開源虛擬化系統 XenServer

自由軟體推動小組 胡適國小 王彥博

2017.10.06

XenServer

詢問 投票

向演講者提問

輸入您的提問

還沒有人提出問題。

成為第一個!

slı.do

XenServer

詢問 投票

即時意見調查 0

各校虛擬化現況調查

- [ ] 使用 XenServer
- [ ] 使用 PVE
- [ ] 使用 KVM
- [ ] 已購買 VMware vSphere(ESXi)
- [ ] 使用 ESXi 免費版
- [ ] 我用 Hyper-V
- [ ] 無虛擬化經驗

傳送

https://sli.do/tpxen

About

- 王彥博 (Alex Wang)
- 胡適國小 系管師
- 台北市自由軟體推動小組

Agenda

- Virtualization
- XenServer
- Demo
- Q&A

看一下統計

虚擬化

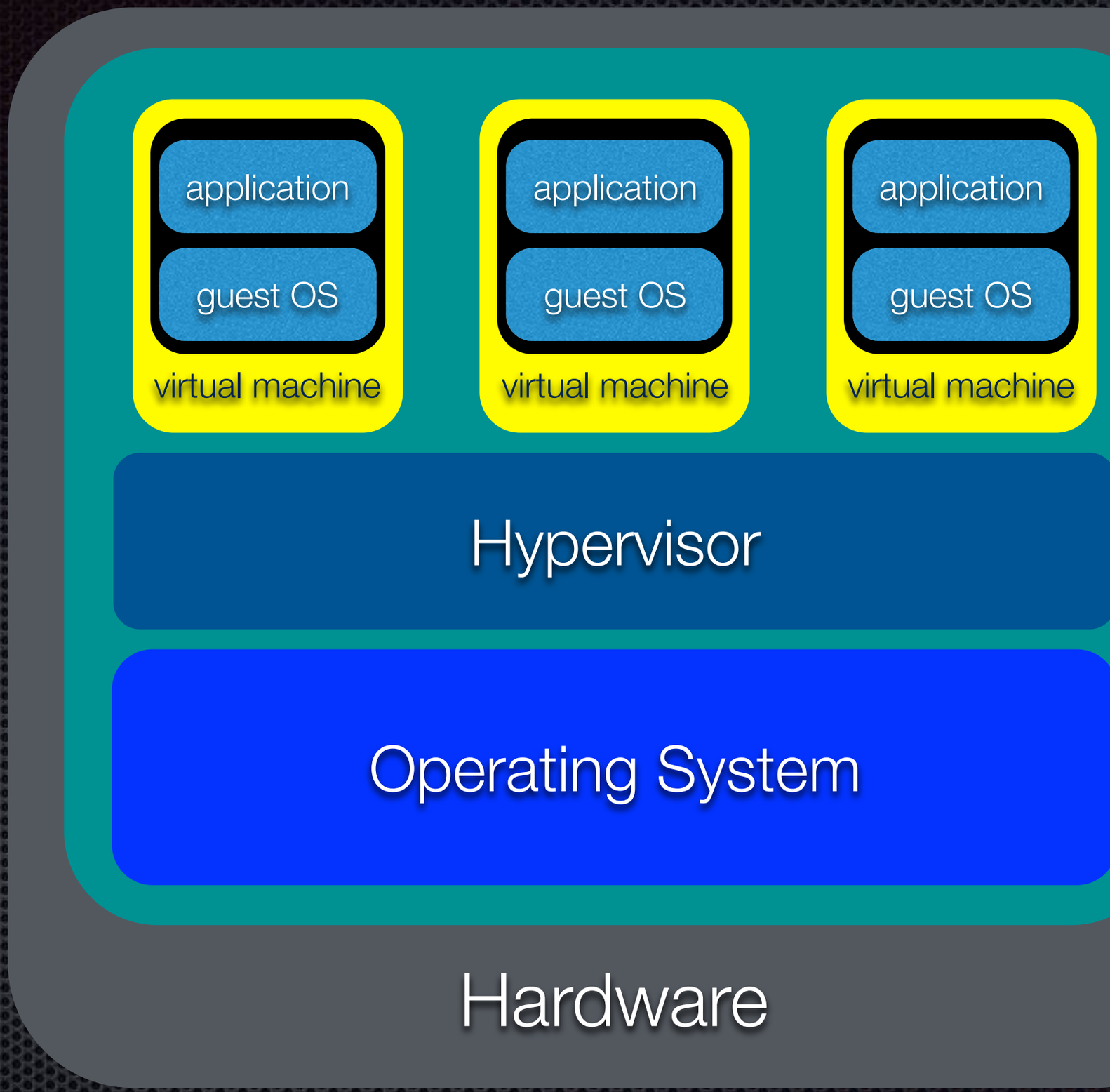
Virtualization

一個打十個

單一機器 多個系統 同時存在 互不干擾

VMware Workstation
Parallels / Fusion
VirtualBox

常見的桌面版虛擬化軟體


application
guest OS
virtual machine
application
guest OS
virtual machine
application
guest OS
virtual machine
Hypervisor
Operating System
Hardware

