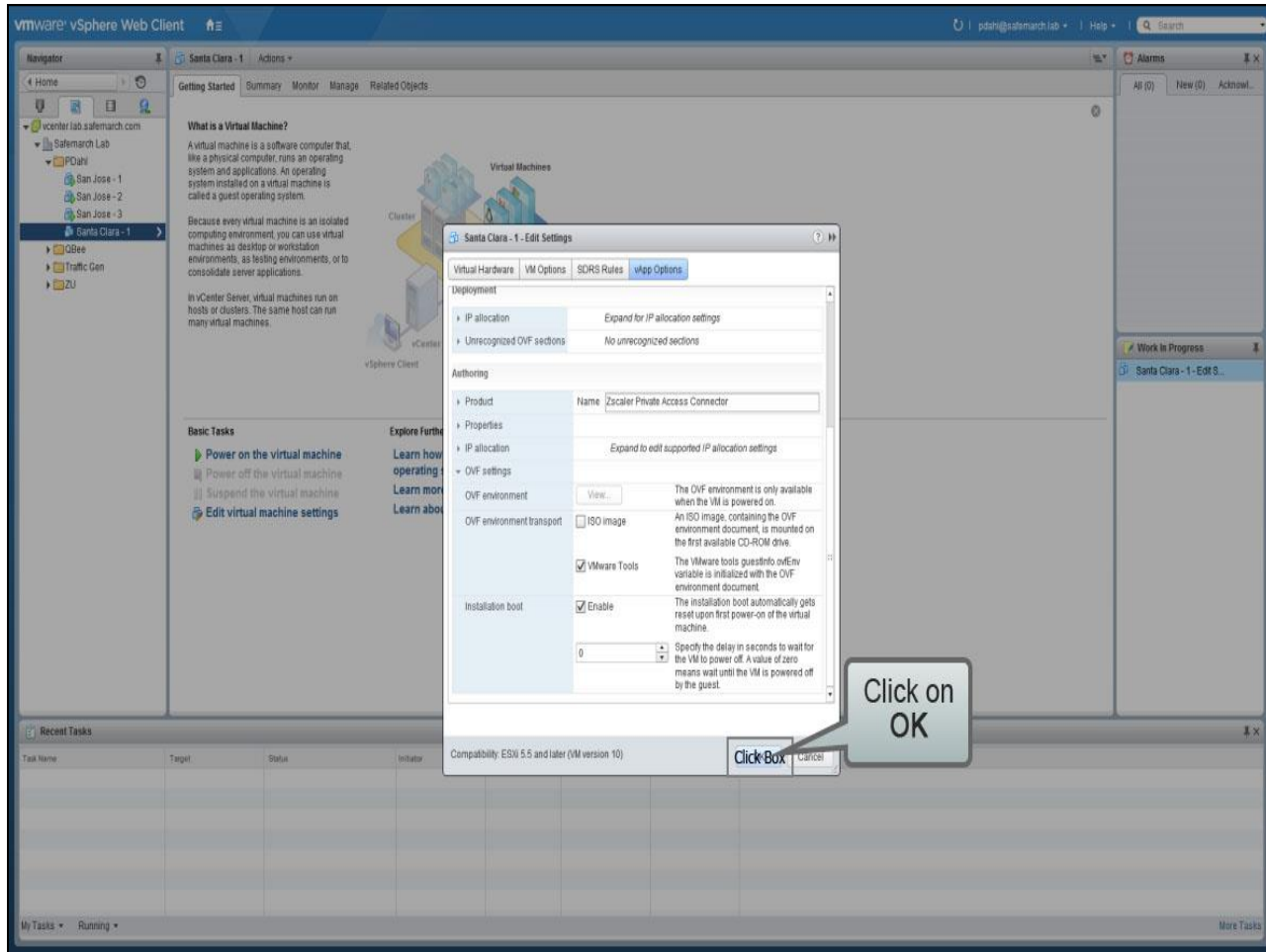
## Slide 34 - Slide 34



## Slide notes

Scroll down and ensure that both the **VMware Tools**, and **Installation boot** options are enabled...

