

vCenter Server

Lesson 1: vCenter Server Architecture

Learner Objectives

By the end of this lesson, you should be able to meet the following objectives:

- Describe the vCenter Server architecture
- Discuss the vCenter Server deployment models
- Identify the vCenter Server services, components, and modules
- Explain Platform Services Controller
- Discuss the REST-based API
- Describe vCenter Server High Availability

Overview of vCenter Server Appliance (1)

vCenter Server Appliance is a preconfigured Linux-based virtual machine that is optimized for running vCenter Server and the associated services.

vCenter Server Appliance reduces the deployment time of vCenter Server and the associated services, and provides a low-cost alternative to the Windows-based vCenter Server installation.

The vCenter Server Appliance package contains the following software:

- VMware Photon™ OS 1.0
- The Platform Services Controller group of infrastructure services
- The vCenter Server group of services
- PostgreSQL

Overview of vCenter Server Appliance (2)

vCenter Server Appliance uses the embedded PostgreSQL database, which can scale up to 2,000 hosts and 35,000 registered virtual machines or 25,000 powered-on virtual machines.

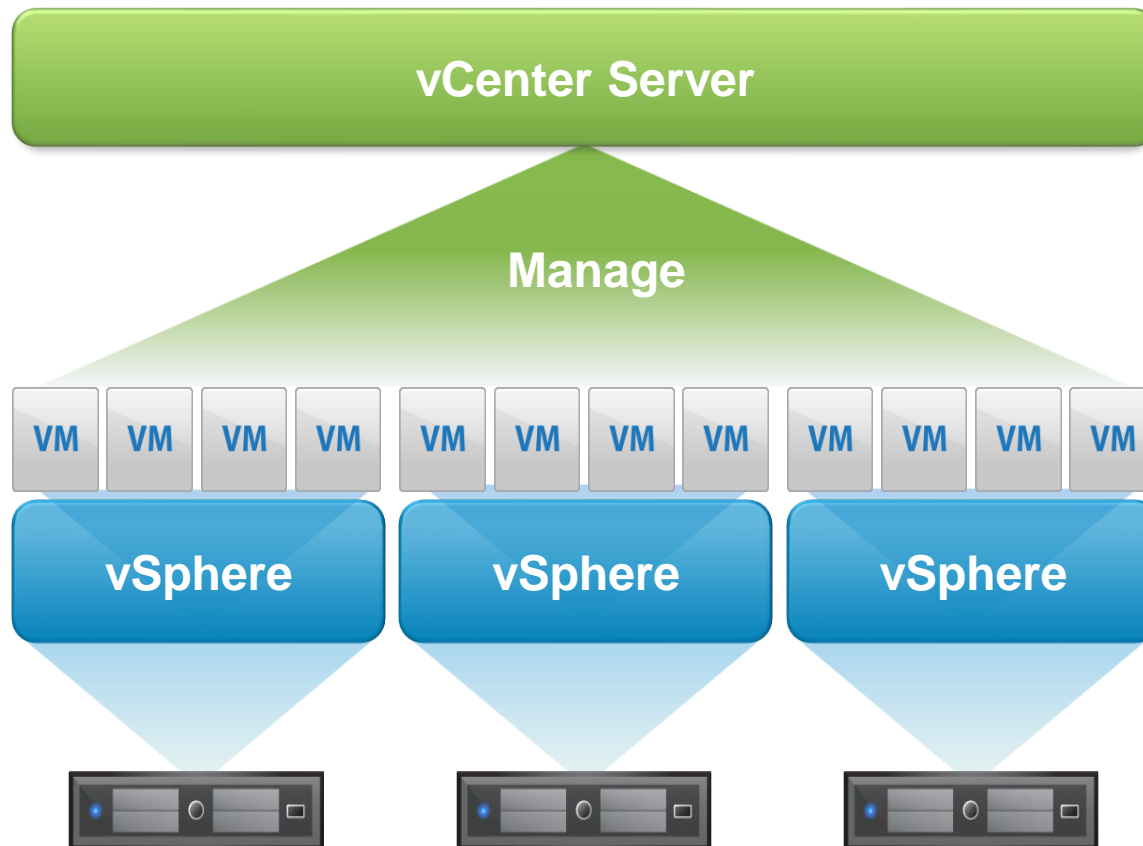
During deployment, you can choose the vCenter Server Appliance size for your vSphere environment and the storage size for your database requirements.

Starting with vSphere 6.5, the vCenter Server services in vCenter Server Appliance include:

- vSphere Update Manager extension
- vCenter Server Appliance support for high availability
- vCenter Server Appliance and Platform Services Controller support for file-based backup and restore

About the vCenter Server Management Platform

vCenter Server is an application service that acts as a central administration point for ESXi hosts and their virtual machines connected on a network. This service directs the actions of virtual machines and hosts.



vCenter Server Services

The vCenter Server group of services contains the following functions:

- vCenter Server
- PostgreSQL
- vSphere Web Client (server)
- vSphere Auto Deploy
- vSphere ESXi Dump Collector
- vSphere Syslog Collector
- vSphere Update Manager



**Platform Services
Controller**

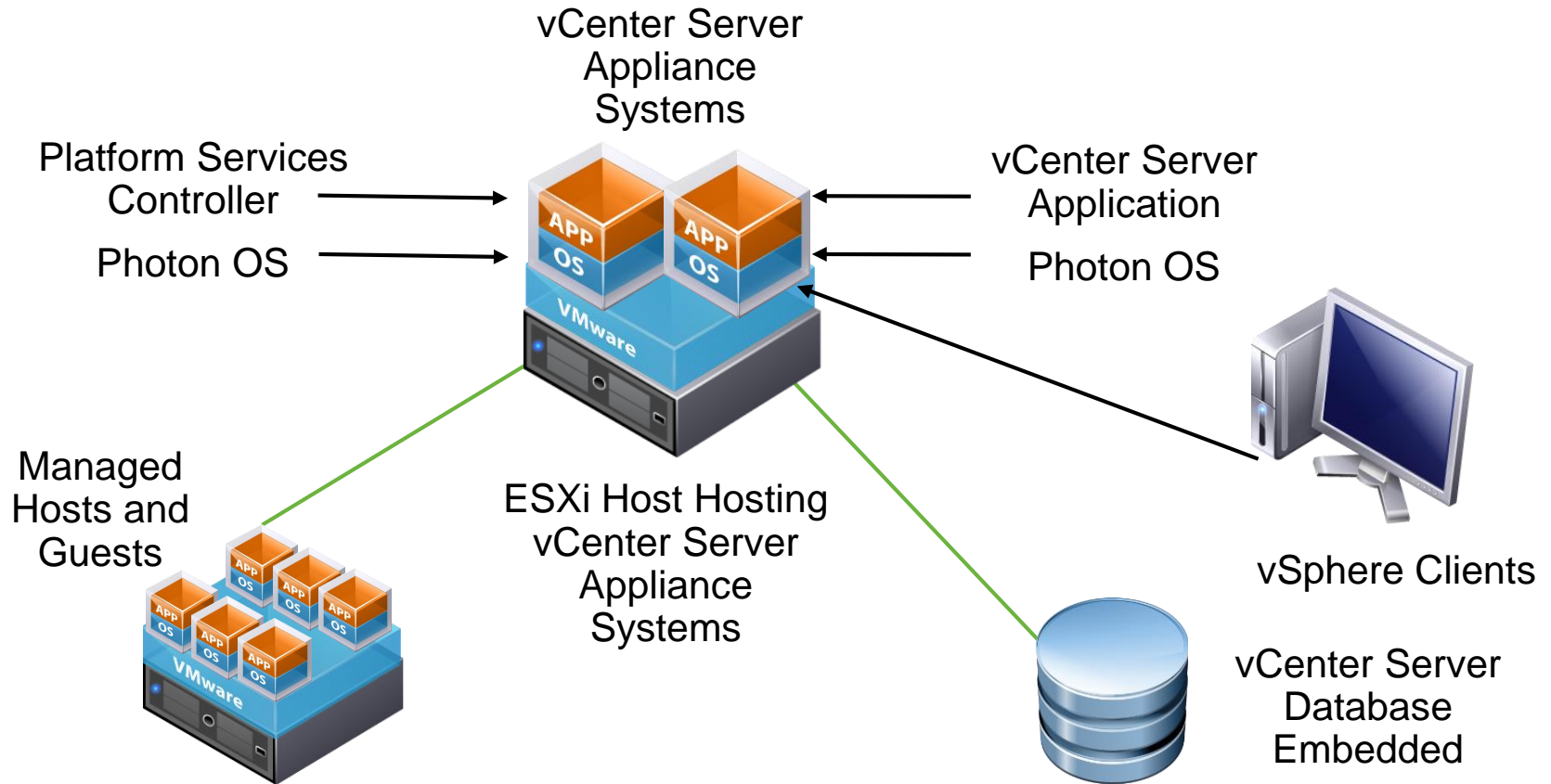
The diagram consists of two stacked rectangular boxes. The top box is light blue with a dashed blue border and contains the text 'Platform Services Controller'. The bottom box is light green with a dashed blue border and contains the text 'vCenter Server'.

vCenter Server

You cannot distribute these vCenter Server functions across multiple servers. When you deploy vCenter Server Appliance, all of these features are included.

vCenter Server Appliance Architecture

The diagram shows the supporting components for vCenter Server Appliance.



vCenter Server Appliance

vCenter Server Appliance now scales to the same capacity as vCenter Server installed on a Windows server.

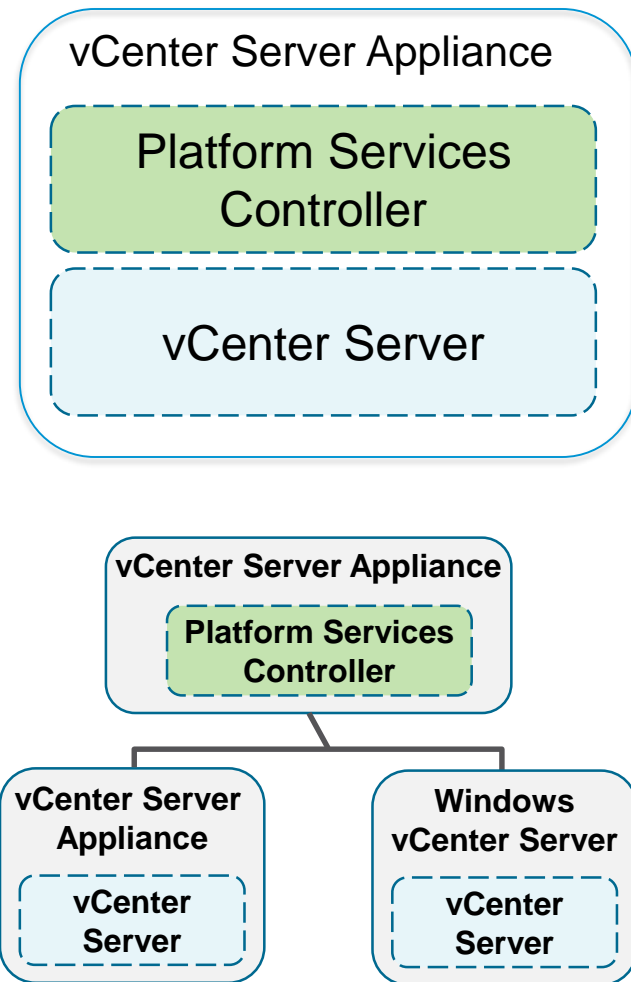
Metric	Windows 6.5	vCenter Server Appliance 6.5
Hosts per vCenter Server system	2,000	2,000
Powered-on virtual machines per vCenter Server System	25,000	25,000
Hosts per cluster	64	64
Virtual machines per cluster	8,000	8,000
Database	Must be Oracle or SQL for full scalability	Embedded vPostgres
Enhanced Linked Mode	Yes	Yes

vCenter Server Deployment Options

vCenter Server Appliance is functionally equivalent to vCenter Server installed on a Windows server:

- vCenter Server Appliance can be configured in the following ways:
 - As an embedded system with an internal Platform Services Controller instance
 - As a distributed system with an external Platform Services Controller instance

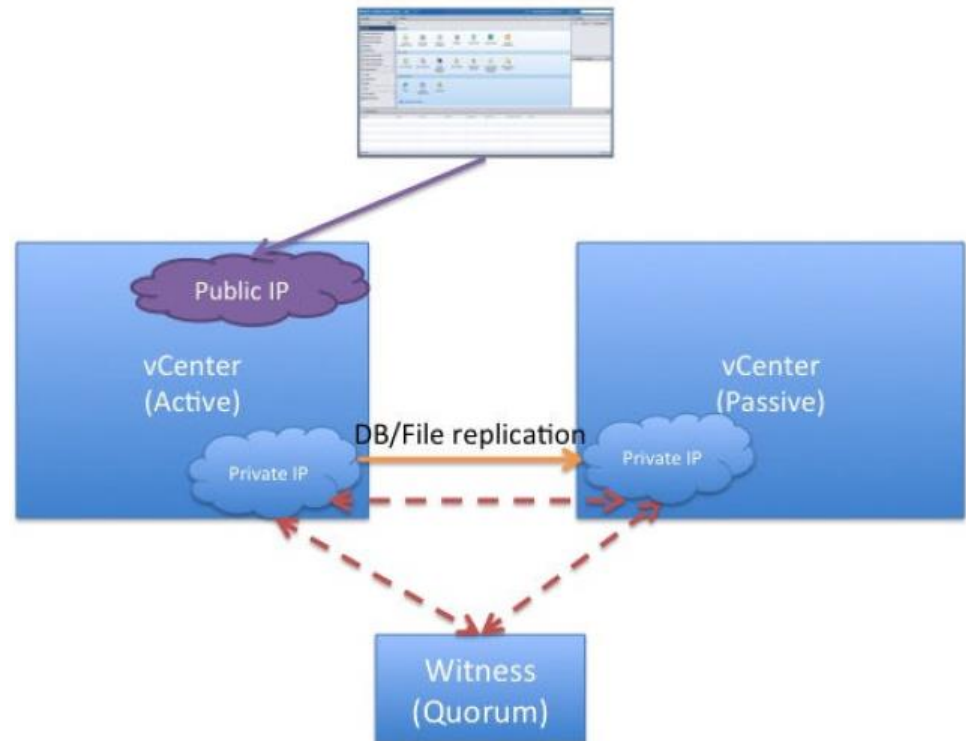
vCenter Server Appliance supports Enhanced Linked Mode.



High Availability for vCenter Server Appliance

High availability for vCenter Server Appliance protects against both hardware and software failures and ensures that your implementation can recover quickly.

- The protected node is called the active node.
- Two other appliance nodes are created: a passive node and a witness node.
- If the active node fails, the passive node takes over the role of the active node.
- The state of the active node is replicated to the passive node and captured in a PostgreSQL database and in the configuration files.



Review of Learner Objectives

You should be able to meet the following objectives:

- Describe the vCenter Server architecture
- Discuss the vCenter Server deployment models
- Identify the vCenter Server services, components, and modules
- Explain Platform Services Controller
- Discuss the REST-based API
- Describe vCenter Server High Availability

Lesson 2: Deploying, Backing Up, and Restoring vCenter Server Appliance

Learner Objectives

By the end of this lesson, you should be able to meet the following objectives:

- Deploy vCenter Server Appliance into an infrastructure
- Add license keys to vCenter Server
- Configure vCenter Server settings
- Create a vCenter Server backup
- Restore vCenter Server Appliance from a backup

Preparing for vCenter Server Appliance Deployment (1)

Before deploying vCenter Server Appliance, you must complete several tasks:

- Verify that all vCenter Server Appliance system requirements are met.
- For the first installation of vCenter Server Appliance, Platform Services Controller must be deployed before vCenter Server:
 - If you deploy vCenter Server Appliance with an embedded Platform Services Controller, this operation occurs automatically.
 - If you install vCenter Server Appliance with an external Platform Services Controller instance, you must first install Platform Services Controller and then install vCenter Server.

Preparing for vCenter Server Appliance Deployment (2)

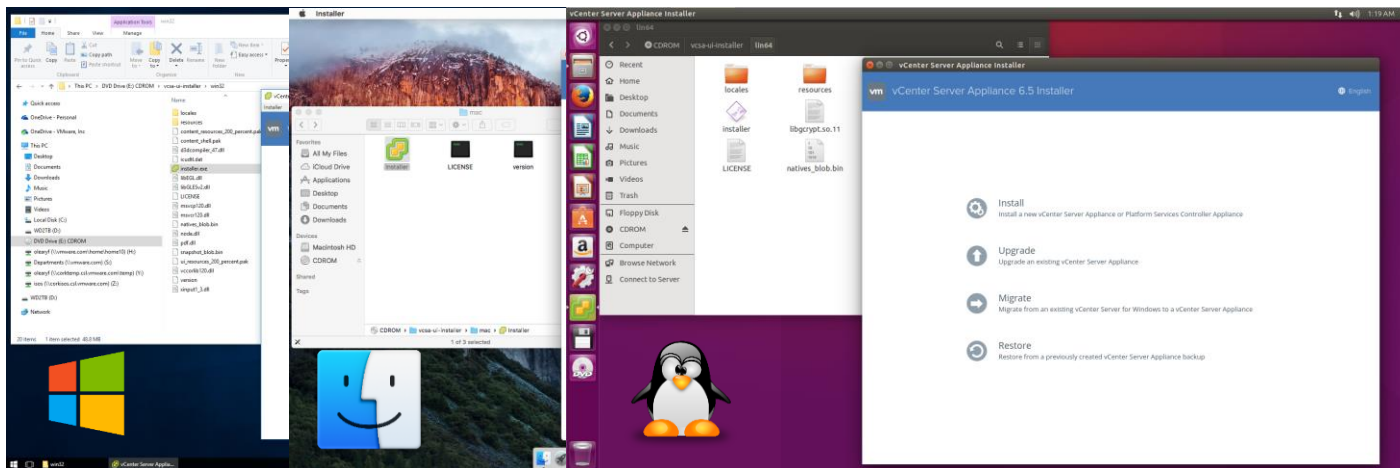
Before deploying vCenter Server Appliance, you must complete several tasks:

- You must provide the fully qualified domain name (FQDN) or the static IP of the host machine on which you are performing the install or upgrade. VMware recommends using the FQDN.
- You must verify that clocks on all machines on the vSphere network are synchronized.

vCenter Server Appliance Native UI Installer

With vSphere 6.5, a native application has been developed to facilitate the deployment of vCenter Server Appliance 6.5:

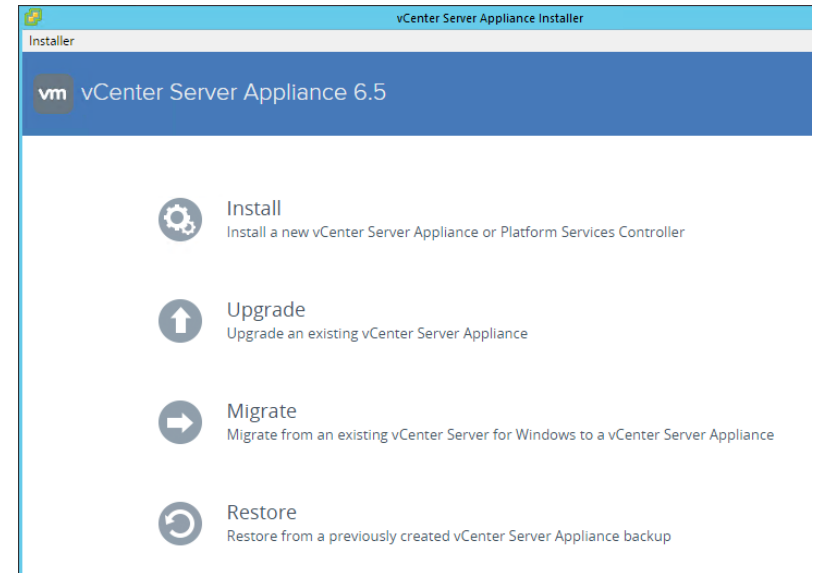
- A native application has been written for Windows, Linux, and Mac OS X and has no dependency on browsers or a plug-in.
- This GUI application performs validations and prechecks during the deployment to ensure that no mistakes are made and that a compatible environment is created.



vCenter Server Install, Upgrade, Migrate, and Restore

The new UI deployment tool has the following featured options:

- **Install:** Installs a new vCenter Server Appliance or Platform Services Controller
- **Upgrade:** Upgrades an existing vCenter Appliance
- **Migrate:** Migrates an existing vCenter Server for Windows to a vCenter Server Appliance
- **Restore:** Restores from a previously created vCenter Server Appliance backup



vCenter Server Appliance Deployment

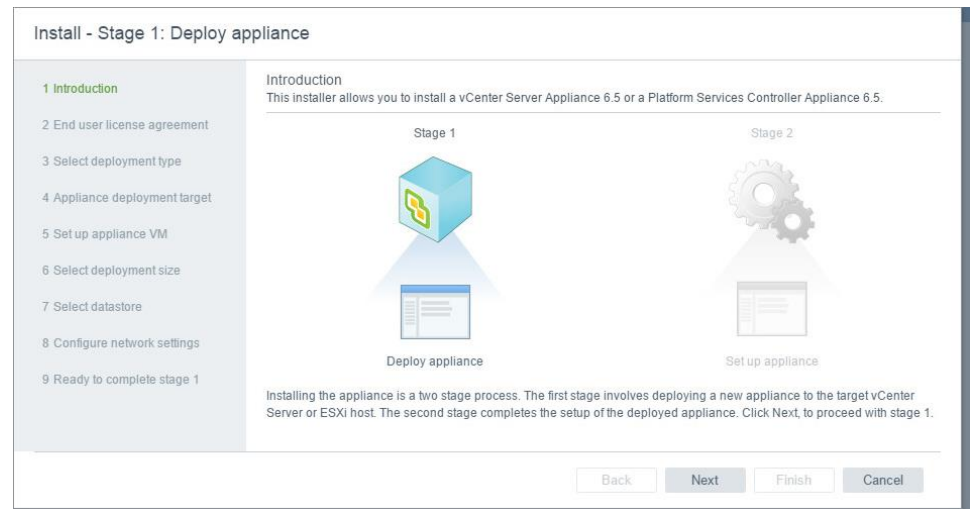
Installer support for Windows, Mac, and Linux

vSphere Update Manager is included

vCenter Server Appliance and Platform Services Controller install is a two-stage process:

- Stage 1: Deploy OVF
- Stage 2: Configuration

Fully automatable by using JSON templates, with Windows, Linux, and Mac support



vCenter Server Appliance Two-Stage Deployment

Stage 1: UI

- Accept the EULA.
- Select the deployment type.
- Connect to the target ESXi host or vCenter Server system to deploy vCenter Server Appliance.
- Define vCenter Server Appliance name and root password.
- Select deployment size (Mem/CPU) and storage size.
- Select datastore location (thin disk).
- Configure networking.

