

# Wyse Datacenter Appliance XC for Citrix XenDesktop

Deployment Guide

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# Revisions

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### 1 Overview

### 1.1 Purpose of this Document

The document describes the following:

- Configuring Storage containers on Nutanix Prism
- Installating vCenter Appliance & ESXi
- Tasks to be performed to Citrix XenDesktop 7.5
- Tasks to be completed to install the Citrix Server VDA Agent on a master image
- Installing Server 2012 RDS
- Creating a Catalog and Delivery group for XenDesktop
- Installing a Citrix Storefront Server
- Preparing a master image for use in a VDI environment

#### 1.2 Scope

The objectives of this document are to:

- Provide the specific configuration required for XC720xd XenDesktop 7.5 VDI Solution by leveraging RDSH and Machine Creation Services
- Provide the Application recommendations
- Provide guidance for application publishing and adding RDSH Session hosts
- Provide configuration and optimization guidance for XD7.5
- Provide configuration and optimization guidance for a Windows 8.1 master image
- Create Desktop pools and provide a Delivery platform for sessions

## Configuring Nutanix Storage Pool and Containers

To use the cluster storage, you must configure a storage pool and containers within the pool. Create only one pool consisting of all the disks in the cluster. Within the storage pool, we recommend creating multiple containers for a logical distinction between the compute and management storage layers.

1. To configure the storage pool and containers, log in to the Nutanix Web Console. From the **Home** drop-down menu, select **Storage**.

NTNX-ESXI-C1	Home	~   😻
Hypervisor St	Home Health	
F	VM Storage Hardware	
Storage Sumr	Data Protectio Analysis Alerts	n 

Figure 1 Nutanix Web Console

2

2. Click the **Create Container** link, and then click the plus symbol(+) under the **STORAGE POOL** section to create a pool.

Create Container	×
Enter a name for your container and select a storage pool for it. You can mount the container as an NFS datastore for all hosts, or select individual hosts.	
STORAGE POOL	
MAX CAPACITY	

Figure 2 Create Container Wizard

Create Container > Create	e Storage Pool	×
A storage pool is a group of phys recommends creating a single st cluster.	sical disks from one or more tiers. Nutanix orage pool to manage all physical disks within the	1
NAME		-
SP1		
511		
CAPACITY		

Figure 3 Creating Storage Pool

- 3. Provide a name for the pool (for example, SP1) and use all unallocated disk space. Click **Save**. On the **Create Container** page, to view additional settings, click the **Advanced Settings** button. The following are the recommended settings:
  - Replication Factor: 2
  - Reserved Capacity: 4096 GB (only for the "Compute" container that contains the persistent virtual desktops)
  - Compression: Disabled
  - Delay: 0 minutes
  - Perf Tier Deduplication: On
  - Capacity Tier Deduplication: On (Post-Process)
- 4. Type a name for the management container such as "ds\_mgmt", and then click **Save**. Click **+ Container** to add another container for the compute/RDSH layer. Use the same advanced settings, provide a name (for example, ds\_compute or ds\_rdsh), and then click **Save**. If you are using desktops and RDSH on the same cluster, create an additional container for logical separation.





#### Hyper-V Hypervisor and SMB Shares

SMB shares are used to store the virtual machine disks and settings files. The cluster name is the "host" portion of the SMB share name. If not created during the Nutanix cluster setup, add a DNS entry for this name and point it to the cluster IP address. The container names that you created earlier are used as the share names. The resulting share name will be \\{cluster\_name}\\{container\_name}. For example, \\cluster\ds\_mgmt.

By default, only the cluster hosts have access to the SMB shares. To change this, you must modify the Whitelist on the cluster. At a minimum, the IP address of the System Center VMM host must be added. If you want all management hosts to be able to access, you can specify the network segment as instaed of single IP address.

#### **NOTE**: The shares must be used only for storing VDI-related components.

To modify the Whitelist, go to the Nutanix Web Console, click the configuration wheel symbol in the upper-right corner, and then click **Filesystem Whitelists**.

			Q 🗘 -
OPS	Health		HTTP Proxies Licensing Filesystem Whitelists
6:00pm			Management Servers Prism Central Registration Pulse
Bps	VMs		Name Servers NTP Servers Remote Support
	Hosts		SMTP Server SNMP
6:00pm	Data Re	Alert Policies Cluster Lockdown	Welcome Banner

Figure 5 Filesystem Whitelists

5. Type the appropriate host IP address or network segment, and then click Add.

# 3 Installing vCenter Server Appliance

The deployment of desktop pools within VMware View requires that an install of the following VMware components is completed successfully: VMware vCenter Server Appliance, VMware View and VMware View Composer as well as an associated SQL server VM. The VMware vCenter VM will be created by using the VMware vCenter Server Appliance. The VMware vCenter Server Appliance is a preconfigured Linux-based virtual machine that is optimized for running vCenter Server and associated services. Go to the VMware website for information about downloading version 5.5.0 and licensing.

- 1. Connect to one of the Nutanix configured ESXi hosts using the VMware vSphere Client.
- 2. In VMware vSphere Client, select File, and then select Deploy OVF Template.

🗗 1	.0.50.192.43 - vSphere Clier	nt	
File	Edit View Inventory Adm	ninistra	ation Plug-ins Help
	New	•	entory 👂 🛅 Inventory
	Deploy OVF Template		
-	Export	+	
	Report	•	kbcmfEsxi VMware ESXi, 5.5.0, 1230948
	Browse VA Marketplace		Getting Started Summary Virtual Machines Resource Allocation Performance Configuration Local Users & C
	Print Maps	+	
	Exit		What is a Host?
			A host is a computer that uses virtualization software, such as ESX or ESXi, to run virtual machines. Hosts provide the CPU and memory resources that virtual machines use and





3. In the OVF deployment wizard, click **Browse** and select the vCenter Appliance OVF template file, and then click **Next**.