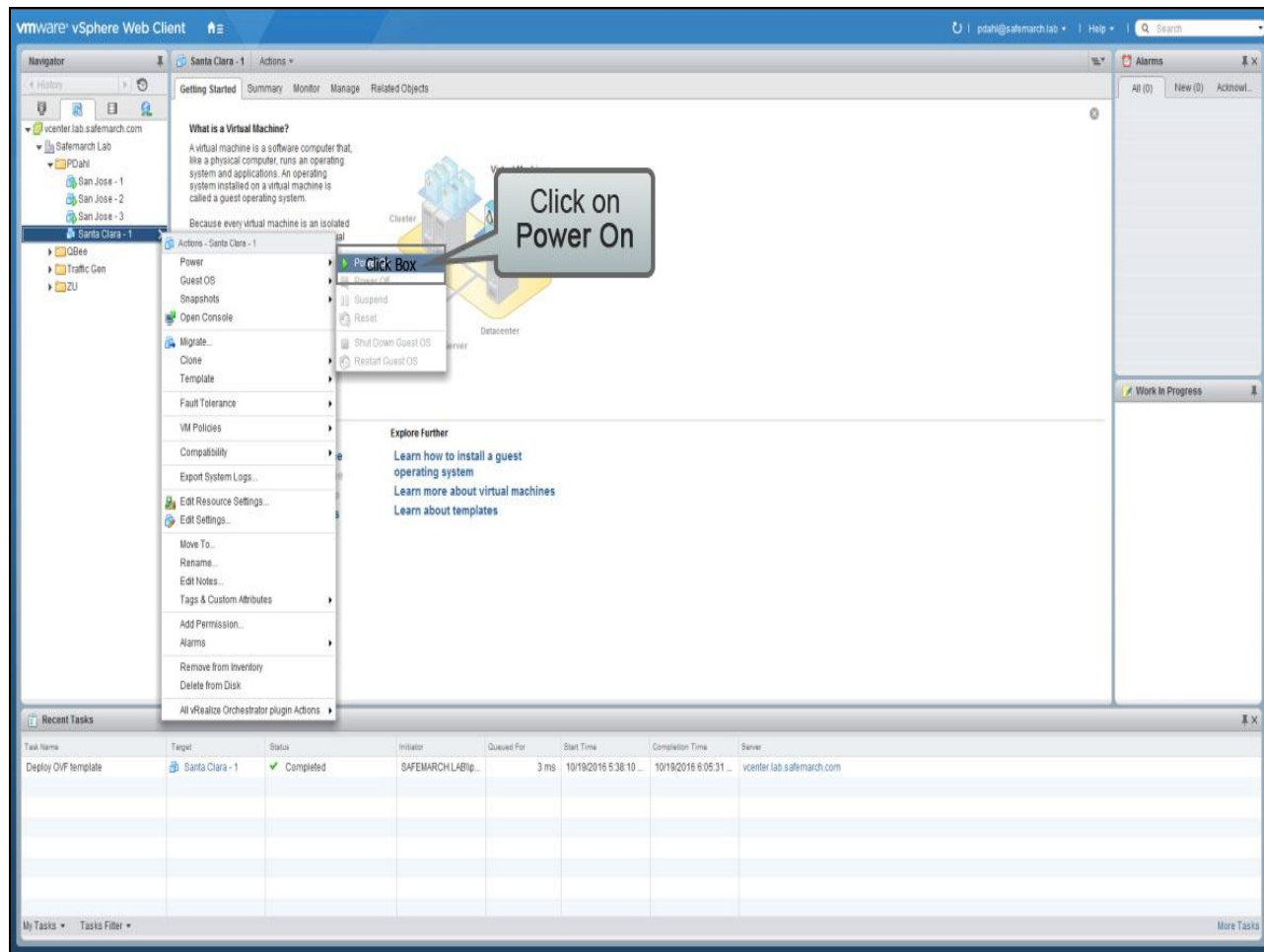
## Slide 35 - Slide 35



## Slide notes

...then click OK.

## Slide 36 - Slide 36



## Slide notes

...then from the **Power** menu options, select **Power On...**

## Slide 37 - Slide 37

**What is a Virtual Machine?**

A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. An operating system installed on a virtual machine is called a guest operating system.

Because every virtual machine is an isolated computing environment, you can use virtual machines as desktop or workstation environments, as testing environments, or to consolidate server applications.

In vCenter Server, virtual machines run on hosts or clusters. The same host can run many virtual machines.