application
guest OS
virtual machine

application
guest OS
virtual machine

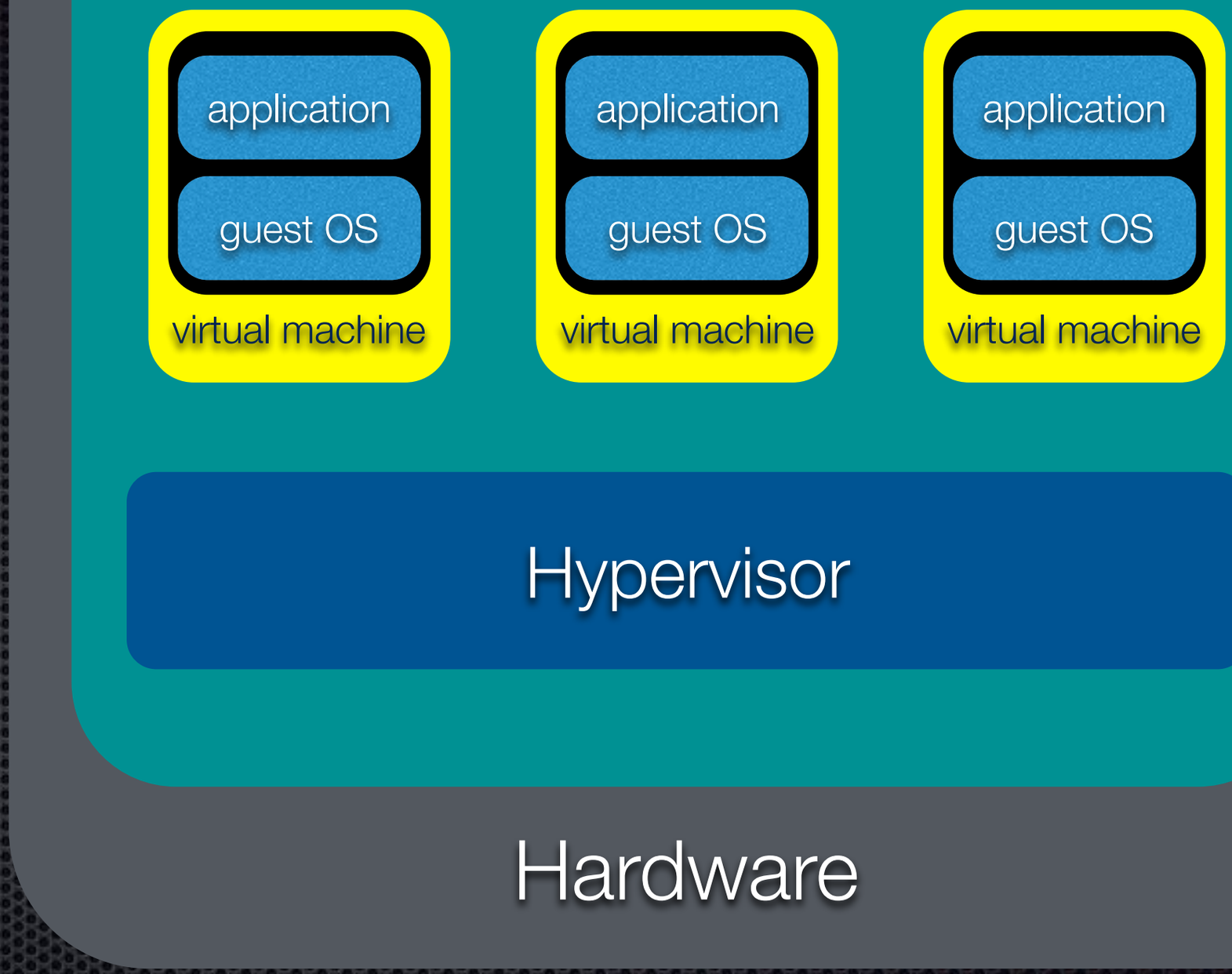
application
guest OS
virtual machine

Hypervisor

Operating System

Hardware

VMware vSphere
Proxmox VE
XenServer
虛擬化作業系統


application
guest OS
virtual machine
application
guest OS
virtual machine
application
guest OS
virtual machine
Hypervisor
Hardware

然後勒？

阿不就一台當多台用

Storage

運算單元與儲存單元的分離

CPU

RAM

HDD

APP
OS
VM

APP
OS
VM

APP
OS
VM

Server

CPU

RAM

HDD

Server

CPU

RAM

HDD

Storage

APP

OS

VM

APP

OS

VM

APP

OS

VM

2 + 1 = 1

2 server + 1 storage = 1 pool (cluster)