Stage 2: Deployment

- OVF is deployed to the ESXi host.
- Disks are configured.
- RPMs are installed (depending on Embedded, Platform Service Controller, vCenter Server deployment choice).
- Networking is configured.

vCenter Server Deployment Wizard

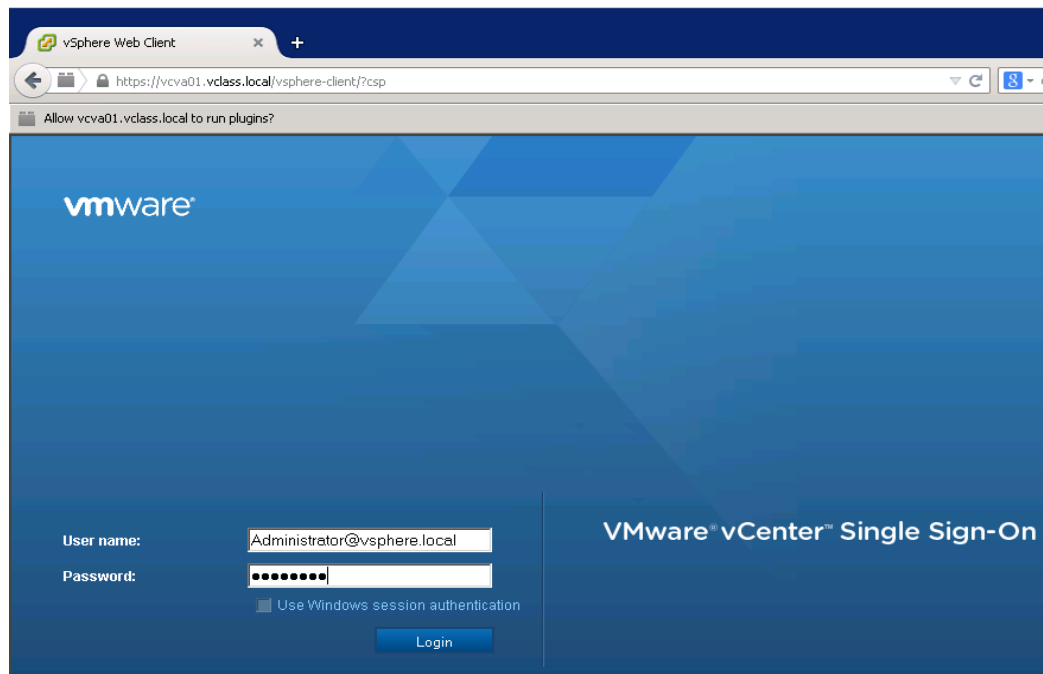
The vCenter Server Deployment wizard prompts for information depending on your choice of deployment methods.

	Embedded	PSC	vCenter Server
Stage 1			
Deployment target	✓	✓	✓
Deployment type	✓	✓	✓
Deployment size	✓	✗	✓
Define VM name	✓	✓	✓
Define root password	✓	✓	✓
Define datastore location	✓	✓	✓
Define networking	✓	✓	✓
Stage 2			
Create SSO domain	✓	✓	✗
Join SSO domain	✗	✓	✓
Configure CEIP	✓	✓	✓

Getting Started with vCenter Server

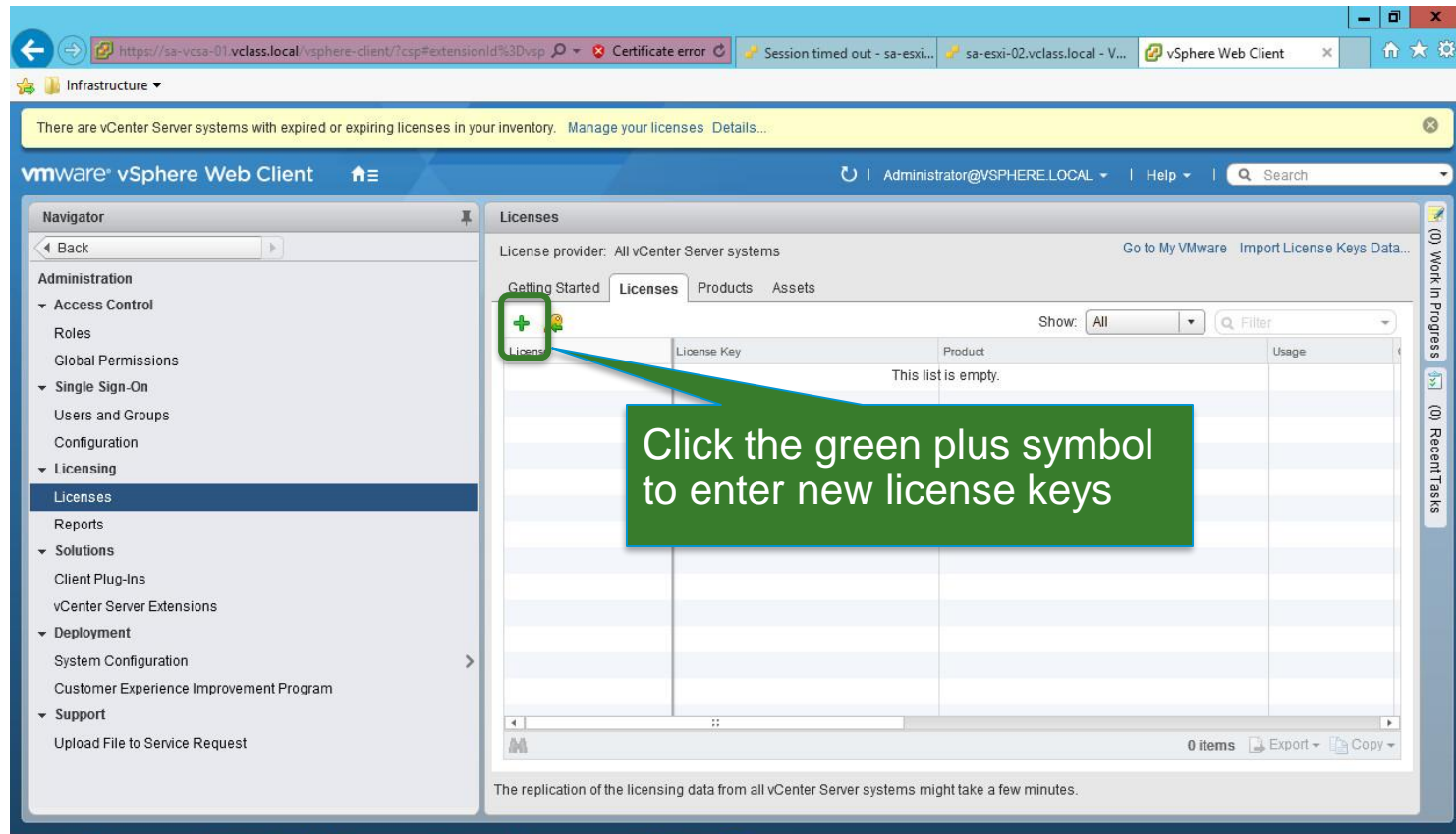
After you deploy vCenter Server Appliance, log in to it by using one of the vSphere clients to manage your vSphere inventory:

- vSphere Web Client: https://FQDN_for_vCenter_Server/vsphere-client
- vSphere Client: https://FQDN_for_vCenter_Server/ui



Adding License Keys to vCenter Server

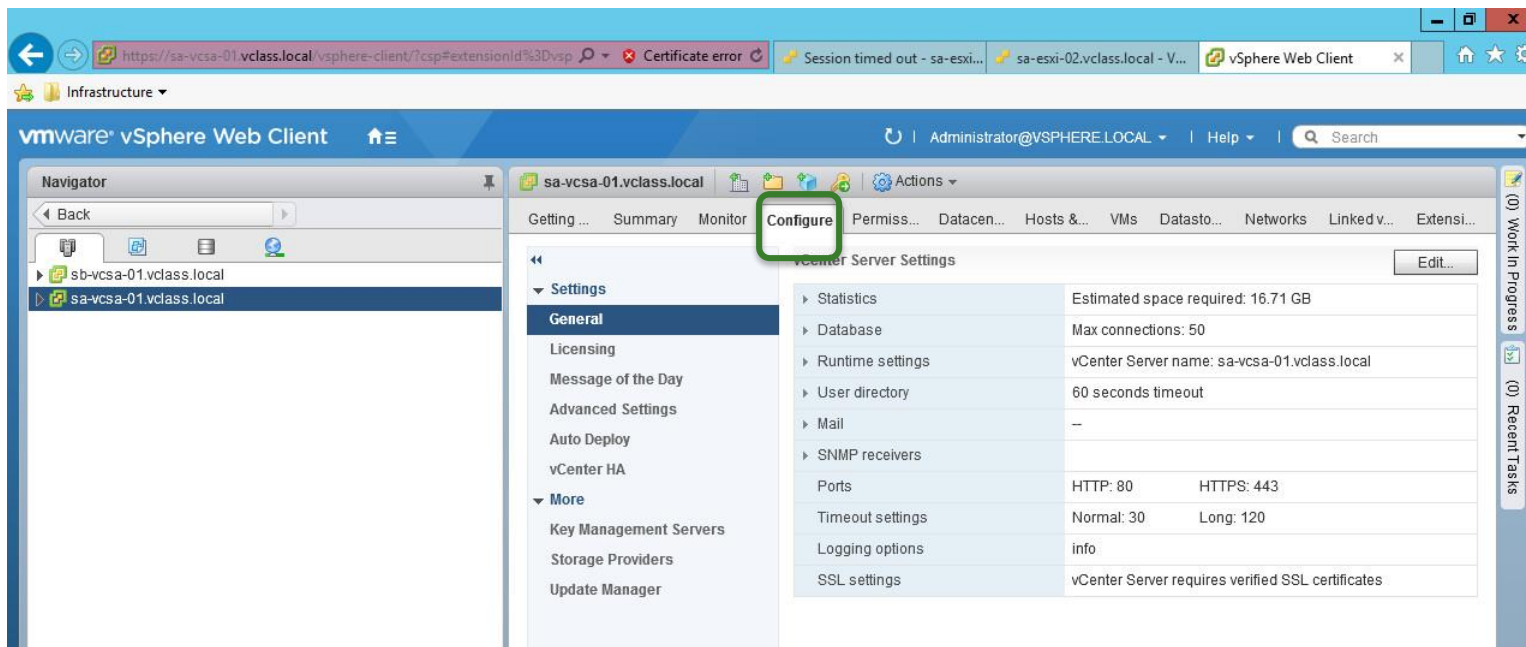
Assign a license to vCenter Server before its 60-day evaluation period expires.



Configuring vCenter Server Settings

You can configure your vCenter Server system from vSphere Web Client, including settings such as licensing, statistics collection, logging, and other settings:

- To access the vCenter Server system settings, navigate to the vCenter Server system in vSphere Web Client and click the **Configure** > **Settings** tabs.