**Basic Tasks**

- Power on the virtual machine
- Power off the virtual machine
- Suspend the virtual machine
- Edit virtual machine settings

**Explore further**

- Learn how to install a guest operating system
- Learn more about virtual machines
- Learn about templates

**Recent Tasks**

Task Name	Host	Status	Progress	Start Time	End Time	Owner
Power on virtual machine	Santa Clara - 1	Completed	3 ms	10/19/2016 5:38:10 ...	10/19/2016 6:05:31 ...	vcenler.lab.safemarch.com

## Slide notes

...and monitor the power on process.

Slide 38 - Slide 38

vmware: vSphere Web Client

pdahl@safemarch.lab

Help

Search

Navigation

Santa Clara - 1

Actions

Getting Started

Summary

Monitor

Manage

Related Objects

What is a Virtual Machine?

A virtual machine is a software computer that, like a physical computer, runs an operating system and applications. An operating system installed on a virtual machine is called a guest operating system.

Because every virtual machine is an isolated computing environment, you can use virtual machines as desktop or workstation environments, as testing environments, or to consolidate server applications.

In vCenter Server, virtual machines run on hosts or clusters. The same host can run many virtual machines.

Cluster

Virtual Machines

Host

vCenter Server

Datacenter

vSphere Client

Basic Tasks

Power on the virtual machine

Power off the virtual machine

Suspend the virtual machine

Edit virtual machine settings

Explore further

Learn how to install a guest operating system

Learn more about virtual machines

Learn about templates

Alarms

All (0)

New (0)

Acknowledged

Work In Progress

Recent Tasks

Power On virtual machine	Santa Clara - 1	Completed	SAFEMARCHLABip...	118 ms	10/19/2016 6:06:05 ...	10/19/2016 6:06:06 ...	vcenar lab.safemarch.com
Initialize powerling On	Safemarch Lab	Completed	SAFEMARCHLABip...	4 ms	10/19/2016 6:06:05 ...	10/19/2016 6:06:05 ...	vcenar lab.safemarch.com
Deploy OVF template	Santa Clara - 1	Completed	SAFEMARCHLABip...	3 ms	10/19/2016 5:38:10	10/19/2016 6:06:31	vcenar lab.safemarch.com

My Tasks

Tasks Filter

More Tasks

Monitor power on progress

Slide notes

## Slide 39 - Slide 39

The screenshot shows the ZPA Admin Portal interface. On the left is a dark sidebar with a navigation menu. The 'Administration' section is expanded, showing options like 'Connectors', 'Connector Provisioning Keys', 'Connector Groups', and 'Log Receivers'. A callout box with the text 'Click Connectors' points to the 'Connectors' option. The main content area on the right displays a dashboard with three summary cards: 'APPLICATIONS' (0), 'ACCESS POLICY BLOCKS' (0), and 'SUCCESSFUL TRANSACTIONS' (641). Below these is a section titled 'TOP APPLICATIONS BY BANDWIDTH' showing a list of applications and their bandwidth usage. At the bottom of the dashboard, it indicates '99.9% of Total Transactions'.

Bandwidth	Application
211.72 MB	server01.safemarch.com
12.80 MB	splunk.safemarch.com
9.22 MB	splunk.tm.zscaler.com
7.46 MB	crm.safemarch.com
6.64 MB	gitlab.safemarch.com
1.06 MB	nav.safemarch.com
950.92 KB	intranet.safemarch.local
499.70 KB	safemarch.com
415.97 KB	172.20.0.26
328.16 KB	qa.safemarch.com

## Slide notes

At the ZPA Admin Portal, from the **Administration** menu, select **Connectors**.

## Slide 40 - Slide 40

The screenshot shows the Zscaler Cloud Management console interface. The left sidebar contains navigation links: Dashboard, Diagnostics, Live Logs, Administration (highlighted), Search, and Zscaler App. The main content area is titled 'Connectors' and includes tabs for 'Connector Groups' and 'Connector Provisioning Keys'. A search bar is present at the top right. Below the tabs is a table listing various connectors.

