

LAB. 6

VMware vSphere **VMware vCenter Server**

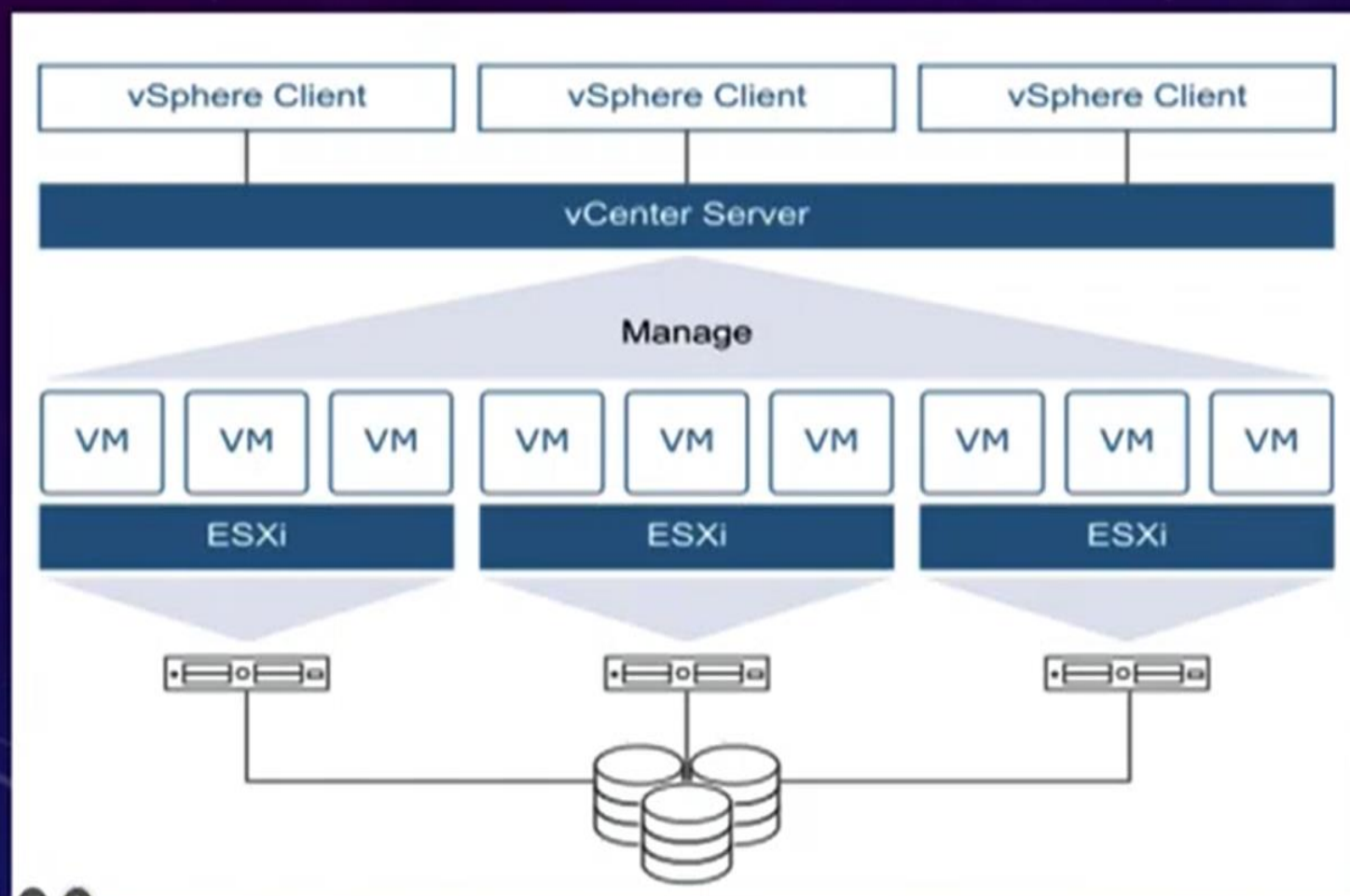
vCenter Server Overview and Deployment

Lecturer:

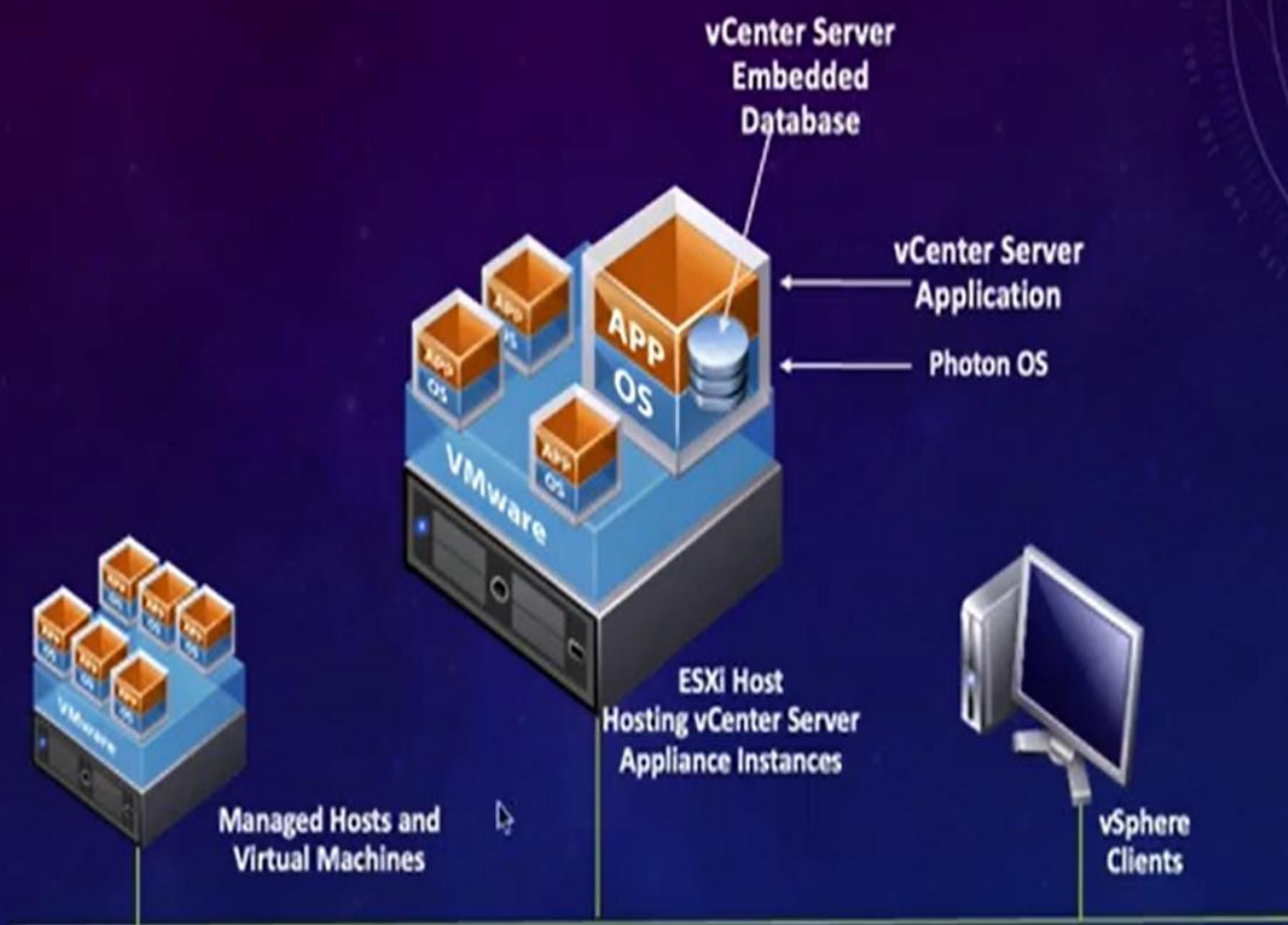
Eng. Asma'a Hassan

vCenter Server Overview

vCenter Server provides a centralized platform for management, operation, resource provisioning, and performance evaluation of virtual machines and hosts.



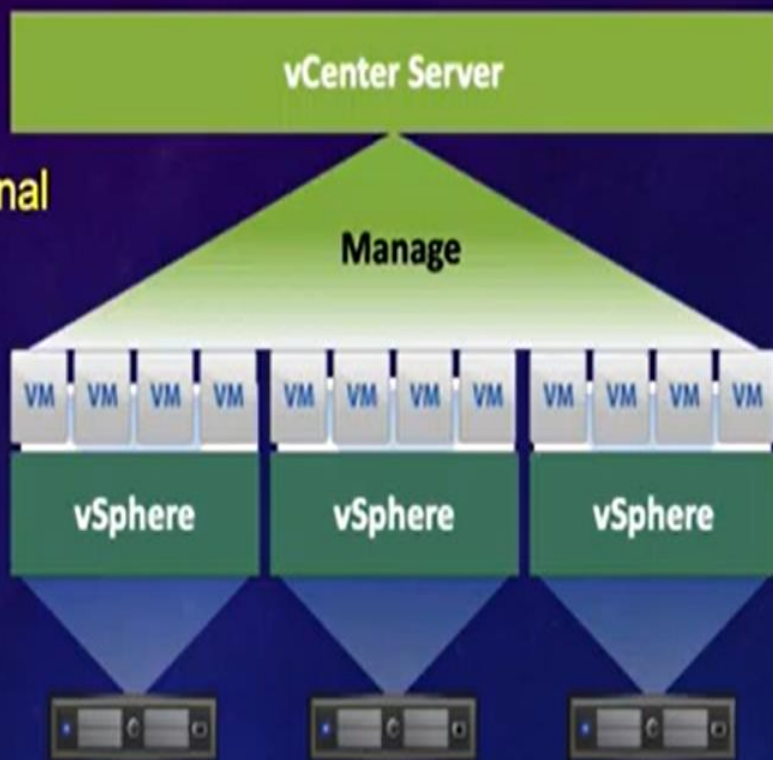
vCenter Server Architecture



About the vCenter Server Management Platform

vCenter Server runs on a Linux-based **(Photon)** Appliance or on a **Windows Server** machine

VMware has announced that 6.7 is the final release of vCenter Server on Windows.



vCenter Server Appliance 7 overview

vCenter Server Appliance is a prepackaged 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 associated services, and it provides a low-cost alternative to the Windows-based vCenter Server installation.