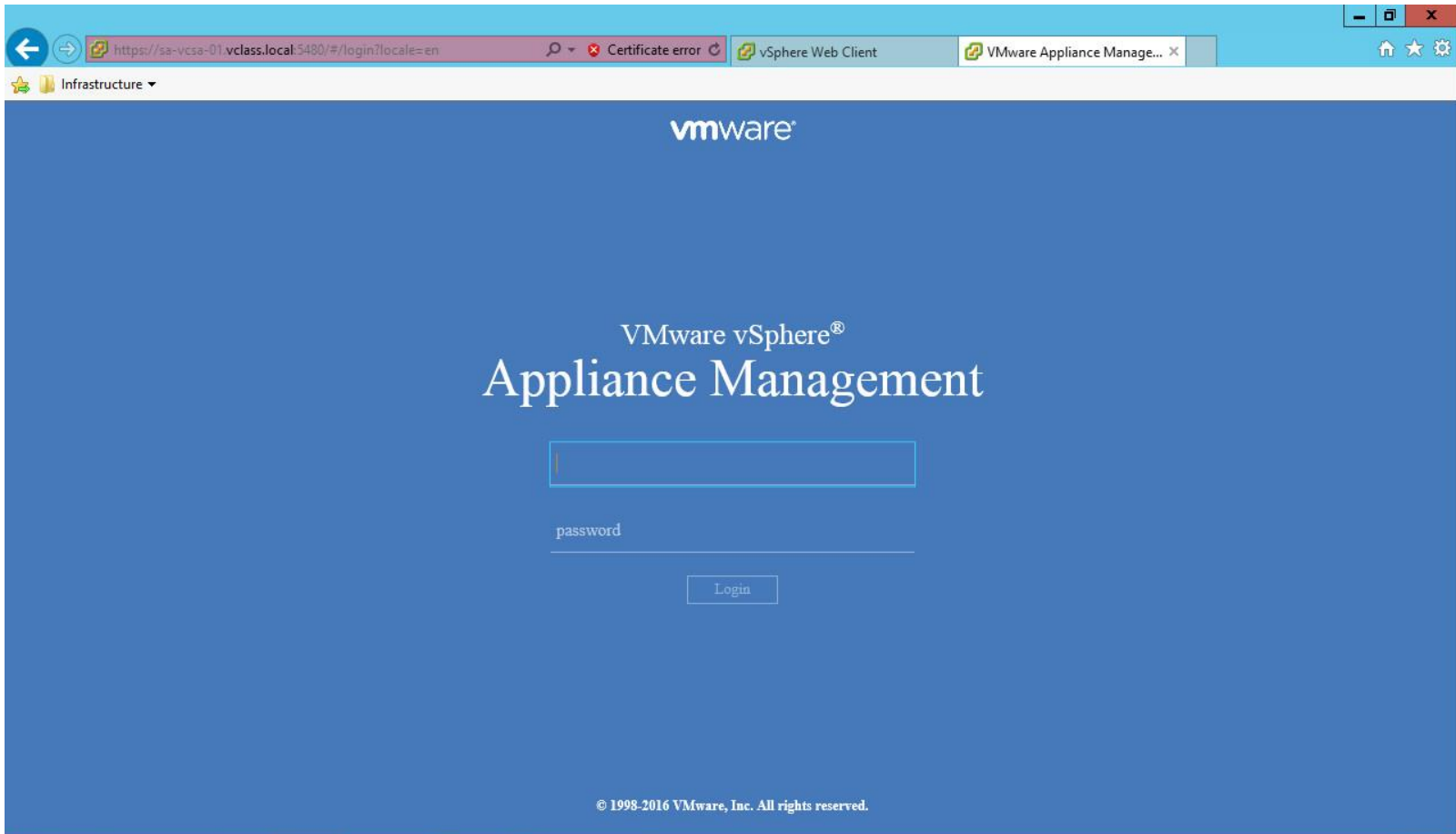


The screenshot shows the VMware vSphere Web Client interface. The browser address bar indicates the URL is `https://sa-vcsa-01.vclass.local/vsphere-client/7csp#extensionId%3Dvsp`. The interface includes a Navigator pane on the left showing the vCenter Server hierarchy, a top navigation bar with tabs like 'Getting...', 'Summary', 'Monitor', 'Configure', 'Permissions...', 'Datacenter...', 'Hosts &...', 'VMs', 'Datastore...', 'Networks', 'Linked v...', and 'Extensions...', and a main content area displaying the 'vCenter Server Settings' page. The 'Configure' tab is highlighted, and the 'Settings' section is expanded in the left sidebar. The main content area shows a table of settings:

Setting	Value
Statistics	Estimated space required: 16.71 GB
Database	Max connections: 50
Runtime settings	vCenter Server name: sa-vcsa-01.vclass.local
User directory	60 seconds timeout
Mail	--
SNMP receivers	
Ports	HTTP: 80 HTTPS: 443
Timeout settings	Normal: 30 Long: 120
Logging options	info
SSL settings	vCenter Server requires verified SSL certificates

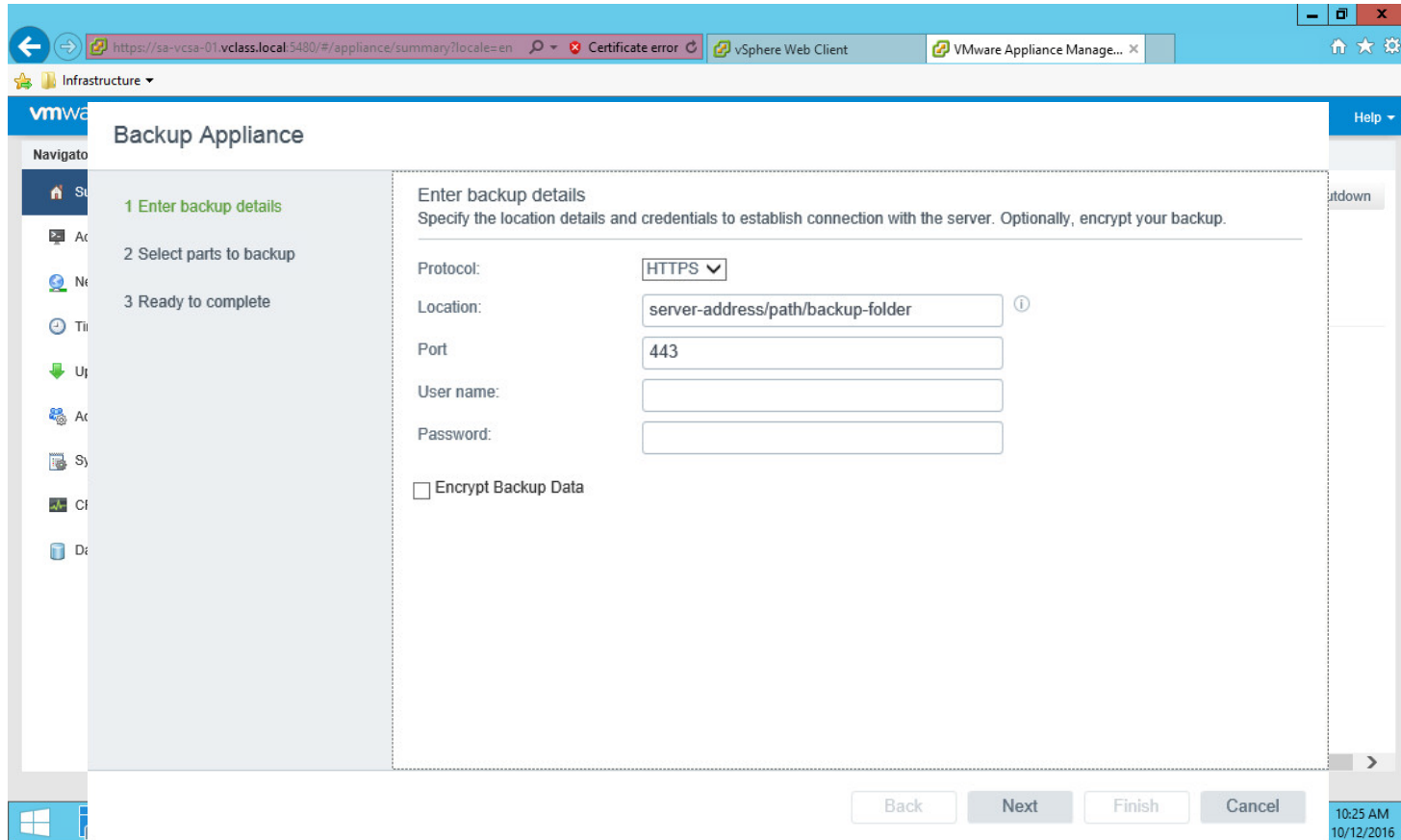
Logging In to the vCenter Server Appliance Management UI

To back up or restore vCenter Server Appliance, you must connect to the Appliance Management interface at `https://FQDN_or_IP_address:5480`.



vCenter Server Appliance Management Home

After logging in to the vCenter Server Appliance Management UI, you see the functions that you can perform. To back up the appliance, click the **Backup** tab.



The screenshot displays the vCenter Server Appliance Management UI. The browser address bar shows the URL `https://sa-vcsa-01.vclass.local:5480/#/appliance/summary?locale=en`. The page title is "Backup Appliance". The main content area is titled "Enter backup details" and includes the instruction: "Specify the location details and credentials to establish connection with the server. Optionally, encrypt your backup." The form contains the following fields:

- Protocol:
- Location:
- Port:
- User name:
- Password:
- Encrypt Backup Data

At the bottom of the form, there are four buttons: "Back", "Next", "Finish", and "Cancel". The system tray at the bottom right shows the time "10:25 AM" and the date "10/12/2016".

Native vCenter Server Backup and Restore

Removes dependency on third-party backup solutions

Restores a vCenter Server instance to a brand new appliance

Supports backup or restore of vCenter Server Appliance and Platform Services Controller

Includes embedded and external deployments

Supports protocols, including:

- HTTP/S
- SCP
- FTP/S

Includes option for encryption

Restores directly from the vCenter Server Appliance ISO

vCenter Server Appliance 6.5 Restore - Stage 1: Deploy OVF

Enter backup details
Enter the backup location type, location, and credentials.

Backup location type:

Backup location:

Port:

User name:

Password:

Encryption password: optional

1 Introduction
2 End user license agreement
3 Enter backup details
4 Review backup information
5 Appliance deployment target
6 Set up target appliance VM
7 Select deployment size
8 Select datastore
9 Configure network settings
10 Ready to

Install
Install a new vCenter Server Appliance or Platform Services Controller Appliance

Upgrade
Upgrade an existing vCenter Server Appliance

Migrate
Migrate from an existing vCenter Server for Windows to a vCenter Server Appliance

Restore
Restore from a previously created vCenter Server Appliance backup

Lab 4: Working with vCenter Server

Install and use vCenter Server Appliance

1. Deploy vCenter Server Appliance
2. Access and Configure vCenter Server Appliance
3. Add Your ESXi Hosts to the vCenter Server Inventory
4. Configure the ESXi Hosts as NTP Clients
5. Back Up vCenter Server Appliance
6. Complete the vCenter Server Appliance Deployment

Review of Learner Objectives

You should be able to meet the following objectives:

- Deploy vCenter Server Appliance into an infrastructure
- Add license keys to vCenter Server
- Configure vCenter Server settings
- Create a vCenter Server backup
- Restore vCenter Server Appliance from a backup

Lesson 3: vSphere Clients

Learner Objectives

By the end of this lesson, you should be able to meet the following objectives:

- Access the vSphere clients
- Install the Enhanced Authentication Plug-In for Windows
- Navigate the vSphere clients

Accessing vSphere Clients

To access a vSphere client, you open a Web browser and enter the URL for the desired vSphere client.

https://FQDN_of_vCenter_Server/vsphere-client for vSphere Web Client
https://FQDN_of_vCenter_Server/ui for vSphere Client