pool

Server

CPU RAM HDD

Server

CPU RAM HDD

Storage

APP OS VM

APP OS VM

APP OS VM

migration

VirtualMachine / Storage

VM migration

APP
OS
VM

APP
OS
VM

APP
OS
VM

Server

CPU

RAM

HDD

Server

CPU

RAM

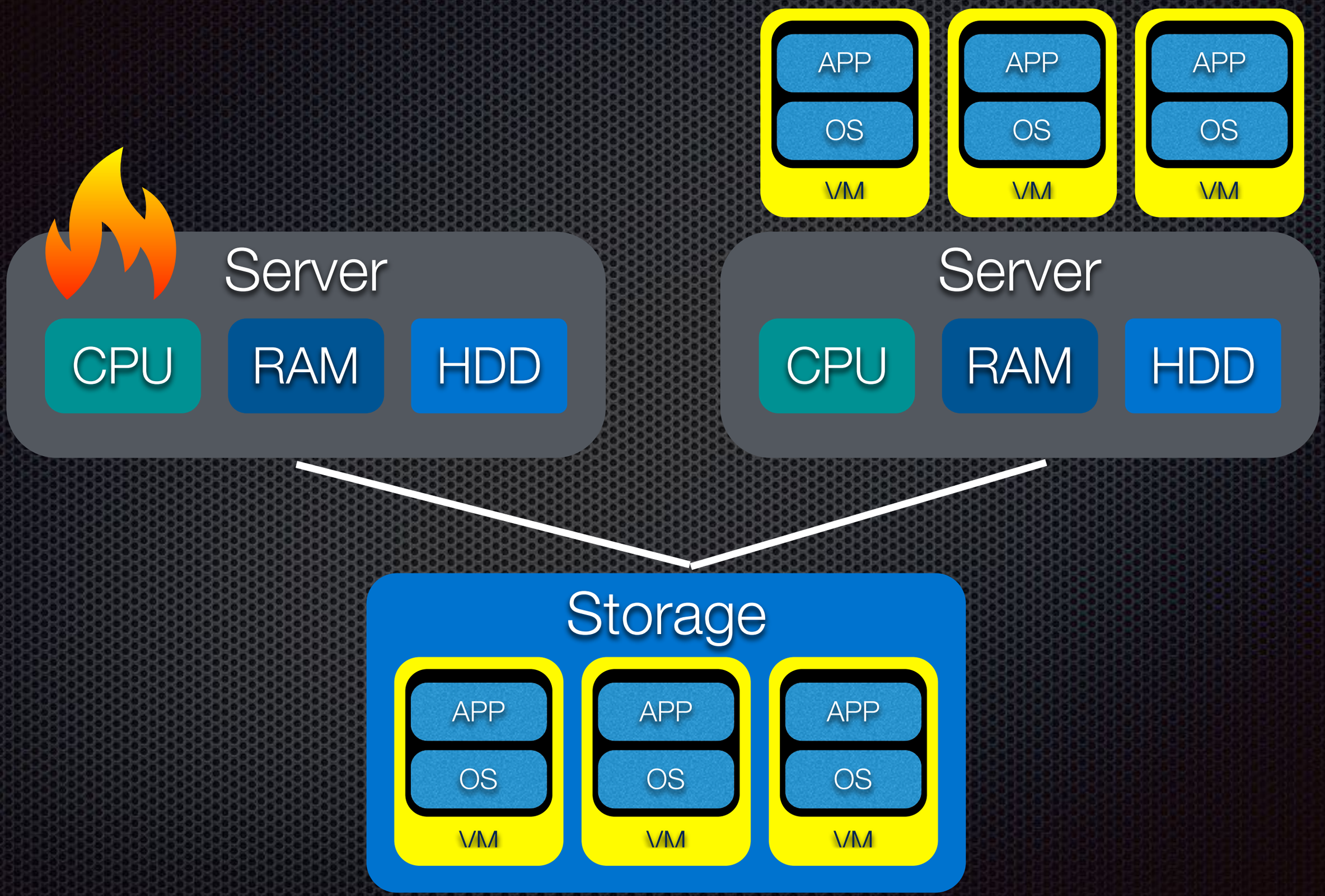
HDD

Storage

APP
OS
VM

APP
OS
VM

APP
OS
VM


APP
OS
VM
APP
OS
VM
APP
OS
VM
Server
CPU
RAM
HDD
Server
CPU
RAM
HDD
Storage
APP
OS
VM
APP
OS
VM
APP
OS
VM

Storage migration

Server

CPU

RAM

HDD

Server

CPU

RAM

HDD

Storage

APP

OS

VM

APP

OS

VM

Storage

APP

OS

VM

Server

CPU

RAM

HDD

Server

CPU

RAM

HDD

Storage

Storage

APP

OS

VM

APP

OS

VM

APP

OS

VM

XenServer

/ˈzɛn sɝvɚ/

CITRIX®

open source Cirtix XenServer

CITRIX

XenServer 7.2 Licensing FAQ

May 2017

Summary

This article contains frequently asked questions about XenServer 7.2 licensing.

XenServer 7.2 is available in two commercial editions:

- Standard
- Enterprise

XenServer 7.2 is available in two commercial editions:

- Standard
- Enterprise

The **Standard** edition is our entry-level commercial offering, with a range of features that will suit the needs of those customers who want a robust and high performing virtualization platform, but do not require the premium features offered by the Enterprise edition; while still wishing to benefit from the assurance of comprehensive Citrix Support and Maintenance.

The **Enterprise** edition is our premium offering, optimized for desktop, server and cloud workloads. In addition to the Standard edition, the Enterprise edition offers the following features:

- Automated Windows VM Driver Updates
- Automatic updating of the Management Agent
- Support for SMB storage
- Direct Inspect APIs
- Dynamic Workload Balancing
- GPU Virtualization with NVIDIA GRID and Intel GVT-g
- VMware vSphere to XenServer Conversion utilities
- Intel Secure Measured Boot (TXT)
- Export Pool Resource Data
- In-memory Read Caching
- PVS-Accelerator
- Automated Updates using XenCenter
- XenServer Live Patching
- AMD MxGPU (Tech Preview) *
- Enablement for XenDesktop Tablet Mode (Tech Preview) *

cirtix.com

xenserver.org

License information

why not VMware ?

咳咳 以前不懂事買了 聽聽我的經驗吧

VMware 好棒棒

恩恩 他確實好棒棒 but....

$$$$$

快寫專案拿你的退休金買

標準版 $3w

VMware vSphere 與 vSphere with Operations Management 版本

VMware vSphere 與 vSphere with Operations Management 版本

產品名稱	授權價格	一年技術支援與訂閱		
VMware vSphere Standard	US$ 995.00	基礎	US$ 273.00	立即購買
		生產	US$ 323.00	
VMware vSphere Enterprise Plus	US$ 3,495.00	基礎	US$ 734.00	立即購買
		生產	US$ 874.00	
VMware vSphere with Operations Management Enterprise Plus	US$ 4,395.00	基礎	US$ 923.00	立即購買
		生產	US$ 1,099.00	

3w

感覺不貴啊

6w 搞定！

真是好傻好天真

Server

CPU

RAM

HDD

Server

CPU

RAM

HDD

Storage

APP

OS

VM

APP

OS

VM

Storage

APP

OS

VM

vCenter

啊! 沒有免費喔，那再買就好了

$18w ?? ??

VMware vCenter Server 版本

VMware vCenter Server 版本

產品名稱	授權價格	一年技術支援與訂閱		
VMware vCenter Server Standard	US$ 5,995.00	基礎	US$ 1,259.00	立即購買
		生產	US$ 1,499.00	

你逗我的吧

$5w 超便宜 快買!

Foundation 版本只能管理 3 ESXi

75	VMware	VMware vCenter Server Foundation for vSphere up to 3 hosts ; (含原廠一年 5*12電話支援及保固內軟體免費下載升級)	1-5	86,192
76	VMware	Academic VMware vCenter Server Foundation for vSphere up to 3 hosts ;(含原廠一年 5*12電話支援及保固內軟體免費下載升級) 校園授權	1-5	51,471

現在公開可能な情報

陸萬加陸萬加伍萬
汝花拾柒萬台幣矣

小可愛,別擔心,救星來了

覺得貴嗎? 老闆超貼心都幫你想好了!

essential plus kit $13w

71	VMware	Academic VMware vSphere Essentials Plus Kit for 3 hosts (Max 2 processors per host; (含原廠一年 5*12電話支援及保固內軟體免費下載升級) 校園授權	1-5	138,781
72	Vmware	VMware vSphere Essentials Kit for 3 hosts (Max 2 processors per host) ; 含 1-year Subscription	1-5	29,431
73	VMware	Academic VMware vSphere Essentials Kit for 3 hosts (Max 2 processors per host) ; 含 1-year Subscription	1-5	14,212

13w

3 ESXi + 1 vCenter

敲便宜der~ 買!

vmware

VMware Electronic Distribution

VMware Inc.
Level 57, Taipei 101 Tower,
7 Xinyi Road, Section 5,
110 Taipei, Taiwan R.O.C.
Phone : +886 2 8758 2604
Fax : +886 2 8758 2999

Issued to Taipei Municipal HU Shih Elementary School

Issue Date	VMware Order #	Customer Reference
2015/12/21	# 23316072	P515440866

Product P/N	Description	Quantity
VS6-ESP-KIT-A	Academic VMware vSphere 6 Essentials Plus Kit for 3 hosts (Max 2 processors per host)	2
VS6-ESP-KIT-G-SSS-A	Academic Basic Support/Subscription VMware vSphere 6 Essentials Plus Kit for 1 year	2

License Key(s):

$26w

授權書拿到了

就過著幸福美滿的日子了 ??