The vCenter Server Appliance package contains the following software:

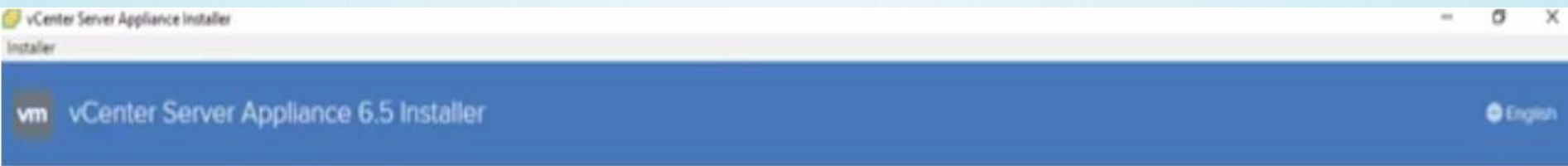
- VMware Photon™
- The vCenter Server group of services
- PostgreSQL

vCenter Server Appliance 7 overview

vCenter Server Appliance uses the embedded PostgreSQL database, which can scale up to 2,500 hosts and 45,000 registered virtual machines or 40,000 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.

خطوات تنصيب VCENTER



١- تحميل جديد



Install

Install a new vCenter Server Appliance or Platform Services Controller Appliance

٢- لترقية من نسخة أقدم حيث يمكن الترقية من الإصدار ٥,٥ وما فوق، الترقية خاصة vCenter Appliance



Upgrade

Upgrade an existing vCenter Server Appliance

٣- ترقية وتحويل في نفس الوقت من vCenter windows إلى Virtual Appliance



Migrate

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

٤- عمل استعادة من نسخة سابقة



Restore

Restore from a previously created vCenter Server Appliance backup

Install - Stage 1: Deploy appliance

1 Introduction

2 End user license agreement

3 Select deployment type

4 Appliance deployment target

5 Set up appliance VM

6 Select deployment size

7 Select datastore

8 Configure network settings

9 Ready to complete stage 1

Introduction

This installer allows you to install a vCenter Server Appliance 6.5 or a Platform Services Controller Appliance 6.5.

Stage 1



Deploy appliance

Stage 2



Set up appliance

Installing the appliance is a two stage process. The first stage involves deploying a new appliance to the target vCenter Server or ESXi host. The second stage completes the setup of the deployed appliance. Click Next, to proceed with stage 1.

Back

Next

Finish

Cancel

Install - Stage 1: Deploy appliance

✓ 1 Introduction

2 End user license agreement

3 Select deployment type

4 Appliance deployment target

5 Set up appliance VM

6 Select deployment size

7 Select datastore

8 Configure network settings

9 Ready to complete stage 1

End user license agreement

Read and accept the following license agreement

VMWARE END USER LICENSE AGREEMENT

PLEASE NOTE THAT THE TERMS OF THIS END USER LICENSE AGREEMENT SHALL GOVERN YOUR USE OF THE SOFTWARE, REGARDLESS OF ANY TERMS THAT MAY APPEAR DURING THE INSTALLATION OF THE SOFTWARE.

IMPORTANT READ CAREFULLY: BY DOWNLOADING, INSTALLING, OR USING THE SOFTWARE, YOU (THE INDIVIDUAL OR LEGAL ENTITY) AGREE TO BE BOUND BY THE TERMS OF THIS END USER LICENSE AGREEMENT ("EULA"). IF YOU DO NOT AGREE TO THE TERMS OF THIS EULA, YOU MUST NOT DOWNLOAD, INSTALL, OR USE THE SOFTWARE, AND YOU MUST DELETE OR RETURN THE UNUSED SOFTWARE TO THE VENDOR FROM WHICH YOU ACQUIRED IT WITHIN THIRTY (30) DAYS AND REQUEST A REFUND OF THE LICENSE FEE, IF ANY, THAT YOU PAID FOR THE SOFTWARE.

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1. DEFINITIONS.

☒ I accept the terms of the license agreement.

Back

Next

Finish

Cancel

Install - Stage 1: Deploy appliance

- ✓ 1 Introduction
- ✓ 2 End user license agreement
- 3 Select deployment type
- 4 Appliance deployment target
- 5 Set up appliance VM
- 6 Select deployment size
- 7 Select datastore
- 8 Configure network settings
- 9 Ready to complete stage 1

Select deployment type

Select the deployment type you want to configure on the appliance.