Source Select the source location.	
Source OVF Template Details Name and Location Storage Disk Format Ready to Complete	Deploy from a file or URL Isoftware\VmWare\VSphere-ESXI - 5.5\VMware-vCenter-Siv Introve. Inter a URL to download and install the OVF package from the Internet, or specify a location accessible from your computer, such as a local hard drive, a network share, or a CD/DVD drive.
Help	< Back Next > Cance

Figure 7 Select OVF Template file.



4. Confirm the template details, and then click **Next**.

Deploy OVF Template OVF Template Details Verify OVF template details	5.	
OVF Template Details Verify OVF template details OVF Template Details Name and Location Storage Disk Format Ready to Complete	Product: Version: Vendor: Publisher: Download size: Size on disk: Description:	VMware vCenter Server Appliance 5.5.0.20000 VMware Inc. VMware, Inc. 1.8 GB 3.5 GB (thin provisioned) 125.0 GB (thick provisioned) VMware vCenter Server Appliance Version 5.5 of VC running on SLES 11
Нер		< Back Next > Cancel

Figure 8 OVF Template Details



5. Assign a name for the vCenter Server Appliance VM, and then click **Next**.

Deploy OVF Template Name and Location Specify a name and locat	ion for the deployed template
Source OVF Template Details Name and Location Storage Disk Format Ready to Complete	Name:           VMware vCenter Server Appliance   The name can contain up to 80 characters and it must be unique within the inventory folder.
Help	< Back Next > Cancel

Figure 9 vCenter Appliance Name



6. Select a storage location, and then click **Next**.

Deploy OVF Template							
Where do you want to st	tore the virtual machine files	?					
Source	Select a destination stor	age for the virtual	machine files:				
<u>OVF Template Details</u> Name and Location	Name	Drive Type	Capacity	Provisioned	Free	Туре	Thin Pro
orage	🎯 datastore1 (1)	Non-SSD	128.50 GB	972.00 MB	127.55 GB	VMFS5	Support
isk Format eady to Complete	datastore2 (28)	Non-SSD	404.25 GB	643.07 GB	153.34 GB	VMFS5	Support
	Disable Storage DR Select a datastore:	S for this virtual n	nachine				
	Name	Drive Type	Capacity Pro	ovisioned	Free 1	Гуре	Thin Prov
Help				< Back	Next	>	Cancel

Figure 10 Select Storage



7. Select the required disk format, and then click Next.

🛃 Deploy OVF Template				
<b>Disk Format</b> In which format do you war	nt to store the virtual disks?			
Source OVF Template Details Name and Location Storage Disk Format Ready to Complete	Datastore: Available space (GB): C Thick Provision Lazy Zeroe Thick Provision Eager Zero Thin Provision	datastore 1 (1) 127.6 d ed		
Help			< Back Next >	Cancel

Figure 11 Disk Format



8. Review the settings and click **Finish** to deploy.

Deploy OVF Template		
Ready to Complete Are these the options ye	ou want to use?	
Source OVF Template Details Name and Location Storage Disk Format Ready to Complete	When you dick Finish, the deploy Deployment settings: OVF file: Download size: Size on disk: Name: Host/Cluster: Datastore: Disk provisioning: Network Mapping: Power on after deployment	ment task will be started. Z:\Software\VmWare\VSphere-ESXi-5.5\VMware-vCente 1.8 GB 3.5 GB VMware vCenter Server Appliance kbcmfEsxi. datastore1 (1) Thin Provision "Network 1" to "VM Network"
Help		< Back Finish Cancel

Figure 12 Finish OVF Deployment Wizard

9. The vCenter Appliance deployment will run.

🛃 6% Deploying VMware vCenter Server Appliance	
Deploying VMware vCenter Server Appliance	
Deploying disk 1 of 2	
9 minutes remaining	
Close this dialog when completed	Cancel

Figure 13 vCenter Appliance Deployment Progress

10. After deploying the vCenter Appliance, VM will be displayed listed under the ESXi host on the **vSphere Client** page.



Figure 14 vCenter Appliance

11. Turn on the vCenter Appliance VM, and then click the **Console** tab to view the on-screen Quick Start Guide.

Figure 15 vCenter Appliance VM turned on

12. Open a web browser, type the URL indicated in the Quick Start Guide in the address bar, type the user name 'root' and password 'vmware', and then click **Login**.

	_ 0 X
Mware vCenter Server App ×	
← → C f  ktps://10.50.184.2:5480/#core.Login	☆ 🔳
🔛 Apps 📑 Foglight - Environment 🗞 Bensen View Administr 💋 Bensen vSphere Web 🔃 Nutanix Web Console	
VMware vCenter Server Appliance	
Login	
User name: root Password: reed Login	
Copyright © 1998-2014 VMware, Inc. All rights reserved. Powered by VMware S	tudio

Figure 16 vCenter Appliance login screen



#### 13. Accept the EULA, and then click Next.



Figure 17 vCenter EULA



14. Click Next to skip the Customer Experience Improvement Program page.



Figure 18 Customer Experience Program

15. If you are using a static IP address, you must close the wizard and set a hostname. In this guide, a static IP Address is used. Click **Cancel** to close the wizard.



Figure 19 Cancel Wizard

16. Click the Network tab, click Address, from the IPv4 Address Type drop-down menu, select Static.



17. Set the hostname and IPv4 address settings. Click Save Settings.

Note: The fully qualified domain name format must be used for the host name.