Server

CPU

RAM

HDD

Server

CPU

RAM

HDD

Storage

Storage

APP

OS

VM

APP

OS

VM

APP

OS

VM

vCenter:

比較

	Essentials Kit	Essentials Plus Kit
概觀	以集中化管理進行伺服器虛擬化及整合	伺服器虛擬化及整合，外加業務續航力
集中化管理	vCenter Server Essentials	vCenter Server Essentials
授權權益	3 部伺服器，每部最高可支援 2 顆處理器	3 部伺服器，每部最高可支援 2 顆處理器
功能	ESXi	ESXi、vMotion、High Availability、Data Protection、vShield Endpoint、vSphere Replication

vSphere Essentials Kit 適用於小型企業而且最多可結合三部實體伺服器的虛擬化作業，並擁有 vCenter Server Essentials 的集中化管理功能。客戶可從 VMware Store 購買一年期的 vSphere Essentials Kit 和 vSphere Essentials Plus Kit 授權。

產品功能	vSphere Standard	vSphere Enterprise Plus	vSphere with Operations Management Enterprise Plus
vMotion	+Cross-vSwitch	+Cross-vSwitch / Cross-vCenter / Long Distance / Cross-Cloud	+Cross-vSwitch / Cross-vCenter / Long Distance / Cross-Cloud
Storage vMotion	●	●	●
Data Protection	●	●	●
Fault Tolerance	2 個 vCPU	4 個 vCPU	4 個 vCPU
vShield Endpoint	●	●	●
vSphere Replication	●	●	●
vCenter High Availability	● vCenter STD	● vCenter STD	● vCenter STD

13w 還是不夠

VMware 很強大

架構很大，$$$

免費版 !!!

咳咳~ 那我們來看看功能差異

功能 / 版本	vSphere Hypervisor	Essentials	Essentials Plus	Standard	Enterprise	Enterprise Plus
[vCenter Server]	[VMware Go]	vCenter for Essentials (3 nodes)		vCenter Standard		
[vSphere Storage Appliance]	–	–	VSA for Essentials Plus	VSA		
Physcial CPU Entitlement	–	3 Servers (2 Processors Each)		6 Processors (scalable with additional licenses)		
vRAM Entitlement	Limit 32 GB	Unlimited		Unlimited		
vCPU Entitlement (vSMP)		8-way		8-way	32-way	64-way
SUSE Linux Enterprise Server for VMware	–	–	–	Yes	Yes	Yes
[Thin Provisioning]	Yes	Yes	Yes	Yes	Yes	Yes
[Update Manager]	–	Yes	Yes	Yes	Yes	Yes
[vStorage APIs for Data Protection]	–	Yes	Yes	Yes	Yes	Yes
[Data Protection]	–	Yes	Yes	Yes	Yes	Yes
[High Availability]	–	–	Yes	Yes	Yes	Yes
[vMotion]	–	–	Yes	Yes	Yes	Yes
[vShield Zones]	–	–	Yes	Yes	Yes	Yes
[vShield Endpoint]	–	–	Yes	Yes	Yes	Yes
[vSphere Replication]	–	–	Yes	Yes	Yes	Yes
[Storage vMotion]	–	–	–	Yes	Yes	Yes
[Fault Tolerance]	–	–	–	Yes	Yes	Yes
Hot Add	–	–	–	Yes	Yes	Yes
Virtual Serial Port Concentrator	–	–	–	–	Yes	Yes

開源軟體

PVE / XenServer

PVE 很強大

但是難度稍微高了一點點

9/22

Proxmox VE

沒意外 應該還會有入門的研習

PVE 問雙園

感恩廖大 讚嘆廖大

拜託 無腦一點

我只想躺著等退休

XenServer

/ˈzɛn sɝvɚ/

Demo

安裝 / 連線 / 玩耍

下載

https://xenserver.org/overview-xenserver-open-source-virtualization/download.html

DOWNLOAD - XENSERVER

SUPPORTED RELEASES

It is important to note that regardless of which edition of XenServer you choose to download, the main ISO is the **same** and the code is open source.

Having a supported platform is vital for mission-critical applications. For those interested in obtaining product support for XenServer from Citrix, the **Standard** edition is just that. For those interested in accessing the premium features that XenServer offers, the **Enterprise** edition is available, for which there is a 90-day trial. Regardless of which edition of XenServer you choose (i.e., Free, Standard, Enterprise), the source code, binary to download and installation experience are identical.

DOWNLOAD XENSERVER 7.2

XenServer 7.2 was released in May of 2017. It is strongly recommended that all new XenServer installations be performed using XenServer 7.2.

INSTALLATION MEDIA

- XenServer Installation ISO
- XenCenter Management GUI (located under **Main Components** section)

Find Downloads

XenServer

or

Search Downloads

Need additional XenServer licenses? Purchase them online today.