For more information on deployment types, refer to the vSphere 6.5 documentation.

Embedded Platform Services Controller

- ☒ vCenter Server with an Embedded Platform Services Controller



External Platform Services Controller

- ☐ Platform Services Controller
- ☐ vCenter Server (Requires External Platform Services Controller)



Back

Next

Finish

Cancel

• يوجد نوعين من VCENTER عند عملية التنصيب ، يوجد ما يسمى PLATFORM SERVICES CONTROLLER

• حيث يمكن تضمين VCENTER في هذا المتحكم في الخيار الأول.

• في الخيار الثاني يكون VCENTER مفصول عن المتحكم، حيث يكون المتحكم EXTERNAL وذلك حتى يمكننا ربط أكثر من VCENTER بنفس PSC وبذلك يمكن تسجيل الدخول على مجموعة VCENTER من خلال PSC، وبذلك يمكن إدارة مجموعة VCENTER من خلال شاشة واحدة وذلك يكون في البيئات الكبيرة التي تحتوي على أكثر من

VCENTER.

Center Server with an Embedded Platform Services Controller

Appliance deployment target

Specify the appliance deployment target settings. The target is the ESXi host or vCenter Server instance on which the appliance will be deployed.

ESXi host or vCenter Server name

10.100.10.6

يتم تسجيل IP الخاص بالـ ESXi



HTTPS port

443

User name

root



Password

.....|

كلمة مرور ESXi

Certificate Warning

If an untrusted SSL certificate is installed on 10.100.10.5, secure communication cannot be guaranteed. Depending on your security policy, this issue might not represent a security concern.

The SHA1 thumbprint of the certificate is:

76 F9 D1 33 84 E6 F0 2F A0 3C FD 1B 89 1E 15 09 90 08 0F 48

To accept and continue, click Yes

Yes

No

Deploy vCenter Server with an Embedded Platform Services Controller

Set up appliance VM

Specify the VM settings for the appliance to be deployed.

VM name

VMware vCenter Server Appliance

Root password

Confirm root password

نحدد اسم VM هذا الاسم الذي يتم من خلاله استدعاء VM ومن خلاله يتم تسجيلها في DNS بواسطة Reverse lockup Zones الذي سيتم شرحه لاحقا

هذا يمثل Root account لنظام التشغيل الموجود على Appliance ويتم كتابته وحفظه لاستخدامه في وقت لاحق

Install - Stage 1: Deploy vCenter Server with an Embedded Platform Services Controller

- ✓ 1 Introduction
- ✓ 2 End user license agreement
- ✓ 3 Select deployment type
- ✓ 4 Appliance deployment target
- ✓ 5 Set up appliance VM

6 Select deployment size

7 Select datastore

8 Configure network settings

9 Ready to complete stage 1

Select deployment size

Select the deployment size for this vCenter Server with an Embedded Platform Services Controller.

For more information on deployment sizes, refer to the vSphere 6.5 documentation.

Deployment size

Tiny ▾

Storage size

Default ▾



Resources required for different deployment sizes

Deployment Size	vCPUs	Memory (GB)	Storage (GB)	Hosts (up to)	VMs (up to)
Tiny	2	10	250	10	100
Small	4	16	290	100	1000
Medium	8	24	425	400	4000
Large	16	32	640	1000	10000
X-Large	24	48	980	2000	35000

Back

Next

Finish

Cancel

Recover from a previously created vCenter Server Appliance backup

For more information on deployment sizes, refer to the vSphere 6.5 documentation.

Deployment size

Small ▼

Storage size

Default ▼



يتم تحديد الحجم حيث يتم شرح المقصود بكل واحد منها
بالأسفل

Resources required for different deployment sizes

Deployment Size	vCPUs	Memory (GB)	Storage (GB)	Hosts (up to)	VMs (up to)
Tiny	2	10	250	10	100
Small	4	16	290	100	1000
Medium	8	24	425	400	4000
Large	16	32	640	1000	10000
X-Large	24	48	980	2000	35000

Step 1: Deploy vCenter Server with an Embedded Platform Services Controller

Install - Stage 1: Deploy vCenter Server with an Embedded Platform Services Controller

Select datastore I

Select the storage location for this vCenter Server with an Embedded Platform Services Controller.

Name ▼	Type ▼	Capacity ▼	Free ▼	Provisio... ▼	Thin
DS01	VMFS	1.81 TB	1.55 TB	265.2 GB	true
DS02	VMFS	458.25 GB	425.53 GB	32.72 GB	true

☐ Enable Thin Disk Mode ⓘ

يتم تحديد data store الذي سوف تخزن عليه VM

كما ويتم تفعيل Thin Disk Mode



Install - Stage 1: Deploy vCenter Server with an Embedded Platform Services Controller

✓ 1 Introduction

✓ 2 End user license agreement

✓ 3 Select deployment type

✓ 4 Appliance deployment target

✓ 5 Set up appliance VM

✓ 6 Select deployment size

✓ 7 Select datastore

8 Configure network settings

9 Ready to complete stage 1

Configure network settings

Configure network settings for this vCenter Server with an Embedded Platform Services Controller.