User name:
Password:
 Use Windows session authentication

VMware® vCenter™ Single Sign-On

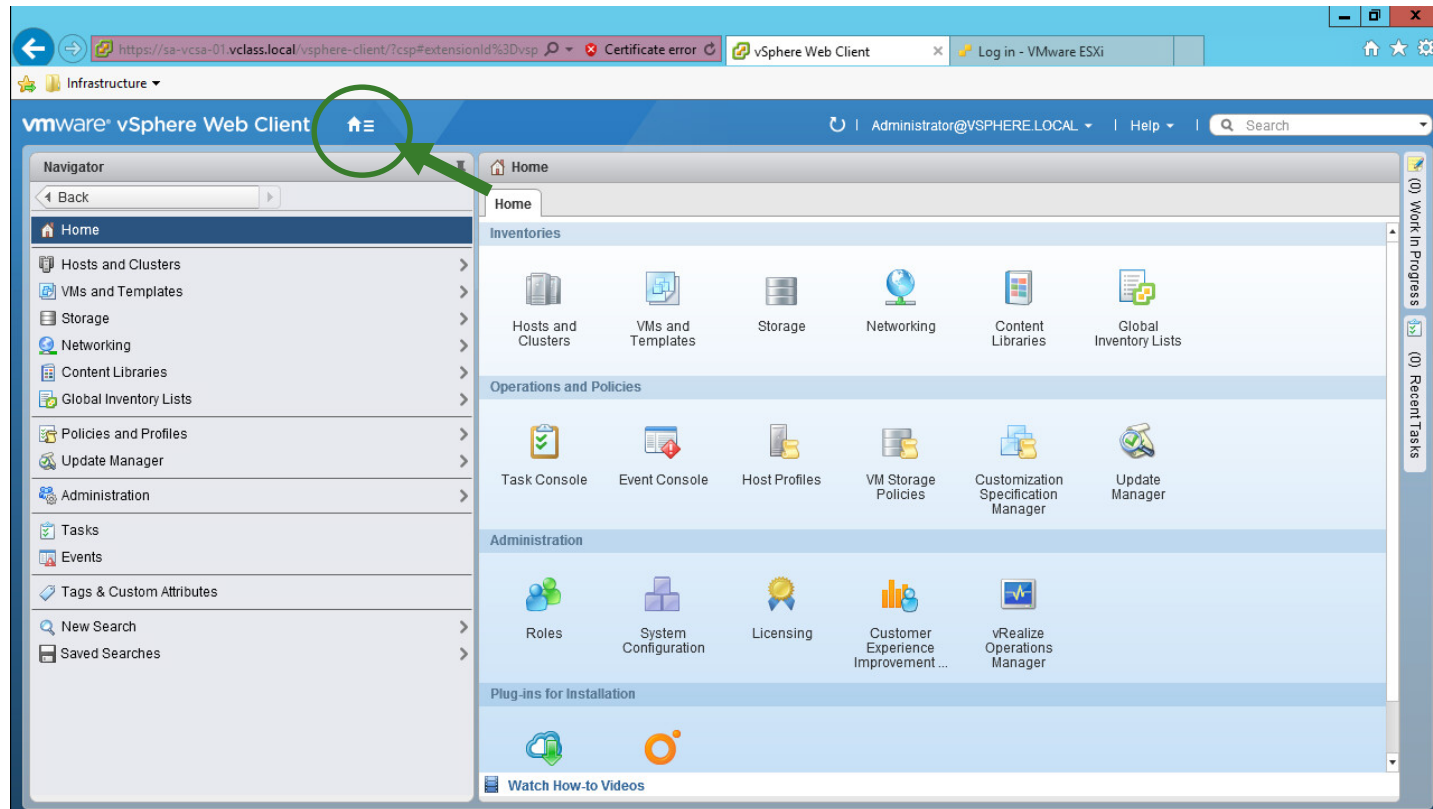
[Download Enhanced Authentication Plugin](#)

Click to download and install the Enhanced Authentication Plug-In.

vSphere Web Client Home Page

Click the **Home** icon to reach the vCenter Server Home page.

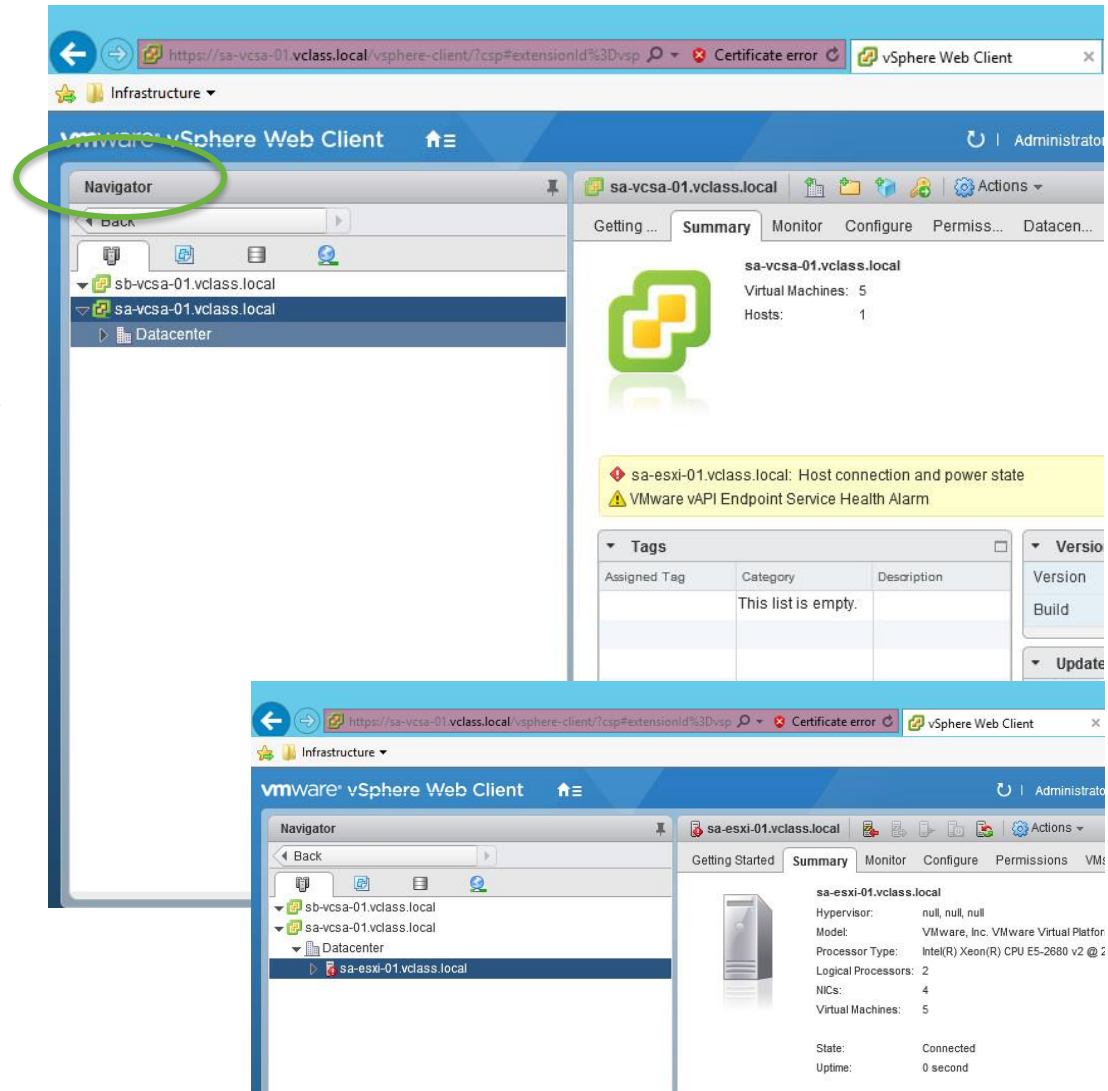
The Home page has a Navigator pane on the left and Inventories, Monitoring, and Administration panes on the right.



Using the vSphere Web Client Navigator

You can use the Navigator pane to browse and select objects in the vSphere Web Client inventory.

The navigator presents a list-based view of the inventory, which enables you to navigate inventory objects.



vCenter Server Views: Hosts and Clusters, VMs, and Templates

Hosts and Clusters Inventory View

The screenshot displays the vSphere Web Client interface for the host `sa-esxi-01.vclass.local`. The left-hand 'Navigator' pane shows a tree view with 'sa-esxi-01.vclass.local' selected and circled in red. The main content area is titled 'sa-esxi-01.vclass.local' and features a 'Summary' tab. The summary includes a server icon, system details, and resource usage metrics.

Resource	Used	Free	Capacity
CPU	46.00 MHz	5.55 GHz	5.60 GHz
MEMORY	1.44 GB	6.56 GB	8.00 GB
STORAGE	17.17 GB	42.33 GB	59.50 GB

System Details:

- Hypervisor: VMware ESXi, 6.5.0, 4564106
- Model: VMware, Inc. VMware Virtual Platform
- Processor Type: Intel(R) Xeon(R) CPU E5-2680 v2 @ 2.80GHz
- Logical Processors: 2
- NICs: 4
- Virtual Machines: 1
- State: Connected
- Uptime: 15 days

VMs and Templates Inventory View

The screenshot displays the vSphere Web Client interface for the virtual machine `VM1-1`. The left-hand 'Navigator' pane shows a tree view with 'VM1-1' selected and circled in red. The main content area is titled 'VM1-1' and features a 'Summary' tab. The summary includes a Windows desktop icon, guest OS details, and resource usage metrics.

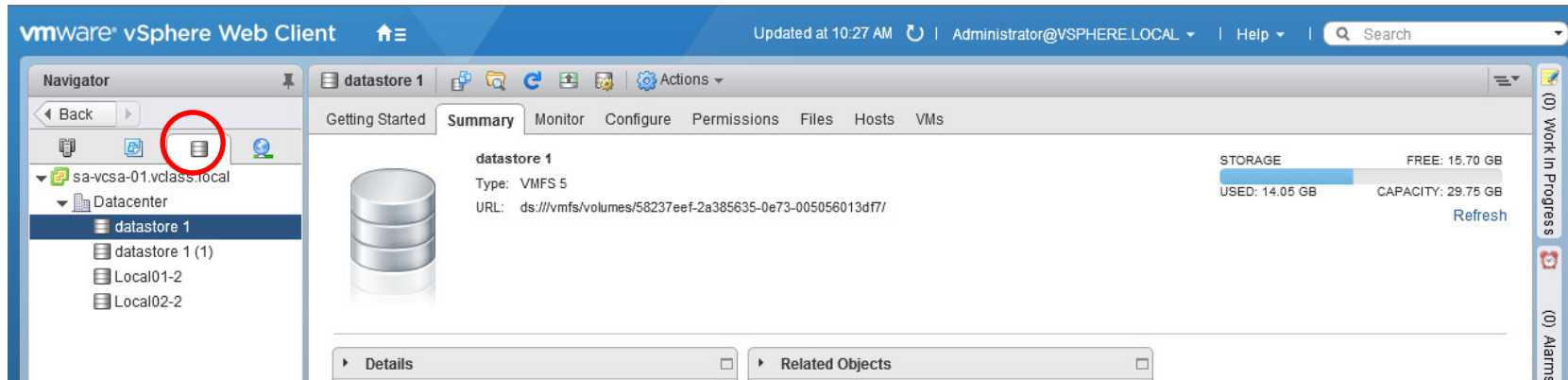
Resource	Usage
CPU USAGE	756.00 MHz
MEMORY USAGE	573.00 MB
STORAGE USAGE	13.11 GB

System Details:

- Guest OS: Microsoft Windows 7 (64-bit)
- Compatibility: ESXi 6.5 and later (VM version 13)
- VMware Tools: Running, version:10272 (Current)
- DNS Name: VM1-1
- IP Addresses: 172.20.10.200
- Host: sa-esxi-01.vclass.local

vCenter Server Views: Storage and Networks

Storage Inventory View



The screenshot shows the VMware vSphere Web Client interface. The top navigation bar includes the VMware logo, 'vSphere Web Client', a home icon, and a search bar. The left sidebar shows a tree view with 'sa-vcsa-01.vclass.local' expanded to 'Datacenter', which contains 'datastore 1', 'datastore 1 (1)', 'Local01-2', and 'Local02-2'. The 'datastore 1' icon is circled in red. The main content area displays the 'datastore 1' summary, including its type (VMFS 5) and URL. A storage usage bar shows 14.05 GB used and 15.70 GB free out of a 29.75 GB capacity. The right sidebar shows 'Work In Progress' and 'Alarms' sections.

vmware® vSphere Web Client Updated at 10:27 AM Administrator@VSPHERE.LOCAL Help Search