Visit the Citrix Store

Support Resources

XenServer 7.2 Standard Edition

Release Date: May 25, 2017

Jump to Download

Jump to Download
XenServer 7.2.0 Base Installation ISO - Standard Edition
XenCenter 7.2.0 Windows Management Console
XenCenter 7.2.0 Localization Version
vSwitch Controller Virtual Appliance 7.2.0
XenServer 7.2.0 Demo Linux Virtual Appliance
Container Management Supplemental Pack
SDK (Software Development Kit) 7.2.0
DDK (Driver Development Kit) 7.2.0
Binary Packages
XenServer 7.2.0 Source ISO (Xen/Dom0 Kernel)
Sources: vSwitch Controller Virtual Appliance 7.2.0
Sources: Demo Linux Virtual Appliance 7.2.0
Sources: Container Management Supplemental Pack

rm for cost-e
any size or ty
rements, while
r XenCenter

XenServer Installation ISO
(燒光碟安裝)

XenCenter Management GUI
(Windows上的管理程式)

不限定 Server

PC 可！

合格 諮詢中心

i5 / 16G / SATA
dell PC

硬體需求

	最低	建議	最高
CPU	1.2G	2.0G+	288 core
RAM	2G	4G+	5T
HD	46G	70G+	-
NIC	1	-	16

看這規格上限

也別小看他喔 很多 VPS 也是走 xen 架構

CITRIX | XenServer™
Welcome to XenServer.
- To install or upgrade press the <ENTER> key.
[F1-Standard] [F2-Advanced]
boot: _

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

Select Keymap

Please select the keymap you would like to use:

[qwerty] us
[qwerty] uk
[azerty] azerty
[azerty] be-latin1
[azerty] fr
[azerty] fr-latin0
[azerty] fr-latin1
[azerty] fr-latin9

Ok

<Tab>/<Alt-Tab> between elements | <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

Welcome to XenServer Setup

This setup tool can be used to install or upgrade XenServer on your system or restore your server from backup. Installing XenServer will erase all data on the disks selected for use.

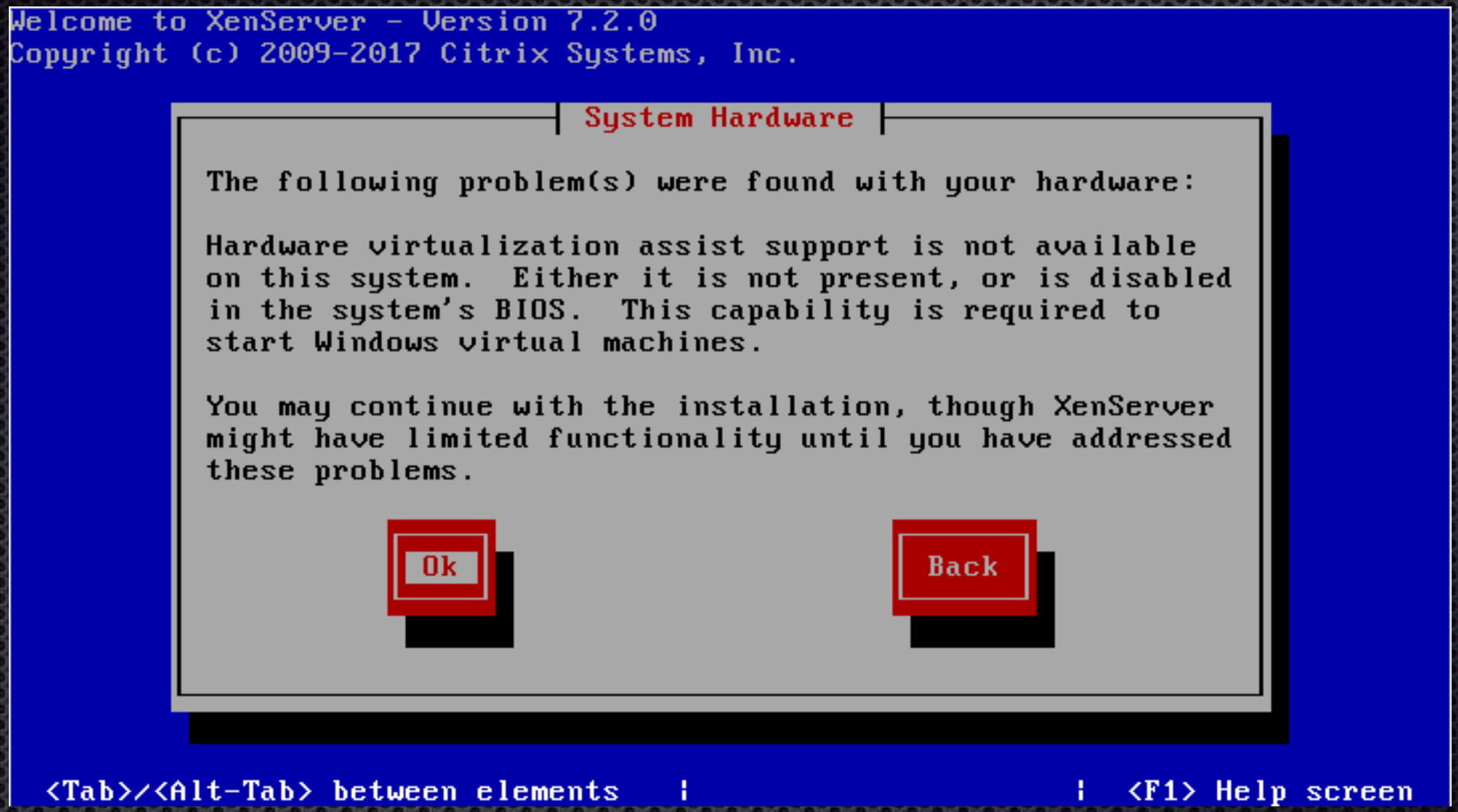
Please make sure you have backed up any data you wish to preserve before proceeding.

To load a device driver press <F9>.
To setup advanced storage classes press <F10>.

Ok Reboot

<Tab>/<Alt-Tab> between elements | <F9> load driver | <F1> Help screen

BIOS 沒開虛擬化功能



Welcome to XenServer - Version 7.2.0

Copyri

End User License Agreement

CITRIX LICENSE AGREEMENT

This is a legal agreement ("AGREEMENT") between the end-user customer ("you"), and the providing Citrix entity (the applicable providing entity is hereinafter referred to as "CITRIX"). Your location of receipt of the Citrix product (hereinafter "PRODUCT") and maintenance (hereinafter "MAINTENANCE") determines the providing entity as identified at https://www.citrix.com/buy/licensing/citrix-providing-entities.html. BY INSTALLING AND/OR USING THE PRODUCT, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO THE TERMS OF THIS

Accept EULA

Back

<Tab>/<Alt-Tab> between elements | <F1> Help screen

Welcome to XenServer - Version 7.2.0

Copyri

Virtual Machine Storage

Which disks would you like to use for Virtual Machine storage?