Network

VLAN101 ⓘ

IP version

IPv4 ▾

IP assignment

static ▾

System name

cal-vcsv-01.atn.local ⓘ

IP address

10.101.10.99

Subnet mask or prefix length

255.255.255.0 ⓘ

Default gateway

10.101.10.254

DNS servers

10.101.10.50

Back

Next

Finish

Cancel

Install - Stage 1: Deploy vCenter Server with an Embedded Platform Services Controller

- ✓ 1 Introduction
- ✓ 2 End user license agreement
- ✓ 3 Select deployment type
- ✓ 4 Appliance deployment target
- ✓ 5 Set up appliance VM
- ✓ 6 Select deployment size
- ✓ 7 Select datastore
- ✓ 8 Configure network settings
- 9 Ready to complete stage 1

Ready to complete stage 1

Review your settings before starting the appliance deployment.

Deployment Details

Target ESXi host	10.100.10.8
VM name	CAI-VCSV-01
Deployment type	vCenter Server with an Embedded Platform Services Controller
Deployment size	Small

Datastore Details

Datastore, Disk mode	DS02, thin
----------------------	------------

Network Details

Network	VLAN101
IP settings	IPv4, static
IP address	10.101.10.99
System name	cai-vcsv-01.aith.local
Subnet mask or prefix length	255.255.255.0
Default gateway	10.101.10.254
DNS servers	10.101.10.50

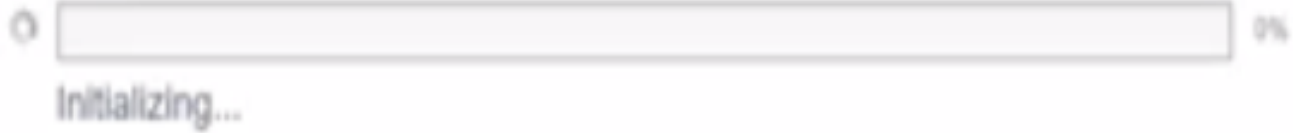
Back

Next

Finish

Cancel

Install - Stage 1: Deploy vCenter Server with an Embedded Platform Services Controller



فترة التحميل من ١٥-٢٠ دقيقة

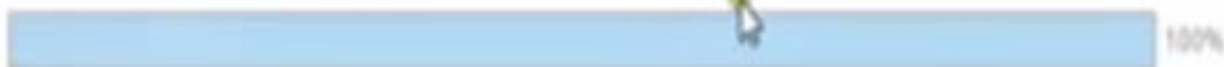


Cancel

Install - Stage 1: Deploy vCenter Server with an Embedded Platform Services Controller



You have successfully deployed the vCenter Server with an Embedded Platform Services Controller.



Deployment complete

To proceed with stage 2 of the deployment process, appliance setup, click Continue.

If you exit, you can continue with the appliance setup at any time by logging in to the vCenter Server Appliance Management Interface https://CAI-VC5V-01/ITN_LOCAL_5485/

Continue

Close

Install - Stage 2: Set Up vCenter Server Appliance with an Embedded PSC

1 Introduction

2 Appliance configuration

3 SSO configuration

4 Configure CEP

5 Ready to complete

Introduction

vCenter Server Appliance installation overview



Installing the vCenter Server Appliance is a two stage process. The first stage has been completed. Click Next, to proceed with Stage 2, setting up the vCenter Server Appliance.

Back

Next

Finish

Cancel

Up vCenter Server Appliance with an Embedded PSC

Appliance configuration

Time synchronization mode

NTP servers (comma-separated list)

Synchronize time with NTP servers ▼
Synchronize time with the ESXi host
Synchronize time with NTP servers

SSH access

Disabled ▼

i For vCenter Server High Availability (HA), enable SSH access

اختيار ESXi

يتم تفعيل هذه الخاصية

2: Set Up vCenter Server Appliance with an Embedded PSC

SSO configuration

يتم تهيئة تسجيل الدخول

Single Sign-On domain name

vsphere.local

Single Sign-On user name

administrator

Single Sign-On password

Confirm password

Site name

default-site

أي اسم وليكن صنعاء

يتم إعطاء domain name أو اسم نطاق للسر فر وليكن:

كما يتم إعطاء كلمة مرور للـ Administrator لأن هذا يعتبر User Account الذي نستخدمه في إدارة vCenter

In vCenter 6.5, joining a vCenter with embedded PSC to an external PSC is not supported. For more information, see the vCenter Server documentation.