💑 VMware	vCente	r Server /	Applianc	е		
vCenter Server	Network	System	Update	Upgrade	Admin	Help   Logout user root
Status Add	ress	Proxy				
Network Address	Settings.	Please rest	art the app	liance after c	hanging th	e network configuration.
Nameserver Source	F	rom Configurat	ion			Actions
Hostname		/Center-App.test	com			Save Settings
IPv4 Default Gateway	Ē	10.50.181.1				Cancel Changes
IPv6 Default Gateway	[					
Preferred DNS Server	Ē	10.50.121.61				
Alternate DNS Server	•	10.50.121.11				
▼ eth0 info						
IPv4 Address Type	e	Static	•			
IPv4 Address		10.50.181.4	ļ	]		
Netmask		255.255.24	8.0	]		
IPv6 Address Type	e	Auto	•			

Figure 21 Set IPv4 Settings

18. When the network settings are saved, change the URL on the web browser to the static IP address, log in again using the login user name 'root' and password 'vmware', and then click the **Network** tab to verify your IPv4 settings.

∞o <sup>©</sup> ∨M	ware	vCenter	Server A	ppliance	;	
vCenter Serv	ver	Network	System	Update	Upgrade	Admin
Status	Addr	ess Pro	оху			
Network St	tatus					
IPv4 Default G IPv6 Default G Preferred DNS Alternate DNS	ateway: 10 ateway: Server: 10 Server: 10	).50.184.1 ).50.120.68 ).50.120.12				
Interface Name	IPv4 Info		IPv6 Info			Managed by VAMI
eth0	Type: Address: Netmask:	Static 10.50.184.4 255.255.248.0	Type: Address: Prefix: Auto Addres:	Unassigned s:	I	Yes



19. Click the **vCenter Server** tab and under the **Utilities** section, click the **Setup wizard Launch** button to restart the Setup wizard.

vCenter Server	Network	System	Update	e Upgrad	le	Admin		Help   Loqout user r
Summary D	atabase	SSO	Time	Authentication	Ser	vices	Storage	
ummary								
vCenter						Stora	ge Usage	
Server:	Stop	oped			Start	Syste	m:	38%
Inventory Service:	Stop	oped			Start	Datab	ase:	1%
Database:	not	configured				Logs:		1%
SSO:	not	configured				Corec	dumps:	1%
Configure Database	e   Configure SS	80				Utiliti	es	
System						Supp	ort bundle	Download
Time synchronizatio	on: Disa	abled				Confi	iguration file	Download
Active Directory:	Disa	abled				0.1		Laurah
Configure Time   C	Configure Authen	tication				Setu	p wizard	Launch
Services						Sysp	rep files	Upload
vSphere Web Clien	t: Run	ning			Stop			
Log Browser:	Stop	oped			Start			
ESXi Dump Collect	or: Run	ning		_	Stop			
Syslog Collector:	Run	ning			Stop			
vSphere Auto Deplo	oy: Stop	oped			Start			
Configure Services								

Figure 23 Setup wizard relaunch



20. The Customer Experience Improvement Program window, click Next.



Figure 24 Customer Experience Improvement Program



21. Click Set custom configuration, and then click Next.



Figure 25 Set Custom Configuration



22. Accept the default database settings, and then click Next.

vCenter Se	Aware vCenter S	erver Appliance			
vCenter Ser Summary Summary VCenter Server. Inventory Se Database SSO: Configure D System Time synch Active Direc Configure T Services vSphere We Log Browse ESXI Dump Syslog Colle vSphere Au	Rebook       Database     SSO       Database     SSO       Stopped       ervice:     Running       VCenter Server Setup       Customer experience improvement program       Configure Options       Database settings       SSO settings       Active Directory settings       Time synchronization       Review configuration       Configure	Database type: Server: Port: Instance name: Login: Password:	Upgrsdo Ad entication Services Start S Stop D embedded	Storage Storag	Help I Loquit User roo 39% 1% % Download Launch Upload
			Can	cel < Prev	Next >

Figure 26 Database Settings

23. Select the embedded SSO deployment type and type a password for the **administrator@vsphere.local** user, and then click **Next**.

vCenter Ser	ver Network	System Update Up	grade	Admin	
Summary	Database SSC	Time Authenticat			
Immary					
Center				Storage Usage	
			Start		
	rvice: Running			Database:	
Database:	vCenter Server Setup				36
	Customer experience	SSO deployment type:	embed	v her	36
	Configure Options	ooo deployment type.	embed		
System	Database settings	Embedded SSO requires choose the user administrator @userbor	sing a passv	vord for	Download
	SSO settings	New administrator password	e.iucai.		
ctive Direc	Active Directory settings	Retyne the new password:			Download
	Time synchronization	Neighe the new password.			Launch
anvicae	Review configuration	Account with right to register vC	Center with t	he SSO server:	Upload
Sphere We	Configure	Username:			
	Comgure	Password:			
		Account that will be assigned a	s vCenter a	dministrator:	
		Name:			
			Is a	group	
		Lookup service location:			
		URL:			
		Certificate status			

Figure 27 Single Sign-on

24. To configure Active Directory authentication, select the **Active Directory Enabled** check box, type the domain name to authenticate to, along with an administrative login user name and password for that domain. Click **Next**.

Summary Data		Time Authentic		vices Storage	
vCenter Server Inventory Service: Database vCenter	Stopped Running Server Setup			Storage Usage System: Database	
SSO Configure D Configure D Configure D Configure D Configure D Configure T Services VSphere We Log Browse ESXI Dump Syslog Colle VSphere Aut Configure S	er experience ment program re Options e settings tings birectory settings configuration e	Active Directory Enabled Domain: Administrator user: Administrator password:	TEST.C test\adm	OM iinistrator	% Download Download Launch Upload

Figure 28 Active Directory

25. Review the configuration settings, and then click Start.

er Serv	ver Network S			Admin	
imary	vCenter Server Setup				
mary nter ver: ntory Se abase: ):	Accept EULA Customer experience improvement program Configure Options Database settings SSO settings Active Directory settings	Instance: Login: DB Reset: SSO: Deployment type: Administrator account: Is a group: Lookup service:		no embedded	
figure D tem e synchi ve Direc figure T	Time synchronization Review configuration Configure	Lookup service thumbpr Authentication: AD Enabled: AD Domain: Time synchronization:	int:	no	Download Download Launch Upload
vices here We Browse (i Dump		NTP servers: NTP options: Customer experience Enabled:	improvement prog	ram: no	
				Cancel < Prev	Start