One storage repository will be created that spans the selected disks. You can choose not to prepare any storage if you wish to create an advanced configuration after installation.

[*] sda - 80 GB [VMware, VMware Virtual S]

[ ] Enable thin provisioning (Optimized storage for XenDesktop)

Ok

Back

<Tab>/<Alt-Tab> between elements | <F5> more info | <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

Select Installation Source

Please select the type of source you would like to use for this installation

Local media
HTTP or FTP
NFS

Ok Back

<Tab>/<Alt-Tab> between elements ¦ ¦ <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

<Tab>/<Alt-Tab> between elements | <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

Set Password

Please specify a password of at least 6 characters for the root account.

(This is the password used when connecting to the XenServer Host from XenCenter.)

Password ********
Confirm ********

Ok Back

<Tab>/<Alt-Tab> between elements ¦ ¦ <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

Networking

Please specify how networking should be configured for the management interface on this host.

( ) Automatic configuration (DHCP)
(*) Static configuration:

IP Address:	192.168.1.200___
Subnet mask:	255.255.255.0___
Gateway:	192.168.1.254__

Ok Back

<Tab>/<Alt-Tab> between elements ; ; <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

Hostname and DNS Configuration

Hostname Configuration

Hostname: xe01

DNS Configuration

DNS Server 1: 8.8.8.8
DNS Server 2:
DNS Server 3:

Ok Back

<Tab>/<Alt-Tab> between elements | <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2

Select Time Zone

Please select the geographical area
that your XenServer Host is in:

Africa
America
Antarctica
Arctic
Asia
Atlantic
Australia
Etc

Ok

Back

<Tab>/<Alt-Tab> between elements : : <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009

Select Time Zone

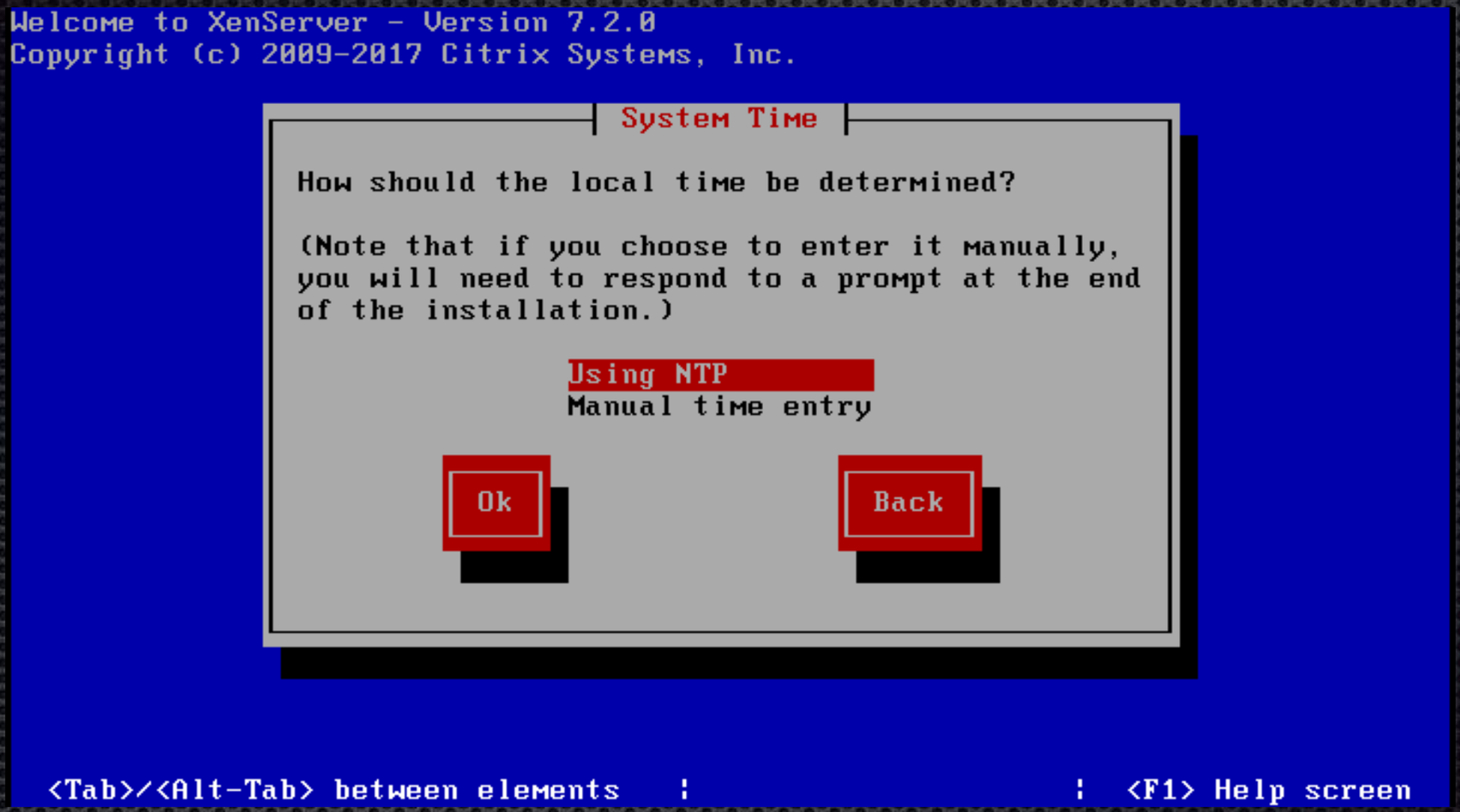
Please select the city or area that the managed host is in (press a letter to jump to that place in the list):

Taipei
Tashkent
Tbilisi
Tehran
Thimphu
Tokyo
Ulaanbaatar
Urumqi

Ok

Back

<Tab>/<Alt-Tab> between elements ; ; <F1> Help screen


Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.
System Time
How should the local time be determined?
(Note that if you choose to enter it manually, you will need to respond to a prompt at the end of the installation.)
Using NTP
Manual time entry
Ok
Back
<Tab>/<Alt-Tab> between elements
<F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

NTP Configuration

Please specify details of the NTP servers you wish to use (e.g. pool.ntp.org)?