Install - Stage 2: Set Up vCenter Server Appliance with an Embedded PSC

- ✓ 1 Introduction
- ✓ 2 Appliance configuration
- ✓ 3 SSO configuration
- 4 **Configure CEIP**
- 5 Ready to complete

Configure CEIP

Join the VMware Customer Experience Improvement Program

VMware's Customer Experience Improvement Program ("CEIP") provides VMware with information that enables VMware to improve its products and services, to fix problems, and to advise you on how best to deploy and use our products. As part of the CEIP, VMware collects technical information about your organization's use of VMware products and services on a regular basis in association with your organization's VMware license key(s). This information does not personally identify any individual.

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If you prefer not to participate in VMware's CEIP for this product, you should uncheck the box below. You may join or leave VMware's CEIP for this product at any time.

☒ Join the VMware's Customer Experience Improvement Program (CEIP)

Back

Next

Finish

Cancel

Install - Stage 2: Set Up vCenter Server Appliance with an Embedded PSC

- ✓ 1 Introduction
- ✓ 2 Appliance configuration
- ✓ 3 SSO configuration
- ✓ 4 Configure CEIP
- ✓ 5 Ready to complete

Ready to complete

Review your settings before finishing the wizard.

Network Details

Network configuration	Assign static IP address
IP version	IPv4
Host name	CAI-VCSN-01.ATN.LOCAL
IP Address	10.101.10.99
Subnet mask	255.255.255.0
Gateway	10.101.10.254
DNS servers	10.101.10.50

Appliance Details

Time synchronization mode	Synchronize time with the ESX host
SSH access	Enabled

SSO Details

Domain name	vsphere.local
Site name	CAIRO
User name	administrator

Customer Experience Improvement Program

Back

Next

Finish

Cancel

Complete



You have successfully setup this Appliance



Complete

vCenter Server Appliance setup has been completed successfully. Click on the link below to get started. Press close to exit.

Appliance Getting Started Page

<https://CAI-VCSV-01.AITN.LOCAL:443>

تمت عملية التحميل ويمكننا الدخول من خلال URL المعطى





آخر تحديثات سيرفر شروحات



https://cai-vcsv-01.aitn.lc



Secure | https://cai-vcsv-01.aitn.local/?workflow=installer

vmware


Getting Started

To access vSphere, log in to:

- [vSphere Web Client \(Flash\)](#)
- vSphere Client (HTML5) - partial functionality

For help, see:

- vSphere Documentation
- Supported Functionality in vSphere Client (HTML5)



vCenter Servers

For Administrators

Web-Based Datastore Browser

Use your web browser to find and download files (for example, virtual machine and virtual disk files).

Browse datastores in the vSphere inventory

For Developers

vSphere Web Services SDK

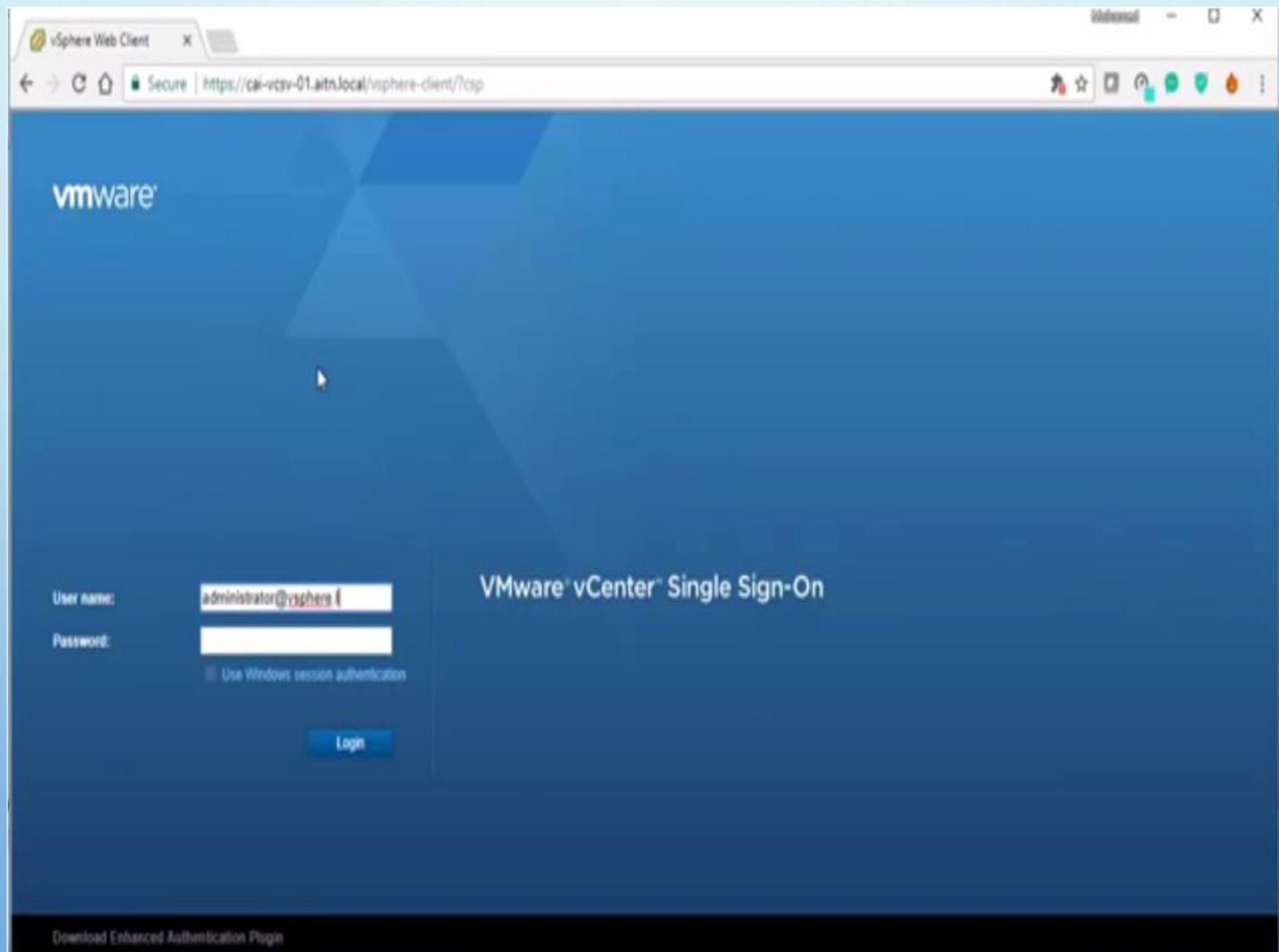
Learn about our latest SDKs, Toolkits, and APIs for managing VMware ESXi and VMware vCenter. Get sample code, reference documentation, participate in our Forum Discussions, and view our latest Sessions and Webinars.