Figure 29 Complete Startup Wizard



26. When the setup wizard completes its configuration processes, click Close.

Summary	vCenter Server Setup		
Summary vCenter Server Inventory Se Database SSO: Configure D System Time synchi Active Direct Configure T Services vSphere We Log Browse ESXI Dump	Accept EULA Customer experience improvement program Configure Options Database settings SSO settings Active Directory settings Time synchronization Review configuration Configure	<ul> <li>Configuring time synchronization</li> <li>Configuring database</li> <li>Configuring SSO</li> <li>Starting vCenter Server</li> <li>Configuring customer experience improvement program</li> </ul>	Download Download Launch Uptoad
		Cancel < Prev C	ose

Figure 30 vCenter Setup Complete

27. To add the Nutanix configured ESXi hosts to be managed by vCenter, open the vSphere Client to attach to the vCenter Server Appliance, and then click **Create a datacenter** to add a datacenter and provide a name.



28. Right-click the datacenter and select New Cluster.

🛃 vCenter-Ap	p - vSphere Client			
File Edit Viev	Inventory Administration	Plug-ins Help		
	🛕 Home 🕨 🚮 Invento	ory 👂 🛐 Hosts a	and Clusters	
et at 1	<b>→</b> (2)			
Center	-App TE	ST-DataCenter		
···· 🗾	New Folder	Ctrl+F	iary Virtual Machines Hosts IP Pools Performan	
dit i	New Cluster	Ctrl+L		
ę	New Datastore Cluster		Add a host 3 Add a virtual machine	
<b>[</b> ]	Add Host	Ctrl+H		
副	New Virtual Machine	Ctrl+N		
	New vSphere Distributed Sv	witch Ctrl+K	er that uses virtualization software, such as	
	Add Datastore		h virtual machines. Adding a host to the	
	Rescan for Datastores		under vCenter Server management.	
23			Iter running ESX or ESXi software. If you	
Migrate Virtual Machine Networking ESXi software, visit the VMware V			ESXi software, visit the VMware Web site	
	Add Permission	Ctrl+P	put this product.	
	Alarm •		e administrative account (typically	
	Open in New Window Ctrl+Alt+N			
	Remove		or).	
	Rename			
		To continue v	Center Server setup, click Add a host.	
		📑 Add a ho	ost	

Figure 32 New Cluster

29. Provide a name to the new cluster. vSphere HA or DRS may be enabled at this point, if required, and then click **Next**.

New Cluster Wizard Cluster Features What features do you wa	nt to enable for this duster?
Cluster Features VMware EVC VM Swapfile Location Ready to Complete	Name         Test-Cluster         Cluster Features         Select the features you would like to use with this cluster.         Turn On vSphere HA         vSphere HA detects failures and provides rapid recovery for the virtual machines running within a cluster. Core functionality includes host and virtual machine monitoring to minimize downtime when heartbeats cannot be detected.         vSphere HA must be turned on to use Fault Tolerance.         Turn On vSphere DRS         vSphere DRS enables vCenter Server to manage hosts as an aggregate pool of resources. Cluster resources can be divided into smaller resource pools for users, groups, and virtual machines.         vSphere DRS also enables vCenter Server to manage the assignment of virtual machines to balance load and enforce resource allocation policies.         vSphere DRS and VMware EVC should be enabled in the cluster in order to permit placing and migrating VMs with Fault Tolerance turned on, during load balancing.
Help	< Back Next > Cancel

Figure 33 New Cluster Wizard

30. Configure Enhanced vMotion, if required, and then click Next.

🕗 New Cluster Wizard				
VMware EVC Do you want to enable Enhanced v	Motion Compatibility for	this duster?		
Cluster Features VHware EVC VM Swapfile Location Ready to Complete	Enhanced vMotion Co compatibility. Once er the duster may be ad	mpatibility (EVC) configures a clust nabled, EVC will also ensure that or Ided to the cluster.	ter and its hosts to maxim nly hosts that are compat	ize vMotion ible with those in
	Disable EVC	C Enable EVC for AMD Hosts	C Enable EVC for	r Intel® Hosts
	VMware EVC Mode:	Disabled		<u></u>
	Description			
Help	<u></u>	<	Back Next >	Cancel

Figure 34 Enhanced vMotion

31. Set the VM swapfile policy, if required, and then click **Next**.

🛃 New Cluster Wizard	
Virtual Machine Swapfile Location Which swapfile location policy sho	n Julid virtual machines use while in this duster?
Cluster Features <u>VMware EVC</u> VM Swapfile Location Ready to Complete	Swapfie Policy for Virtual Machines
	Store the swapfile in the datastore specified by the host
	If not possible, store the swapfile in the same directory as the virtual machine.
	A host specified datastore may degrade vMotion performance for the affected virtual machines.
Help	< Back Next > Cancel

Figure 35 Swapfile Policy

32. Review and click **Finish** to complete the cluster setup.

🛃 New Cluster Wizard					
Ready to Complete					
Review the selected options for this	duster and dick Finish.				
Cluster Features	The cluster will be created with the	following options:			
VMware EVC	Cluster Name:	Test-Cluster			
Ready to Complete	VMware EVC Mode:	Disabled			
	Virtual Machine Swanfile Location:	Same directory as the virtual machine			
		Sume directory as the virtual machine			
Help		< Back Finish	Cancel		

Figure 36 Complete Cluster Setup



33. Click the newly created cluster, click **Add a host**, type the ESXi host FQDN or IP address and the ESXi host user name and password in the wizard, and then click **Next**.