NTP Server 1: clock.stdtime.gov.tw
NTP Server 2:
NTP Server 3:

Ok Back

<Tab>/<Alt-Tab> between elements | <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

Confirm Installation

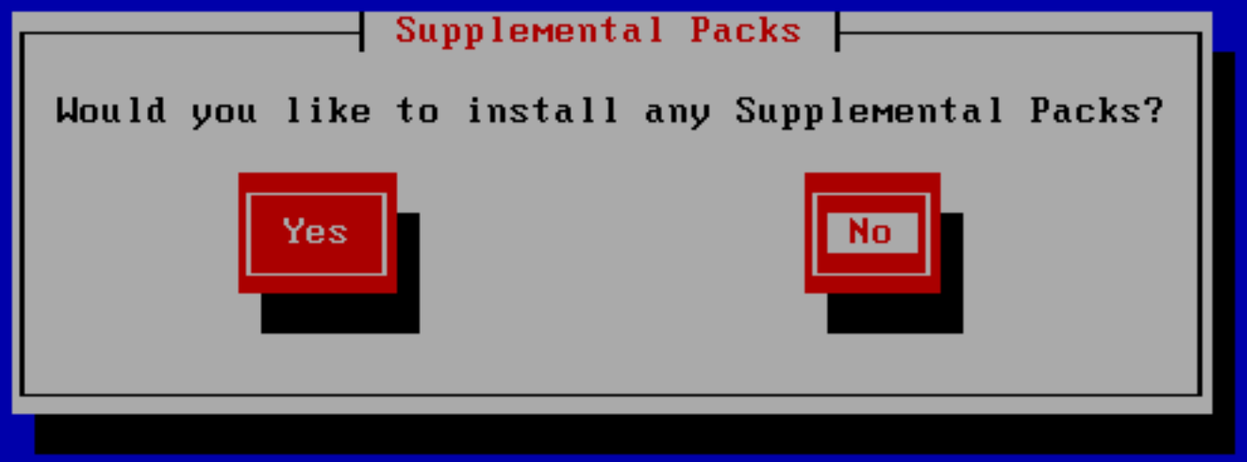
We have collected all the information required to install XenServer.

Please confirm you wish to proceed: all data on disk sda will be destroyed!

[Install XenServer] [Back]

<Tab>/<Alt-Tab> between elements | <F1> Help screen

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.



<Tab>/<Alt-Tab> between elements | <F1> Help screen

可列印版本

驅動程式與軟體

驅動程式與軟體

說明

Knowledge base options

Search HPE Support Center - HPE

常見問題

檢視人數最多的解決方案

建議、公告及附註

手冊

疑難排解

設定和安裝

學習並使用

執行維護

升級與移轉

Related links

SGI 產品文件和軟體下載目前正在進行移轉。移轉期間如有任何 SGI 文件與軟體需求，請前往SGI 入口網站取得。

* RECOMMENDED * 適用於 Citrix XenServer 7.x (x86_64) 的 HPE SNMP 代理程式

下載即表示您同意 Hewlett Packard Enterprise 軟體授權協議的條款與條件。

附註： 某些軟體需要有效的保固、Hewlett Packard Enterprise 現行支援合約，或授權費用。

類型：	軟體 - 管理
版本：	10.4(22 八月 2016)
作業系統：	Citrix XenServer 7.x (x86-64)
檔案名稱：	hp-agents-10.40-3.XS7.0.iso (20 MB)

下載

說明 | 增強功能 | 安裝說明 | 發行通告 | 重要的 | 修訂歷程

適用於 Citrix XenServer 的 HPE SNMP 代理程式可在 Citrix XenServer 7.x (x86_64) 上安裝 HP Health (HP 健全狀況)、HP SNMP 代理程式與 HP System Management Home Page (HP 系統管理首頁 (SMH))

Welcome to XenServer - Version 7.2.0
Copyright (c) 2009-2017 Citrix Systems, Inc.