Name	Status	Session	Update Status	Current Software Version	Actions
Amsterdam Connector 1	✖	Disconnected	Success ⓘ	16.86.1	
AWS Prov-4	✔	Disconnected			
AWS US-West Connector 1	✔	Authenticated	Success ⓘ	19.20.3	
AWS US-West Connector 2	✔	Authenticated	Success ⓘ	19.20.3	
Azure East-US-1	✔	Authenticated	Success ⓘ	19.20.3	
Azure US-Central-South-1	✔	Authenticated	Success ⓘ	19.20.3	
Log Streaming Service-1	✖	Disconnected	Success ⓘ	17.62.2	
Log Streaming Service-2	✔	Authenticated	Success ⓘ	19.20.3	
San Francisco Connector 1	✖	Disconnected			
San Jose Connector 3	✔	Authenticated	Success ⓘ	19.20.3	
San Jose Connector 4	✔	Authenticated	Success ⓘ	19.20.3	

A callout box with the text 'Click on a Connector name' points to the 'San Jose Connector 3' row. The 'San Jose Connector 3' row is highlighted with a blue border. The 'San Jose Connector 4' row is also highlighted with a blue border. The 'San Francisco Connector 1' row is highlighted with a red border. The 'Log Streaming Service-1' row is highlighted with a red border. The 'Log Streaming Service-2' row is highlighted with a green border. The 'AWS US-West Connector 1' row is highlighted with a green border. The 'AWS US-West Connector 2' row is highlighted with a green border. The 'AWS Prov-4' row is highlighted with a green border. The 'Amsterdam Connector 1' row is highlighted with a red border.

## Slide notes

Verify that the **Connectors** page now shows that your new Connector is active. To view more details for the Connector, click the name of a Connector...



## Slide 41 - Slide 41

The screenshot shows the Zscaler Cloud Management console. The left sidebar contains navigation links: Dashboard, Diagnostics, Live Logs, Administration, Search, and Zscaler App. The main content area has tabs for Connectors, Connector Groups, and Connector Provisioning Keys. The 'Connector Provisioning Keys' tab is active, displaying a table of connectors. A callout box points to the 'Connector Provisioning Keys' tab with the text 'Click on Connector Provisioning Keys'.

Connector Name	Status	Auth Status	Provisioning Key Status	IP Address	Actions
Log Streaming Service Sa...	✓	Authenticated		19.20.3	✎ ✕
San Francisco Connector ...	✗	Disconnected			✎ ✕
San Jose Connector 3	✓	Authenticated	Success ⓘ	19.20.3	✎ ✕
<b>Connector Group:</b> ESXi Connector Group					
<b>Connector Platform:</b> Enterprise Linux 7					
<b>Last Software Update:</b> Apr 20th, 15:10 PM (+07)					
<b>ZEN:</b> US-CA-8172					
<b>Last Connection to ZEN:</b> Jul 17th, 19:06 (+07)					
<b>Last Disconnect from ZEN:</b> Jul 17th, 19:06 (+07)					
<b>Location:</b> San Jose, CA, USA					
<b>Public IP:</b> 66.201.57.146					
<b>Private IP:</b> 172.20.0.57					
<b>Uptime:</b> 9day(s) 3hrs 15mins					
<b>Signing Certificate:</b> Connector Cert					
<b>Description:</b>					
San Jose Connector 4	✓	Authenticated	Success ⓘ	19.20.3	✎ ✕
Seattle Connector 1	✓	Authenticated	Success ⓘ	19.20.3	✎ ✕
Sentinel Group-1	✓	Authenticated	Scheduled ⓘ	19.12.1	✎ ✕ ⬆

## Slide notes

To review the status of your Provisioning Keys, click on **Connector Provisioning Keys**.