Navigator

datastore 1

Getting Started Summary Monitor Configure Permissions Files Hosts VMs

datastore 1

Type: VMFS 5

URL: ds:///vmfs/volumes/58237eef-2a385635-0e73-005056013df7/

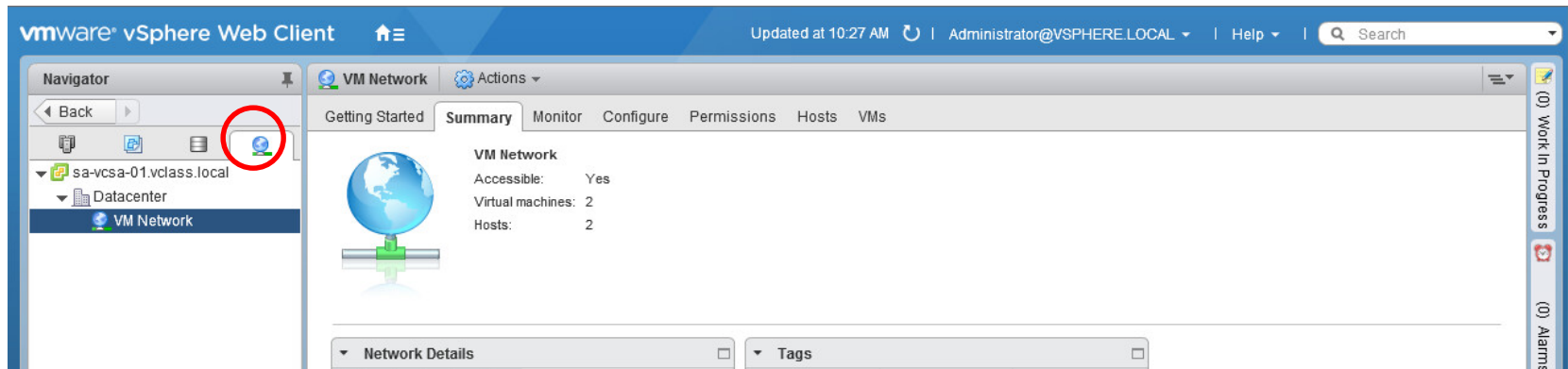
STORAGE FREE: 15.70 GB

USED: 14.05 GB CAPACITY: 29.75 GB Refresh

Details Related Objects

Work In Progress Alarms

Networks Inventory View



The screenshot shows the VMware vSphere Web Client interface. The top navigation bar includes the VMware logo, 'vSphere Web Client', a home icon, and a search bar. The left sidebar shows a tree view with 'sa-vcsa-01.vclass.local' expanded to 'Datacenter', which contains 'VM Network'. The 'VM Network' icon is circled in red. The main content area displays the 'VM Network' summary, including its accessibility (Yes) and the number of virtual machines (2) and hosts (2). The right sidebar shows 'Work In Progress' and 'Alarms' sections.

vmware® vSphere Web Client Updated at 10:27 AM Administrator@VSPHERE.LOCAL Help Search

Navigator

VM Network

Getting Started Summary Monitor Configure Permissions Hosts VMs

VM Network

Accessible: Yes

Virtual machines: 2

Hosts: 2

Network Details Tags

Work In Progress Alarms

Viewing Object Information

Because you can navigate to view object information and access related objects, monitoring and managing object properties is easy.

The screenshot shows the vSphere Client interface for a host named `sa-esxi-01.vclass.local`. The interface is divided into several sections:

- Navigation Tree (Left):** Shows the hierarchy: `sa-vcsa-01.vclass.local` > `Datacenter` > `Lab Servers` > `sa-esxi-01.vclass.local` (selected). Other hosts like `sa-esxi-02.vclass.local` and `VM1-1` are also visible.
- Top Navigation Bar:** Includes the vSphere Client logo, a search bar, and the user `Administrator@VSPHERE.LOCAL`.
- Host Summary (Main Content):** The `Summary` tab is active, displaying the following information:
 - Host Details:** Hypervisor: VMware ESXI, 6.5.0, 4513128; Model: VMware Virtual Platform; Processor Type: Intel(R) Xeon(R) CPU E5-2680 v2 @ 2.80GHz; Logical Processors: 2; NICs: 4; Virtual Machines: 1; State: Connected; Uptime: 1 days.
 - Resource Usage:**
 - CPU:** Free: 5.54 GHz; Used: 83 MHz; Capacity: 5.8 GHz.
 - Memory:** Free: 13.42 GB; Used: 2.58 GB; Capacity: 16 GB.
 - Storage:** Free: 81.31 GB; Used: 18.19 GB; Capacity: 99.5 GB.
- Recent Tasks (Bottom):** A table with columns: Task Name, Target, Status, Initiator, Queued For, Start Time, Completion Time, and Server. The table is currently empty.

Using Quick Filters in vSphere Web Client

You can use quick filters to find an object or a set of objects in the vSphere inventory by using certain display criteria.

The screenshot shows the VMware vSphere Web Client interface. The left sidebar contains the Navigator pane with a tree view of the inventory. The main content area is titled 'Datacenter' and shows the 'Datastores' tab. A table lists two datastores: 'Local01-2' and 'Local02-2'. A green callout box points to the quick filter icon (a funnel with a plus sign) in the top right corner of the table, with the text 'Show or hide the quick filters options.' The search bar in the top right of the table contains the text 'local'.

Name	Status	Type	Datastore Cluster	Capacity	Free
Local01-2	Normal	VMFS 5		29.75 GB	25.52 GB
Local02-2	Normal	VMFS 5		29.75 GB	25.84 GB

Using Drag-and-Drop Functionality in vSphere Web Client

You can drag an inventory object to another location.

Drag-and-drop icons indicate whether you can move the object.

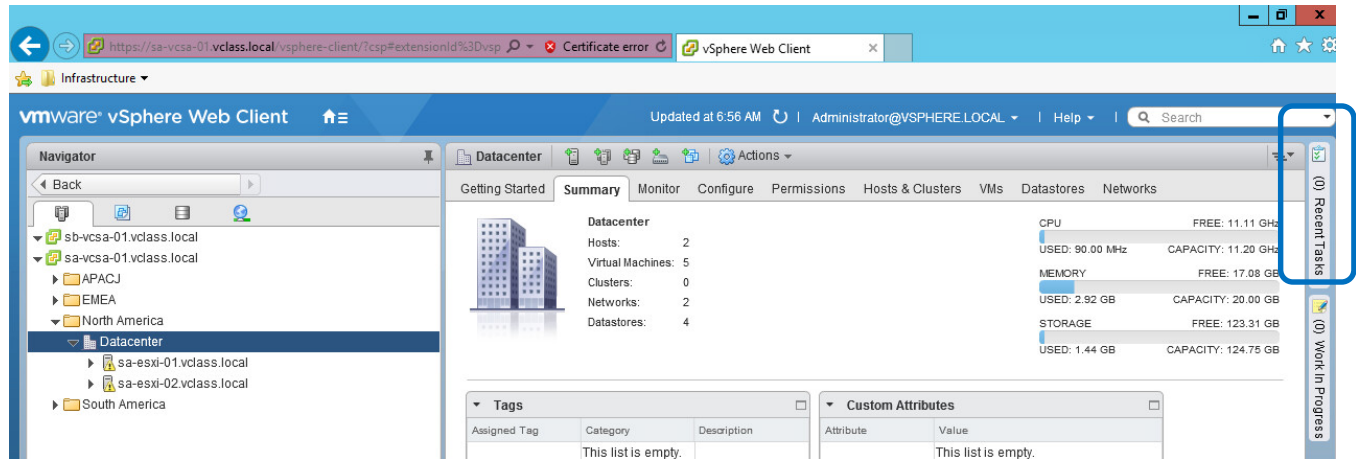
Assigned Tag	Category	Description
		This list is empty.

Attribute	Value
	This list

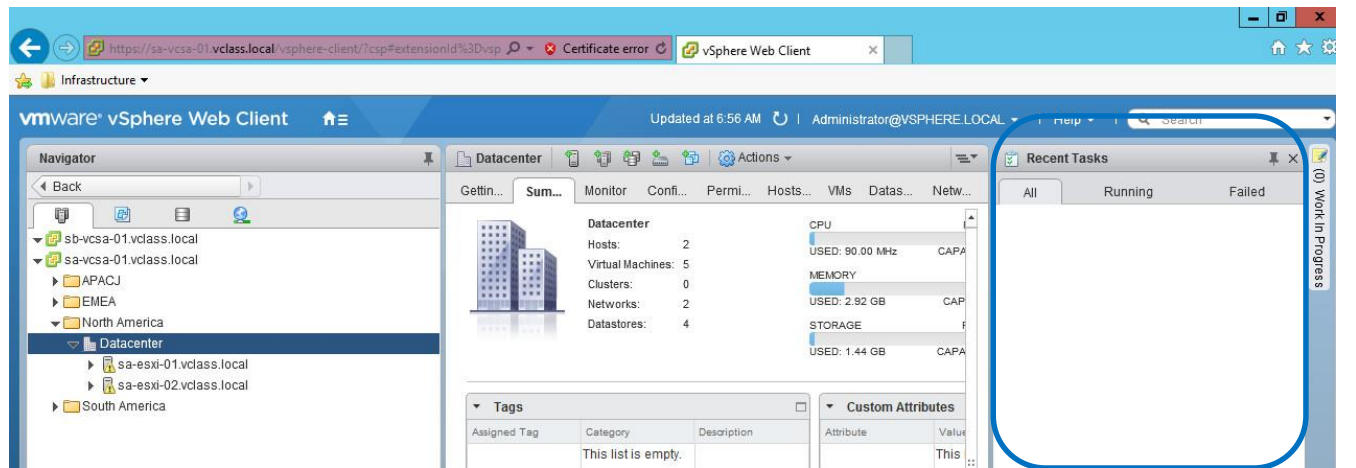
Using Pin and Unpin Functionality

You can pin and unpin display panes within the user interface.

Unpinned
Recent Tasks



Pinned Recent
Tasks



Lab 5: Navigating the vSphere Clients

Become familiar with vSphere Client and vSphere Web Client

1. Navigate vSphere Client
2. Navigate vSphere Web Client

Review of Learner Objectives

You should be able to meet the following objectives:

- Access the vSphere clients
- Install the Enhanced Authentication Plug-In for Windows
- Navigate the vSphere clients

Lesson 4: Managing the vCenter Server Inventory

Learner Objectives

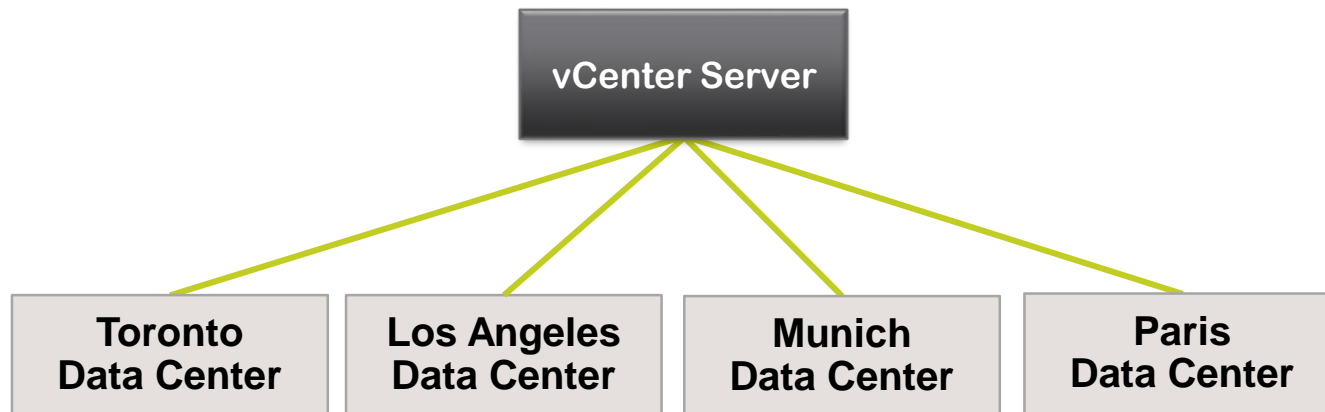
By the end of this lesson, you should be able to meet the following objectives:

- Create and organize vCenter Server inventory objects
- Add data center and organizational objects to vCenter Server
- Add hosts to vCenter Server
- Discuss how to create custom inventory tags for inventory objects
- Recognize how to view vCenter Server logs and events
- Manage the vCenter Server services
- Monitor vCenter Server Appliance

About Data Center Objects

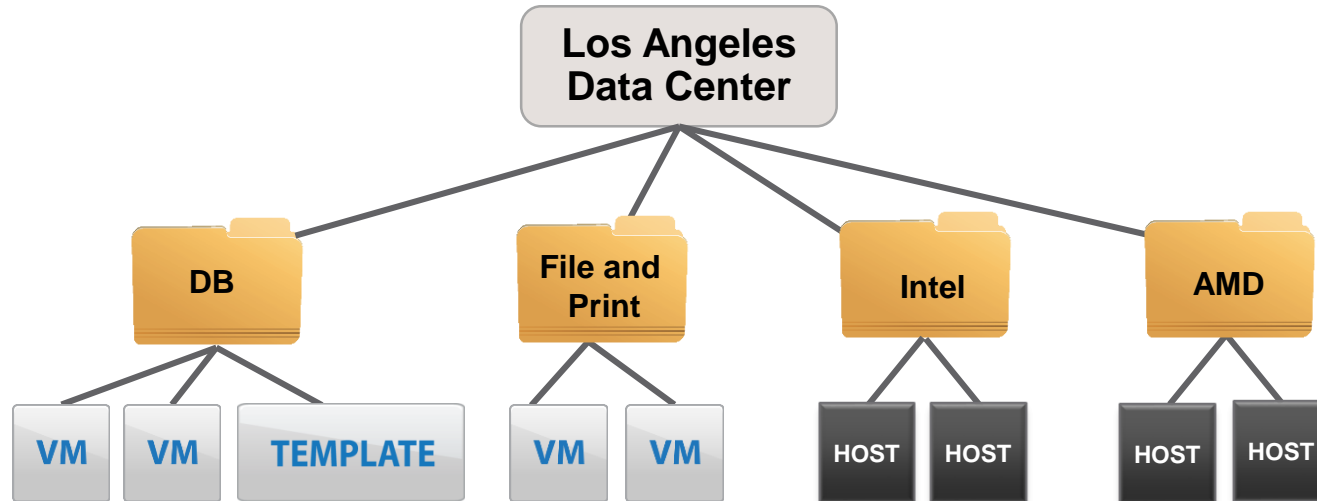
A virtual data center is a container for all the inventory objects required to complete a fully functional environment for operating virtual machines:

- You can create multiple data centers to organize sets of environments.
- Each data center has its own hosts, virtual machines, templates, datastores, and networks.



Organizing Inventory Objects into Folders

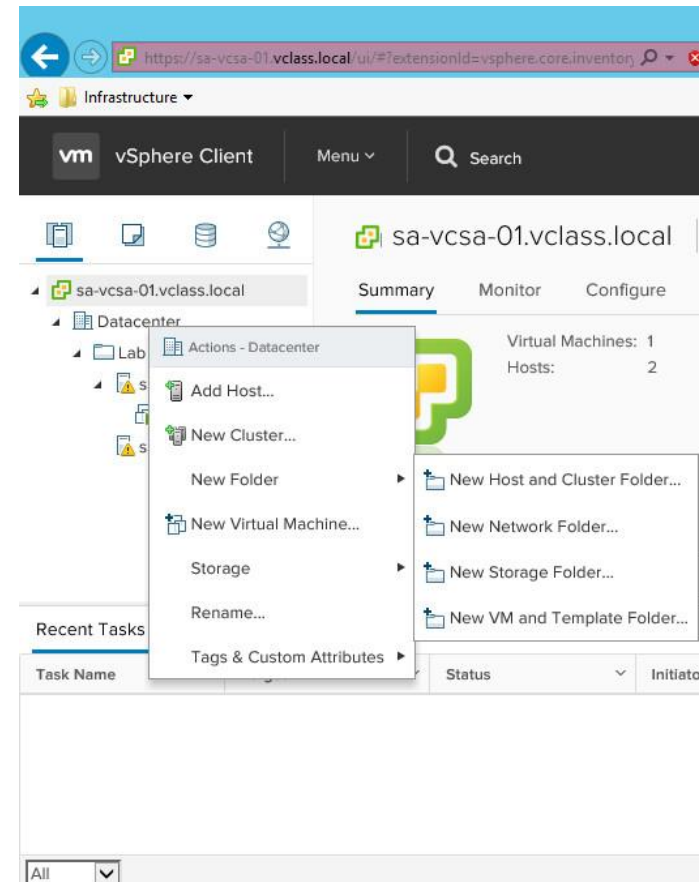
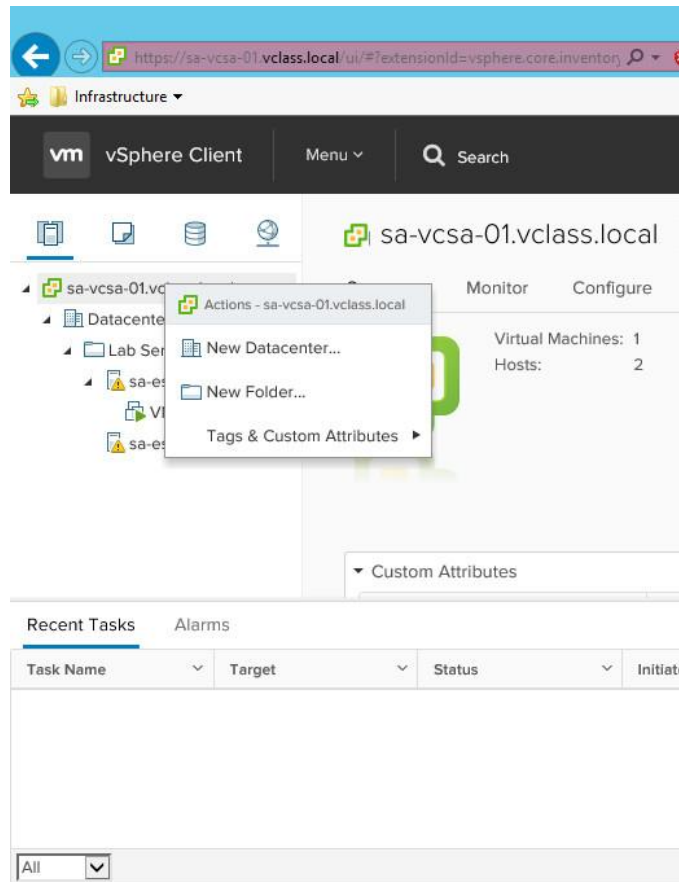
Items in the data center can be placed into folders. Folders and subfolders can be created to better organize systems.



Adding a Data Center and Organizational Objects to vCenter Server

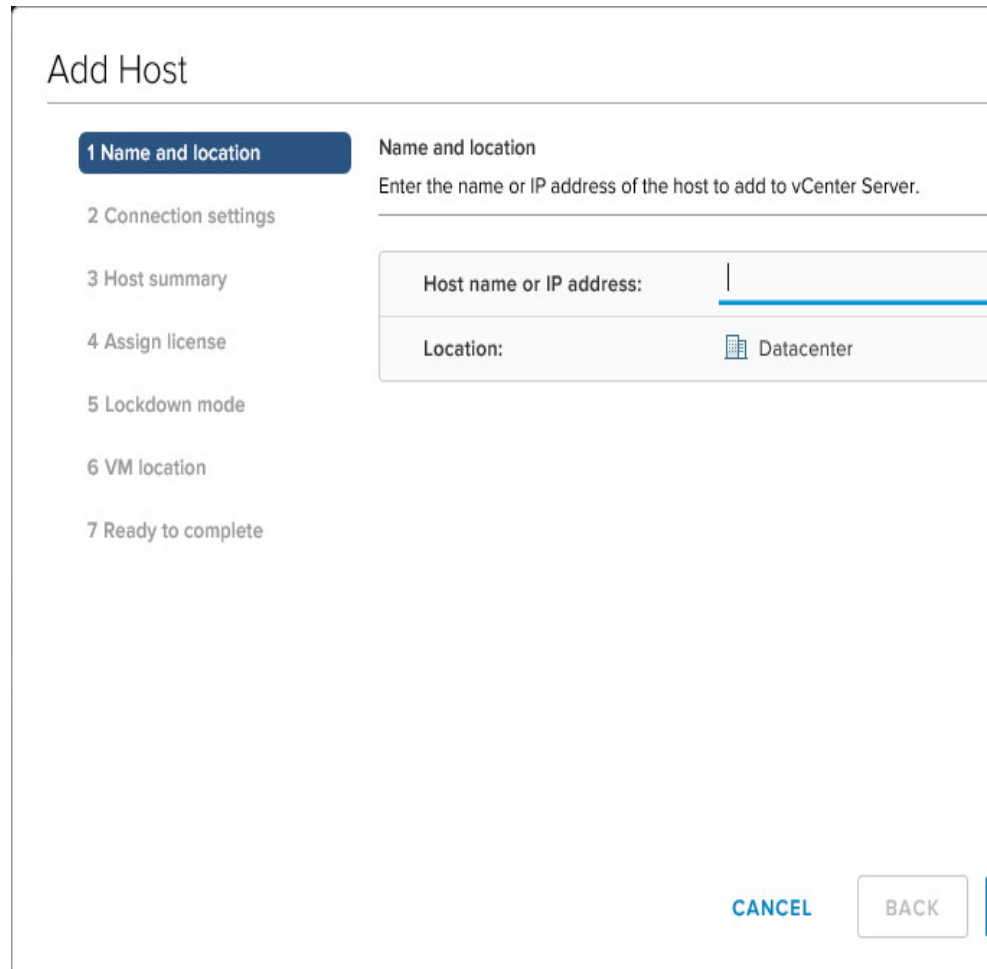
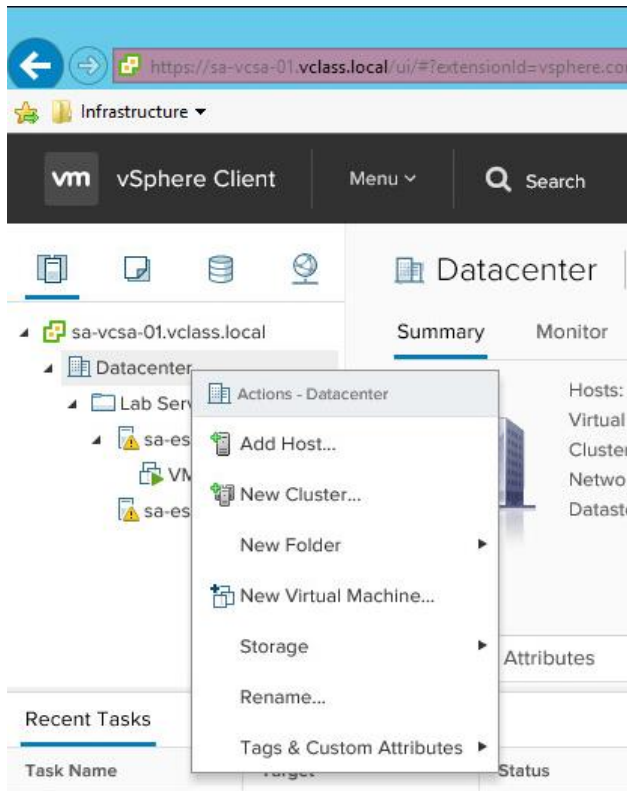
You can add a data center and host and cluster folders:

- You can use folders to group objects of the same type for easier management.