- Learn more about the Web Services SDK
- Browse objects managed by vSphere
- Browse vSphere REST APIs
- Download trusted root CA certificates

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evolving host...

نضغط على vspher Flash



There are vCenter Server systems with expired or expiring licenses in your inventory. Manage your licenses Details...

vmware vSphere Web Client

Administrator@VSPHERE.LOCAL | Help | Search

Navigator

CAI-VCSV-01.AITN.LOCAL Actions

Work In Progress

BACK

Getting... Summary Monitor Configure Permissions Datacenter Hosts & VMs Datastore Networks Linked... Extensions Update...

CAI-VCSV-01.AITN.LOCAL

1 Create Datacenter 2 Add Host 3 Add Virtual Machine 4 Complete set-up

Welcome to vCenter Server

You are ready to set up vCenter Server. The first step is creating a datacenter.

A datacenter contains all inventory objects such as hosts and virtual machines. You might need only one datacenter. Large companies might use multiple datacenters to represent organizational units in their enterprise.



Alarms

All (0) New (0) Acknowledged

Recent Objects

Recent Tasks

Viewed

Created

CAI-VCSV-01.AITN.LOCAL

Filter

Task Name	Target	Status	Initiator	Queued For	Start Time	Completion Time
Create alarm	CAI-VCSV-01.AITN...	✓ Completed	com.vmware.vsan.h...	2 ms	2/2/2018 3:42:40 PM	2/2/2018 3:42:40 PM
Create alarm	CAI-VCSV-01.AITN...	✓ Completed	com.vmware.vsan.h...	2 ms	2/2/2018 3:42:40 PM	2/2/2018 3:42:40 PM
Create alarm	CAI-VCSV-01.AITN...	✓ Completed	com.vmware.vsan.h...	1 ms	2/2/2018 3:42:40 PM	2/2/2018 3:42:40 PM
Create alarm	CAI-VCSV-01.AITN...	✓ Completed	com.vmware.vsan.h...	2 ms	2/2/2018 3:42:40 PM	2/2/2018 3:42:40 PM
Create alarm	CAI-VCSV-01.AITN...	✓ Completed	com.vmware.vsan.h...	2 ms	2/2/2018 3:42:40 PM	2/2/2018 3:42:40 PM
Create alarm	CAI-VCSV-01.AITN...	✓ Completed	com.vmware.vsan.h...	2 ms	2/2/2018 3:42:40 PM	2/2/2018 3:42:40 PM

vmware vSphere Web Client

Administrator@VSPHERE.LOCAL | Help | Search

CAI-VC-SV-01.AITN.LOCAL

Getting Started Summary Monitor Configure Permissions Datastores Hosts & VMs Datastores Networks Linked ... Extensions Update