## Slide 42 - Slide 42

Connectors Connector Groups Connector Provisioning Keys

search by name

Expand All

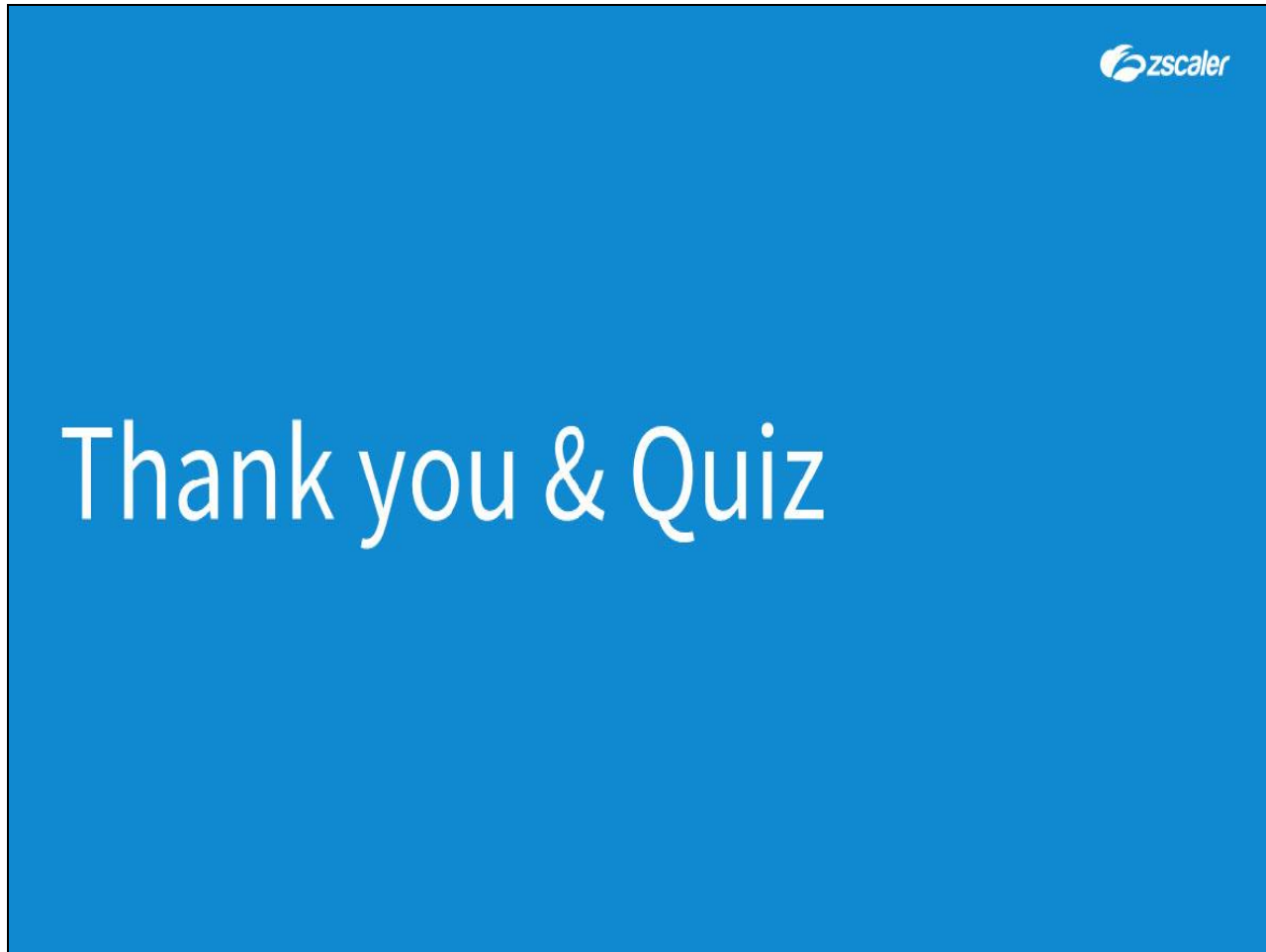
Name	Maximum # of Connectors	# of Enrolled Connectors	Connector Group	Provisioning Key	Actions
> AWS Key	10	0	AWS Connector Group	<a href="#">COPY KEY</a>	<a href="#">Edit</a> <a href="#">Delete</a>
> ESXi Connector Key	5	0	ESXi Connector Group	<a href="#">COPY KEY</a>	<a href="#">Edit</a> <a href="#">Delete</a>
> Log-Streaming-Key	12	0	Log-Streaming-Connectors	<a href="#">COPY KEY</a>	<a href="#">Edit</a> <a href="#">Delete</a>
> San Jose Connector - 1	5	4	SanJose	<a href="#">COPY KEY</a>	<a href="#">Edit</a> <a href="#">Delete</a>
> Santa Clara Key	5	1	Santa Clara	<a href="#">COPY KEY</a>	<a href="#">Edit</a> <a href="#">Delete</a>
> Sentinel Key	10	0	Sentinel Group	<a href="#">COPY KEY</a>	<a href="#">Edit</a> <a href="#">Delete</a>

Review Connector Prisioning Key status

## Slide notes

Check in particular the **Max # Of Connectors**, and **# Of Enrolled Connectors** values.

## Slide 43 - Thank you &amp; Quiz



## Slide notes

Thank you for following this Zscaler training module, we hope this module has been useful to you and thank you for your time.

What follows is a short quiz to test your knowledge of the material presented during this module. You may retake the quiz as many times as necessary in order to pass.