🐉 vCenter-App - vSphere Clien			
File Edit View Inventory Admi	nistration Plug-ins Help		
🖸 🔝 🏠 Home 🕨 🚮	Inventory 🕨 🛐 Hosts and Clusters		Search Inventory
<b>.</b> 4 4 85			
Center-App TEST-DataCenter	Test-Cluster Getting Starteo Summary Virtual Mac What is a Cluster? A cluster is a group of hosts. W cluster, the host's resources be resources. The cluster manage within it	hine Hostis Resource Allocation P Add Host Wizard Specify Connection Settings Type in the information used to con	erformance Tasks & Events Alarms Permissions Maps Profile Compliance Storac close tab 📧
	Clusters enable the vSphere Hi vSphere Distributed Resource	Connection Settings Host Summary Ready to Complete	Connection — Enter the name or IP address of the host to add to vCenter.
	Basic Tasks		Host:       10.50.182.13         Authorization         Enter the administrative account information for the host. vSphere Client will use this information to connect to the host and establish a permanent account for its operations.         Username:       root         Password:       *********
		Help	< Back Next > Cancel

Figure 37 Add A Host

34. Review the host summary, and then click **Next**.

Connection Settings	You have chose	n to add the following host to vCenter:	
Assign License Lockdown Mode Ready to Complete	Name: Vendor: Model: Version: Virtual Machin	10.50.192.43 Deil Inc. PowerEdge 2950 VMware ESXi 5.5.0 build-1230948 es:	
	置Test VMwar 耐vDGAHasWi 耐vDGAHasWi 耐VMware vCe	e vCenter n7 n8 enter Server Appliance	

Figure 38 Host Summary

35. Assign a license key, if required, and then click **Next**.

Add Host Wizard		
Assign License Assign an existing or a new license key t	o this host.	
Connection Settings Host Summary	• Assign an existing license key to this host	
Assign License Lockdown Mode Ready to Complete	Product Available Evaluation Mode O (No LicenseKey)	
	TMware vSphere 5 Desktop Host 300 VMs	
	Assign a new license key to this host     Enter Key,	
	Product: VMware vSphere 5 Desktop Host Capacity: 300 VMs Available: 300 VMs Expires: Never Label:	
Help	< Back Next >	Cancel //

Figure 39 License Key

36. Set the Lockdown mode, if required, and then click Next.

Add Host Wizard	
Configure Lockdown Mode Specify whether lockdown mode	is to be enabled for this host.
Connection Settings Host Summary Assign License Lockdown Mode Ready to Complete	Lockdown Mode When enabled, lockdown mode prevents remote users from logging directly into this host. The host will only be accessible through local console or an authorized centralized management application. If you are unsure what to do, leave this box unchecked. You can configure lockdown mode later by navigating to the host's Configuration tab and editing its Security Profile. Enable Lockdown Mode
Help	< Back Next > Cancel

Figure 40 Lockdown Mode

37. Click **Finish** to add the ESXi host to the cluster. Repeat the process of adding the host for all Nutanix configured ESXi hosts.

🛃 Add Host Wizard			
Ready to Complete Review the options you have selected an	d click Finish to add	the host.	
Connection Settings Host Summary Assign License Lockdown Mode Ready to Complete	Review this summ Host: Version: Networks: Datastores: Lockdown Mode:	ary and dick Finish. 10.50, 192.43 VMware ESXi 5.5.0 build-1230948 VM Network datastore1 (1) datastore2 (28) Disabled	
Help		< Back	Finish Cancel

Figure 41 Finish Add Host Wizard



### 3.1 Adding Hosts to vCenter

1. To add the Nutanix configured ESXi hosts to be managed by vCenter, open the vSphere Client to attach to the vCenter Server Appliance, and then click **Create a datacenter** to add a datacenter and provide name.



Figure 42 New Datacenter

2. Right-click the datacenter and select New Cluster.



Figure 43 New Cluster
3. Provide a name to the new cluster. vSphere HA or DRS may be enabled at this point, if required, and then click **Next**. We recommend to turn these offafter the pools have been deployed, because this feature set consumes a lot of CPU cycles.

🛃 New Cluster Wizard	
Cluster Features What features do you wan	t to enable for this duster?
Cluster Features Whware EVC VM Swapfile Location Ready to Complete	Name         Test-Cluster         Cluster Features         Select the features you would like to use with this duster.         Turn On VSphere HA         vSphere HA detects failures and provides rapid recovery for the virtual machines running within a duster. Core functionality includes host and virtual machine monitoring to minimize downtime when heartbeats cannot be detected.         vSphere HA must be turned on to use Fault Tolerance.         Turn On vSphere DRS         vSphere DRS enables vCenter Server to manage hosts as an aggregate pool of resources. Cluster resources can be divided into smaller resource pools for users, groups, and virtual machines.         vSphere DRS enables vCenter Server to manage the assignment of virtual machines to hosts automatically, suggesting placement when virtual machines are powered on, and migrating running virtual machines to balance load and enforce resource allocation policies.
	vSphere DRS and VMware EVC should be enabled in the cluster in order to permit placing and migrating VMs with Fault Tolerance turned on, during load balancing.
Help	< Back. Next > Cancel

Figure 44 New Cluster Wizard



4. Configure Enhanced vMotion, if required, and then click Next.

🚱 New Cluster Wizard			_ 🗆 ×	
VMware EVC Do you want to enable Enhanced	vMotion Compatibility for	this duster?		
Cluster Features VHware EVC VM Swapfile Location Ready to Complete	Enhanced vMotion Compatibility (EVC) configures a duster and its hosts to maximize vMotion compatibility. Once enabled, EVC will also ensure that only hosts that are compatible with those in the duster may be added to the duster.			
	Disable EVC	C Enable EVC for AMD Hosts	C Enable EVC for Intel® Hosts	
	VMware EVC Mode:	Disabled	<b>Y</b>	
	Description			
Help		< Bad	k Next > Cancel	