1 Create Datacenter 2 Add Host 3 Add Virtual Machine 4 Complete set-up

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Explore Further

To get started click Create Datacenter

Alarms

Recent Objects

Recent Tasks

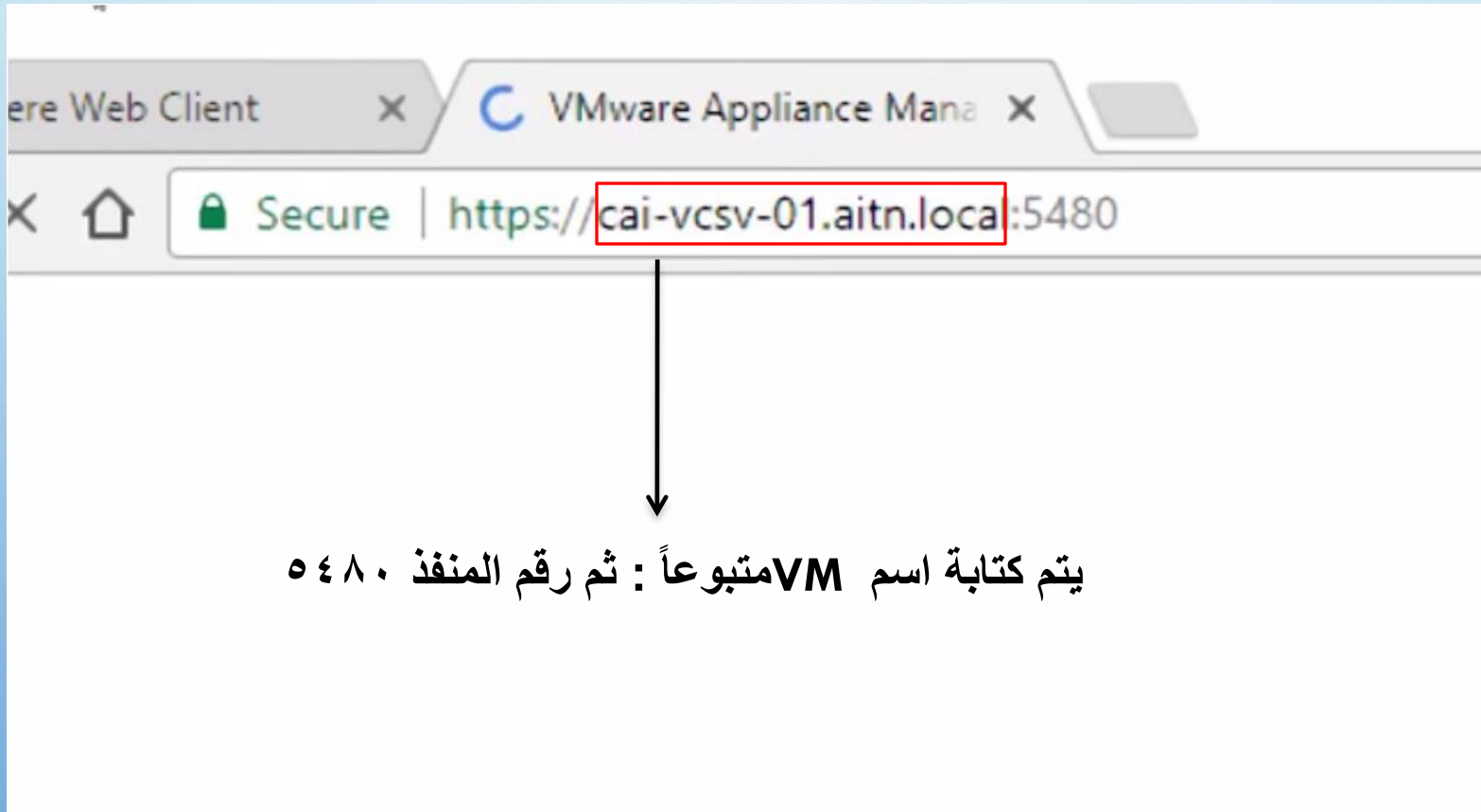
Task Name Target Status Initiator Queued For Start Time Completion Time

Create alarm CAI-VC-SV-01.AITN... Completed com.vmware.vsan.h... 2 ms 2/2/2018 3:42:40 PM 2/2/2018 3:42:40 PM

Help Table of Contents
Watch How-to Videos
About VMware vSphere
Hide All Getting Started Pages
Hide Toolbar Action Labels

من خلال خيار Hide All Getting started pages يتم إخفاء كافة نوافذ البدء في vCenter الموجود في Help

INTERFACE FOR APPLIANCE






VMware vSphere® Appliance Management

نكتب كلمة المرور واسم المستخدم الخاص بنظام
تشغيل **Appliance** وهي اسم المستخدم يكون
Root ، وكلمة المرور هي ما تمت كتابته مسبقا.

- Navigator
- Summary
 - Access
 - Networking
 - Time
 - Update
 - Administration
 - syslog Configuration
 - CPU and Memory
 - Database

Summary



Hostname:	CAI-VC-SV-01.A1TN.LOCAL	Backup	Create Support Bundle	Reboot	Shutdown
Type:	vCenter Server with an embedded Platform Services Controller				
Product:	VMware vCenter Server Appliance				
Version:	6.5.0.10000				

Health Status

Overall Health	Good
Last Health Check	2/2/2018, 3:52:26 PM
CPU	Good
Memory	Good
Database	Good

Single Sign-On

Single Sign-On Domain	vsphere.local
Status	Running

Health Messages

No Messages Available

انتهى العمل السادس