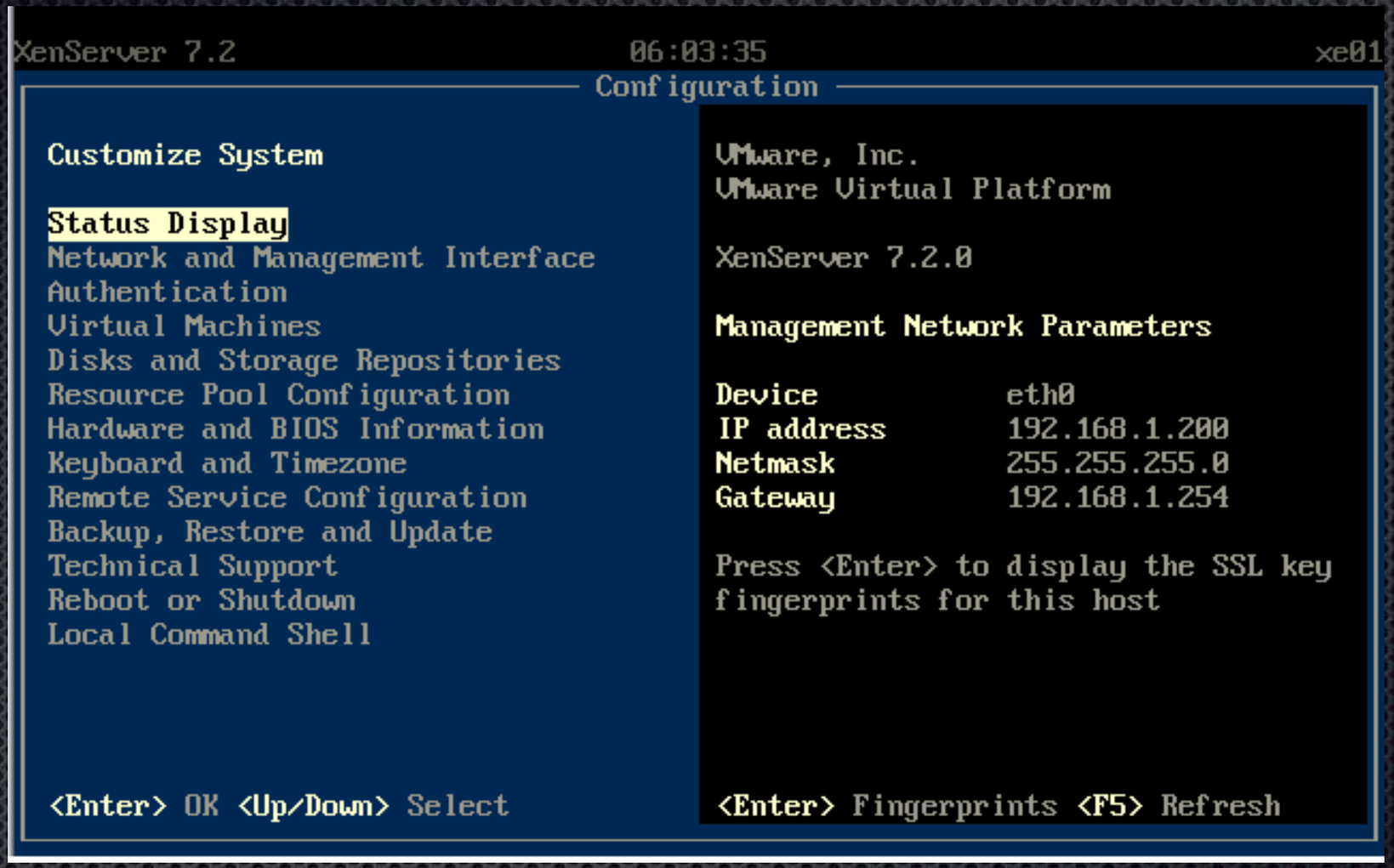
Installation Complete

The XenServer installation has completed.

Please remove any local media from the drive, and press Enter to reboot.

Ok

<Tab>/<Alt-Tab> between elements | <F1> Help screen


XenServer 7.2
06:03:35
xe01
Configuration
Customize System
Status Display
Network and Management Interface
Authentication
Virtual Machines
Disks and Storage Repositories
Resource Pool Configuration
Hardware and BIOS Information
Keyboard and Timezone
Remote Service Configuration
Backup, Restore and Update
Technical Support
Reboot or Shutdown
Local Command Shell
<Enter> OK <Up/Down> Select
VMware, Inc.
VMware Virtual Platform
XenServer 7.2.0
Management Network Parameters
Device eth0
IP address 192.168.1.200
Netmask 255.255.255.0
Gateway 192.168.1.254
Press <Enter> to display the SSL key fingerprints for this host
<Enter> Fingerprints <F5> Refresh

安裝完成

XenCenter

Windows only

XenCenter

File View Pool Server VM Storage Templates Tools Help

Back Forward | Add New Server | New Pool New Storage New VM | Shut Down Reboot Suspend

Search...

XenCenter

XenCenter

Infrastructure

Objects

Organization Views

Saved Searches

Notifications

XenCenter

Home Search

Citrix **Xen**Server

Industry leading open source platform for cloud server and desktop virtualization

Learn about using XenCenter

Network with other XenServer users

Visit the Citrix Knowledge Center

Add a Server

Purchase Support

Try Desktop Virtualization

XenCenter

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Search...

XenCenter

XenCenter

Home Search

Citrix **Xen**Server

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Add New Server ? ×

Enter the host name or IP address of the server you want to add and your user login credentials for that server.

Server: 192.168.1.200

User login credentials

Username: root

Password:

Add Cancel

Infrastructure

Health Check Overview

Health Check will automatically upload a server status report to Citrix Insight Services, based on a predefined schedule configured on your XenServer pools.

Privacy Statement

Pool	Status
xe01	Health Check not enabled

xe01

Not enrolled into Health Check

Enroll now

Show this dialog when connecting to servers that are not enrolled into Health Check

Close

XenCenter

File View Pool Server VM Storage Templates Tools Help

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Search...

xe01 Logged in as: Local root account

- XenCenter
  - xe01

General Memory Storage Networking NICs GPU Console Performance Users Search

General Properties

ties Expand all Collapse all

ral

	xe01
tion:	Default install of XenServer
	<None>
	<None>
d:	Yes
QN:	iqn.2017-09.com.example:8ddb5dbf
Log destination:	Local
Server uptime:	-11 minutes
Toolstack uptime:	-13 minutes
UUID:	183b11e2-05a7-43cd-8339-2e6421cdcc84

Management Interfaces

Memory

Version Details

License Details

New VM...
New SR...
Import...
Add to Pool
Enter Maintenance Mode...
Reboot
Shut Down
Restart Toolstack
Disconnect
Reconnect As...
Properties

Storage

儲存伺服器

連線方法

iSCSI

NFS

SMB(7.x)

Synology / QNAP

s10G 網卡 / RAID 6 問題

2Xw storage !!!

有買的舉手

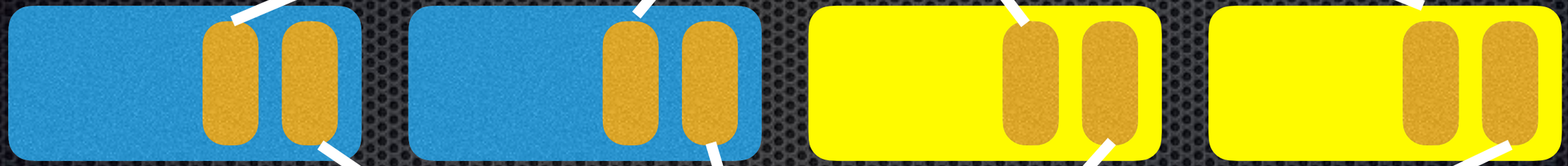
開源 NAS OS

FreeNAS / NAS4Free / OpenMediaVault

Storage Network

我們還是分手吧

LAN SW



Storage SW

LAN SW

Storage SW

防呆不防笨

Live Demo

create pool

create SR

create VM

import

VOF / VOA

vm migrate

storage migration

snapshot

Q&A

看一下提問

https://admin2.sli.do/event/h65ppsjp/questions

STOP!

Backup

NAUbackup

WebUI

xoa

P2V

clonezilla

Thanks.

we r fosstp