Figure 45 Enhanced vMotion



5. Set the VM swapfile policy, if required, and then click **Next**.

🚱 New Cluster Wizard	
Virtual Machine Swapfile Location Which swapfile location policy shoul	Id virtual machines use while in this duster?
Cluster Features <u>VMware EVC</u> <b>VM Swapfile Location</b> Ready to Complete	Swapfile Policy for Virtual Machines Store the swapfile in the same directory as the virtual machine (recommended) Store the swapfile in the datastore specified by the host If not possible, store the swapfile in the same directory as the virtual machine. A host specified datastore may degrade vMotion performance for the affected virtual machines.
Help	< Back Next > Cancel

Figure 46 Swapfile Policy



6. Review and click **Finish** to complete the cluster setup.

🛃 New Cluster Wizard					
Ready to Complete					
Review the selected options for this	cluster and click Finish.				
Cluster Features	The cluster will be created with the following options:				
VMware EVC	Cluster Name:	Test-Cluster			
Ready to Complete	VMware EVC Mode:	Disabled			
	Vistori Marking Councils Landing	Come disastery on the vist of modified			
	virtual Machine Swaphie Location:	Same directory as the virtual machine			
Help		< Back Finish	Cancel		
Παφ		< back Hillsh			

Figure 47 Complete Cluster Setup



7. Click the newly created cluster, click **Add a host**, type the ESXi host FQDN or IP address and the ESXi host user name and password in the wizard, and then click **Next**.

🧭 vCenter-App - vSphere Client	1		
File Edit View Inventory Admin	nistration Plug-ins Help		
🖸 🔝 🔥 Home 🕨 🛃	Inventory 🕨 🛐 Hosts and Clusters		Search Inventory
r & & #			
Center-App E TEST-DataCenter	Test-Cluster Getting Started Summary Virtual Mac What is a Cluster? A cluster is a group of hosts, W cluster, the host's resources be resources. The cluster manage	hines Hosts Resource Allocation Add Host Wizard Specify Connection Settings Type in the information used to co	Performance Tasks & Event2 Alarms Permissions Maps Profile Compliance Storag close tab 🖾
	within it. Clusters enable the vSphere Hi vSphere Distributed Resource	Connection Settings Host Summary Ready to Complete	Connection
	Basic Tasks ∰ Add a host		Host:     10.50.182.13       Authorization       Enter the administrative account information for the host. vSphere Client will use this information to connect to the host and establish a permanent account for its operations.       Username:     root       Password:     *********
		Help	< Back Next > Cance

Figure 48 Add A Host

8. Review the host summary, and then click Next.

Host Summary	You have chosen	to add the following host to vCenter:
<u>Assign License</u> Lockdown Mode Ready to Complete	Name: Vendor: Model: Version: Virtual Machine Test VMware VDGAHasWir PVDGAHasWir WVWare vCei	10.50.192.43 Dell Inc. PowerEdge 2950 VMware ESXi 5.5.0 build-1230948 s: vCenter i7 i8 nter Server Appliance

Figure 49 Host Summary

9. Assign a license key, if required, and then click **Next**.

🗗 Add Host Wizard		
Assign License Assign an existing or a new license key t	io this host.	
Connection Settings Host Summary	<ul> <li>Assign an existing license key to this host</li> </ul>	
Assign License Lockdown Mode Ready to Complete	Product Available     Evaluation Mode     O (No LicenseKey)	
	Assign a new license key to this host     Enter Key	
	Product: VMware vSphere 5 Desktop Host Capacity: 300 VMs Available: 300 VMs Expires: Never Label:	
Help	< Back Next >	Cancel

Figure 50 License Key

10. Set the Lockdown mode, if required, and then click Next.

Configure Lockdown Mode Specify whether lockdown mode	is to be enabled for this host.
Connection Settings -lost Summary Assign License Lockdown Mode Ready to Complete	Lockdown Mode When enabled, lockdown mode prevents remote users from logging directly into this host. The host will only be accessible through local console or an authorized centralized management application. If you are unsure what to do, leave this box unchecked. You can configure lockdown mode later by navigating to the host's Configuration tab and editing its Security Profile. Enable Lockdown Mode
Help	< Back Next > Cance

Figure 51 Lockdown Mode



11. Click **Finish** to add the ESXi host to the cluster. Repeat the process of adding the host for all Nutanix configured ESXi hosts.

Add Host Wizard				
Ready to Complete Review the options you have selected and	click Finish to add	the host.		
Connection Settings Host Summary Assign License Lockdown Mode Ready to Complete	Review this summ Host: Version: Networks: Datastores: Lockdown Mode:	ary and click Finish. 10.50.192.43 VMware ESXi 5.5.0 build-1230948 VM Network datastore1 (1) datastore2 (28) Disabled		
Help		< Back	Finish	Cancel

Figure 52 Finish Add Host Wizard



### 3.2 Setting up vCenter Networking

1. To add **Networking** in vCenter, click one of the host servers, click the **Configuration** tab, click **Networking**, and then click **Add Networking**. The vSphere Standard Switch view must be selected.



Figure 53 Networking setup

2. Click Virtual Machine connection type to create a Virtual Machine Port Group.

🚱 Add Network Wizard		_ 🗆 🗵
Connection Type Networking hardware can	be partitioned to accommodate each service that requires connectivity.	
Connection Type Network Access Connection Settings Summary	Connection Types   Virtual Machine  Add a labeled network to handle virtual machine network traffic.   VHkernel  The VMkernel  The VMkernel TCP/IP stack handles traffic for the following ESXI services: vSphere vMotion, ISCSI, NFS, and host management.	
Help	< Back Next >	Cancel