Adding ESXi Hosts to vCenter Server

You can add an ESXi host.

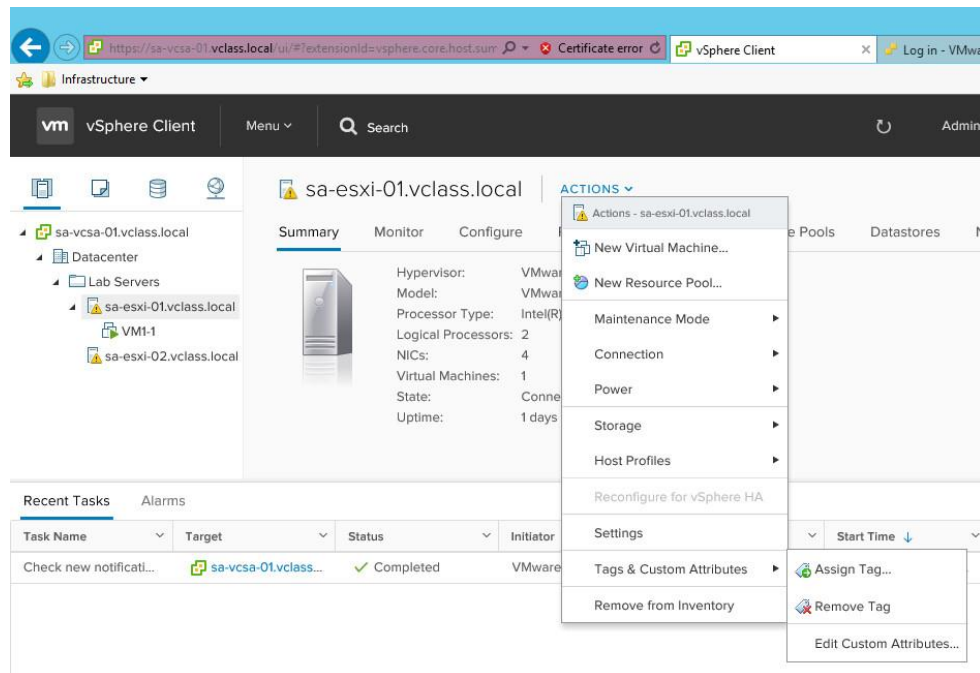


Creating Custom Tags for Inventory Objects

Tags enable you to attach metadata to objects in the vSphere inventory to make these objects more sortable.

You can associate a set of objects of the same type:

- Search for objects by that tag.
- Enable a business case where customers want to create groups of virtual machines, clusters, and datastores for ease of management.



vCenter Server Events

The vCenter Server events and audit trail allows selectable retention periods in increments of 30 days:

- User-action information includes the user's account and specific event details.
- All actions are reported, including file ID, file path, source of operation, operation name, and date and time of operation.

The screenshot shows the vSphere Client interface for a host named 'sa-esxi-01.vclass.local'. The 'Monitor' tab is active, and the 'Events' section is selected in the left-hand navigation pane. The main content area displays a table of events with columns for Description, Type, Date Time, Task, Target, User, and Event Type. A green callout box labeled 'Event Type' points to the 'Event Type' column header. Below the table, the 'Event Details' for a specific event are expanded, showing a description of a user logging out.

Description	Type	Date Time	Task	Target	User	Event Type
Message...	Informati...	10/28/2016 6...		VM1-1	User	vim.event.Vm...
User root...	Informati...	10/28/2016 6...		sa-esxi-0...	root	vim.event.Us...
VM1-1 is...	Informati...	10/28/2016 6...		VM1-1	VSPHERE.LO...	vim.event.Vm...
Message...	Informati...	10/28/2016 6...		VM1-1	vpuser	vim.event.Vm...
VM1-1 is...	Informati...	10/28/2016 6...		VM1-1	VSPHERE.LO...	vim.event.Vm...
Task: Po...	Informati...	10/28/2016 6...	Power On vir...	VM1-1	VSPHERE.LO...	vim.event.Ta...

Event Details:

Description:
10/28/2016 1:33:17 PM
User root@172.20.10.80 logged out (login time: Fri Oct 28 13:05:08 UTC 2016, number of API invocations: 0, user agent: Mozilla/5.0 (Windows NT 6.3; WOW64; Trident/7.0; rv:11.0) like Gecko)

vCenter Server System Logs

vSphere records events in the vCenter Server database:

- System log entries include information, such as who generated the event, when the event was created, and the type of event.

2016-10-11T17:41:47.632Z Section for VMware VirtualCenter, pid=4023, version=6.5.0, build
2016-10-11T17:41:47.632Z verbose vpxd[7F29D7D02800] [Originator@6876 sub=Default] D

----- Early init logs start -----
2016-10-11T17:41:47.454Z verbose -[7F29D7D02800] [Originator@6876 sub=vpxdvpxdSignal] Signal handler for signal 1 is installed
2016-10-11T17:41:47.454Z verbose -[7F29D7D02800] [Originator@6876 sub=vpxdvpxdSignal] Signal handler for signal 2 is installed
2016-10-11T17:41:47.454Z verbose -[7F29D7D02800] [Originator@6876 sub=vpxdvpxdSignal] Signal handler for signal 15 is installed
2016-10-11T17:41:47.454Z verbose -[7F29D7D02800] [Originator@6876 sub=vpxdvpxdSignal] Signal handler for signal 10 is installed
2016-10-11T17:41:47.566Z info -[7F29D7D02800] [Originator@6876 sub=Default] Glibc malloc guards disabled.
2016-10-11T17:41:47.566Z info -[7F29D7D02800] [Originator@6876 sub=Default] Initialized SystemFactory

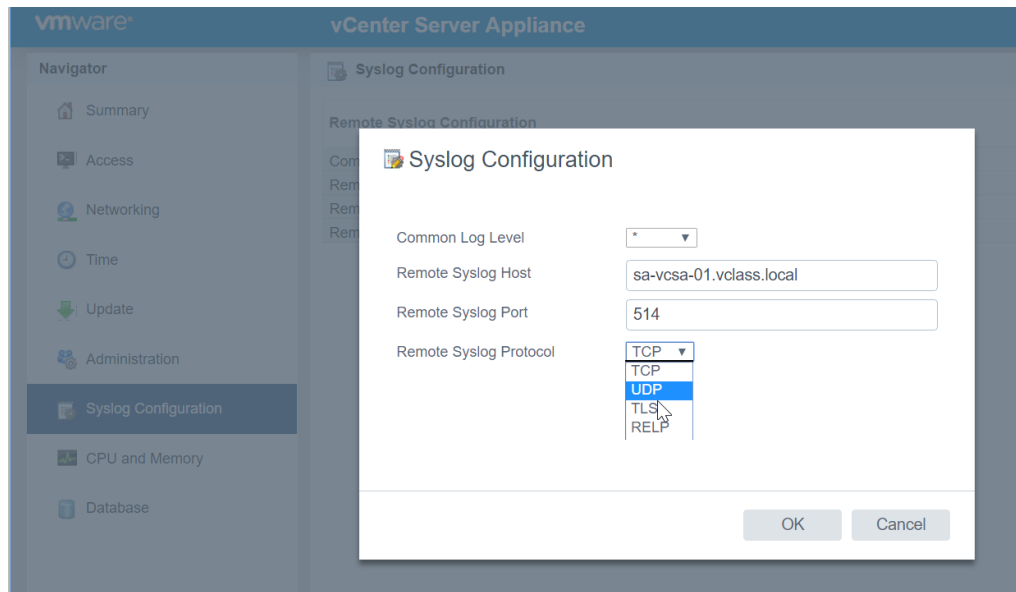
----- Early init logs end -----
2016-10-11T17:41:47.632Z info vpxd[7F29D7D02800] [Originator@6876 sub=Default] Logging uses fast path: true
2016-10-11T17:41:47.632Z info vpxd[7F29D7D02800] [Originator@6876 sub=Default] The bora/lib logs WILL be handled by VmaCore
2016-10-11T17:41:47.632Z info vpxd[7F29D7D02800] [Originator@6876 sub=Default] Initialized channel manager
2016-10-11T17:41:47.634Z info vpxd[7F29D7D02800] [Originator@6876 sub=Default] Current working directory: /storage/log/vmware/vmon
2016-10-11T17:41:47.635Z info vpxd[7F29D7D02800] [Originator@6876 sub=ThreadPool] Catch work item exceptions disabled.
2016-10-11T17:41:47.635Z info vpxd[7F29D7D02800] [Originator@6876 sub=FairScheduler] Priority level 4 is now active.
2016-10-11T17:41:47.635Z info vpxd[7F29D7D02800] [Originator@6876 sub=WorkQueue.vmcoreDefaultIOCompletionQueue] Created: WorkQueue.vmcoreDefaultIOCompletionQueue, type = fair, priority = 4, itemWeight = 1
2016-10-11T17:41:47.635Z info vpxd[7F29D7D02800] [Originator@6876 sub=FairScheduler] Priority level 8 is now active.
2016-10-11T17:41:47.635Z info vpxd[7F29D7D02800] [Originator@6876 sub=WorkQueue.vmcoreDefaultIOQueue] Created: WorkQueue.vmcoreDefaultIOQueue,

Showing 2000 of 50850 lines Show line numbers

Outputting vCenter Server Logs to Syslog Collector

vCenter Server is capable of streaming its log information to a remote Syslog server:

- You can enable this feature in the vCenter Server Appliance Management Interface at https://FQDN_of_vCenter_Server_Appliance:5480.
- This feature can help prevent the file system of vCenter Server Appliance from filling up with log files. It also enables further analysis of the vCenter Server Appliance log files with log analysis products, such as VMware vRealize® Log Insight™.



vCenter Server Database Health

vCenter Server checks the status of the database every 15 minutes:

- Database health warnings trigger an alarm when the volume (by default) reaches 80 percent.
- The alarm changes from warning to error when the free space reaches 95 percent and vCenter Server services shut down to allow the user to configure more disk space or remove unwanted content.

These features are available for the following databases:

- PostgreSQL and MSSQL
- Not available for Oracle

Managing the vCenter Server Services

You can manage vCenter Server services by selecting **Administration > System Configuration** from the Home page and selecting **Services**.

System Configuration

Using System Configuration, you can manage and monitor the management stack running the vCloud Suite. The management stack includes nodes and the services running in each node.

[Learn more about vCenter Server Appliance configuration](#)

Note the following important information:

1. Nodes running vSphere 5.5.x cannot be viewed in System Configuration. Upgrade your environment.
2. Non-vCSA nodes do not support some features such as rebooting, monitoring and configuration systems to perform these tasks.

Nodes Health	
Critical	0 Nodes
Warning	0 Nodes
Unknown	0 Nodes
Good	1 Node
Not applicable	0 Nodes

Services Health	
Critical	0 Services
Warning	0 Services
Unknown	1 Service
Good	17 Services
Not applicable	3 Services

Lab 6: Creating Folders in vCenter Server Appliance

Create folders in vCenter Server Appliance

1. Create a Host and Cluster Folder
2. Create Virtual Machine and Template Folders

Review of Learner Objectives

You should be able to meet the following objectives:

- Create and organize vCenter Server inventory objects
- Add data center and organizational objects to vCenter Server
- Add hosts to vCenter Server
- Discuss how to create custom inventory tags for inventory objects
- Recognize how to view vCenter Server logs and events
- Manage the vCenter Server services
- Monitor vCenter Server Appliance