Figure 54 Connection Type

3. Create a standard vSwitch, select the two 10 Gb NICs, and then click Next.

🚱 Add Network Wizard		_ 🗆 X
Virtual Machines - Netwo Virtual machines reach n	ork Access networks through uplink adapters attached to vSphere standard switches.	
Connection Type Network Access	Select which vSphere standard switch will handle the network traffic for this connection. You may also create a ne vSphere standard switch using the undaimed network adapters listed below.	w
Connection Settings Summary	• Create a vSphere standard switch Speed Networks         Intel Corporation 82599 10 Gigabit Dual Port Network Connection             ✓ III Vmnic1 10000 Full ⊡-             ✓ III III IIIIIIIIIIIIIIIIIIII	×
Нер	< Back Next > C	ancel

Figure 55 Network Access

4. Assign a name for the VDI VLAN that will host user virtual desktops and a VLAN ID, and then click Next.

🗗 Add Network Wizard				_ 🗆 🗙
Virtual Machines - Conn Use network labels to in	ection Settings dentify migration compatible connect	tions common to two or more hosts.		
Connection Type Network Access Connection Settings Summary	Port Group Properties	VDI-VLAN	×	
	Preview: -Virtual Machine Port Group VDI-VLAN VLAN ID: 112	Physical Adapters		
Нер	<u>I</u>		< Back	Next > Cancel

Figure 56 Connection settings

5. Click Finish to complete.

🛃 Add Network Wizard	
Ready to Complete Verify that all new and mo	dified vSphere standard switches are configured appropriately.
Connection Type Network Access Connection Settings Summary	Host networking will include the following new and modified standard switches: Preview:  VITUAI Machine Port Group VDT-VLAN VLAN ID: 112  VILAN ID: 112 VILAN ID: 112 VILAN ID: 112 VILAN ID: 112 VILAN ID: 112 VILAN ID
Help	< Back Finish Cancel

Figure 57 Summary



6. Repeat tasks 1 and 2 to create a second Virtual Machine Port Group to host the Nutanix CVMs and vCenter VMs and use the previously created vSwitch.

🛃 Add Network Wizard				
Virtual Machines - Netwo Virtual machines reach	ork Access networks through uplink adapters attached to vSphe	ere standard sw	itches.	
Connection Type Network Access	Select which vSphere standard switch will handle vSphere standard switch using the unclaimed ne	the network tr twork adapters	affic for this connection. You may also cre listed below.	ate a new
Connection Settings Summary	C Create a vSphere standard switch Intel Corporation I350 Gigabit Netv wmic2 wmic3 Use vSwitch0 Intel Corporation 82599 10 Gigabit wmic1 wmic0 Preview:	Speed vork Connect 1000 Full Down Speed Dual Port Net 10000 Full	Networks ion None Networks twork Connection	- - -
	Virtual Machine Port Group VM Network 2 Virtual Machine Port Group VDI-VLAN VLAN ID: 112	Physical Adag	xers niCL nicO	×
Help	7		< Back Next >	Cancel

Figure 58 Network Access



7. Assign a name and VLAN ID, and then click **Next**.

🛃 Add Network Wizard		
Virtual Machines - Conn Use network labels to	rection Settings identify migration compatible connections common to two or more hosts.	
Connection Type Network Access Connection Settings Summary	Port Group Properties Network Label: VLAN ID (Optional): 177 Preview: Virtual Machine Port Group VM Network VLAN ID: 177 Virtual Machine Port Group VI AN ID: 112 VI AN ID: 112	
Help		< Back Next > Cancel

Figure 59 Connection Settings



8. Click **Add Networking** again, click **VMKernel** connection type for the vMotion network, and then click **Next**.

🛃 Add Network Wizard	× 0 -
Connection Type Networking hardware car	be partitioned to accommodate each service that requires connectivity.
Connection Type Network Access Connection Settings Summary	Connection Types Virtual Machine Add a labeled network to handle virtual machine network traffic. VMkernel The VMkernel TCP/IP stack handles traffic for the following ESXI services: vSphere vMotion, ISCSI, NFS, and host management.
Help	< Back Next > Cancel

Figure 60 Connection Type



9. Select the existing vSwitch, and then click **Next**.

🛃 Add Network Wizard				
VMkernel - Network Acce The VMkernel reaches n	<b>255</b> etworks through uplink adapters attached to vSphe	re standard swi	tches.	
Connection Type Network Access	Select which vSphere standard switch will handle vSphere standard switch using the undaimed ne	the network tr twork adapters	affic for this connection. You may also creative listed below.	ate a new
<ul> <li>Connection Settings</li> </ul>	Create a vSphere standard switch	Speed	Networks	<b></b>
Summary	Intel Corporation I350 Gigabit Netv	vork Connect	on	
	Vmnic2	1000 Full	10.30.177.40-03.30.177.31	
	vmnic3	Down	None	
	• Use vSwitch0	Speed	Networks	
	Intel Corporation 82599 10 Gigabit	Dual Port Net	work Connection	
	vmnic1	10000 Full	81-10.50.120.1-10.50.127.254	
	vmnic0	10000 Full	10-10.50.125.1-03.50.127.254	
	<u> </u>			•
	Preview:			
	VMkernel Port VMkernel @ VIrtual Machine Port Group VDI-VLAN @ VLAN ID: 112 -Virtual Machine Port Group VM Network @	Physical Adap	ters nic1 nic0	<u> </u>
Help	VLAN ID: 177		< Back Next >	Cancel

Figure 61 Network Access



10. Assign a name and VLAN ID, select Use this port group for vMotion, and then click Next.

🛃 Add Network Wizard			
VMkernel - Connection S Use network labels to id	ettings lentify VMkernel connections while ma	naging your hosts and datacenters.	
Connection Type Network Access Connection Settings IP Settings Summary	Port Group Properties Network Label: VLAN ID (Optional): Network Type:	VMotion         10       Image: Comparison of the second secon	
	Preview: VMkernel Port VMotion VLAN ID: 10 VI-vrual Machine Port Group VLAN ID: 112 Vrual Machine Port Group VM Network VLAN ID: 177	Physical Adapters Physical Adap	×
Help		< Back Next >	Cancel

Figure 62 Connection Settings

#### 11. Assign an IP address, and then click **Next**.

Connection Type			
Network Access	Obtain IP settings automatically		
Connection Settings	Se the following IP setungs:		
Summary	IP Address:		
,	Subnet Mask:		
	VMkernel Default Gateway:		
		Latin	
	-VMkernel Port	Physical Adapters	
	VMkernel Port VMMotion Virtual Machine Port Group VDI-VLAN	Physical Adapters	
	VMkemel Port VMMotion Virual Machine Port Group VDI-VLAN VLAN ID: 112	Physical Adapters • • • • • • • • • • • • • • • • • • •	
	VMikemel Port VMMotion - Virtual Machine Port Group VDI-VLAN VLAN ID: 112 - Virtual Machine Port Group	Physical Adapters  Physical Ada	
	VMKemel Port VMMotion Virtual Machine Port Group VDI-VLAN VLAN ID: 112 Virtual Machine Port Group VM Network virtual Machine Port Group VI Network virtual Machine Port Group VM Network VII	Physical Adapters     Winnic1     winnic0     winnic0	
	VMkemel Port     VMMotion     Virtual Machine Port Group     VD-VLAN     VLAN ID: 112     Virtual Machine Port Group     VM Network     VLAN ID: 177	Physical Adapters  Physical Ada	
	VMkemel Port     VMMotion     Virtual Machine Port Group     VDFVLAN     VLAN ID: 112     Virtual Machine Port Group     VM Network     VLAN ID: 177	Physical Adapters  Wmnic1   Wmnic0	
	VMkemel Port     VMMotion     Virtual Machine Port Group     VDFVLAN     VLAN ID: 112     Virtual Machine Port Group     VM Network     VLAN ID: 177	Physical Adapters     wmnic1     wmic0     wmic0	



12. Click Finish to complete.

🛃 Add Network Wizard		
Ready to Complete Verify that all new and mo	odified vSphere standard switches are configured appropriately.	
Connection Type Network Access Connection Settings Summary	Host networking will include the following new and modified standard switches: Preview:  VMMkemel Port UNKemel Port U.S.0.123.232 Unrula Machine Port Group ULAN ID: 112 Unrula Machine Port Group ULAN ID: 112 UNRUWORK ULAN ID: 177	
	1	
Help	< Back Finish Canc	el

Figure 64 Summary

- 13. Repeat tasks 8 and 9 to create another VMkernel Port for the Management network.
  - 14. Assign a name and VLAN ID, select **Use this port for vMotion** and **Use this port group for management traffic check boxes**, select **IP and IPv6** network type, and then click **Next**.

🛃 Add Network Wizard			
VMkernel - Connection S Use network labels to id	Settings dentify VMkernel connections while mar	aging your hosts and datacenters.	
Connection Type Network Access Connection Settings IP Settings Summary	Port Group Properties Network Label: VLAN ID (Optional):	Management Network	
	Network Type:	IP and IPv6	
	Viewn Management Network VLAN ID: 177 Virtual Machine Port Group VDI-VLAN VLAN ID: 112 Virtual Machine Port Group VM Network VLAN ID: 177 Vitkamal Port	Physical Adapters     wmnic0	
Help		< Back Next >	Cancel

Figure 65 Connection Settings

15. Type an IP address, and then click **Next**.

🛃 Add Network Wizard	-	
VMkernel - IP Connection	Settings	
Specify VMkernel IP setti	gs	
Connection Type Network Access Connection Settings IP Settings IPv6 Settings Summary	C Obtain IP settings automatically Use the following IP settings: IP Address: Subnet Mask: VMkernel Default Gateway: Edit	
	Preview: Vilkemel Port Physical Adapters Management Network IVI AN ID: 177	-
	VITUAI Machine Port Group VDI-VLAN VLAN  VLAN ID: 112 Virtual Machine Port Group VM Network	
	VLAN ID: 177 - VMkernel Port	_
Help	<pre></pre>	



16. Select the Obtain IPv6 address automatically through Router Advertisement check box, and then click **Next**.

🛃 Add Network Wizard	- Internet and the second s	
VMkernel - IPv6 Connec	tion Settings	
Specity VMkernel IPv6 s	settings	
Connection Type Network Access	Use the following IPv6 settings:	
<u>Connection Settings</u>	Obtain IPv6 address automatically through DHCP	
IP Settings	☑ Obtain IPv6 address automatically through Router Advertisement	
Summary	Static IPv6 addresses:	
	IPv6 Address Subnet Prefix Length	
	Add Edit Remove	
	VMkernel Default Gateway:	
	Preview:	
	-VMkernel Port	-
	Management Networks	
	- Virtual Machine Port Group	
	VDI-VLAN Q	
<u> </u>	VLAN ID: 112	-
Help	<back next=""> Cancel</back>	



17. Click Finish to complete.

Add Network Wizard Ready to Complete Verify that all new and mo	dified vSphere standard switches are configured appropriately.
Connection Type Network Access Connection Settings Summary	Host networking will include the following new and modified standard switches: Preview:  VILAU ID: 112 VILAN ID: 112 VILAN ID: 117 VILAN ID: 127 VM Network VLAN ID: 177 VM kernel Port VM Network VLAN ID: 10 VM kernel Port VM Network VLAN ID: 177 Fe80::e 3598
Help	< Back Finish Cancel

Figure 68 Summary

18. Click **Add Networking** to create a second switch for the internal CVM traffic, click **Virtual Machine** connection type, and then click **Next**.

Add Network Wizard	
Connection Type Networking hardware of	an be partitioned to accommodate each service that requires connectivity.
Connection Type Network Access Connection Settings Summary	Connection Types   Virtual Machine  Add a labeled network to handle virtual machine network traffic.   Virlkernel  The Wikernel TCP/IP stack handles traffic for the following ESX services: vSphere vMotion, ISCSI, NFS, and host management.
Help	< Back Next > Cancel

Figure 69 Connection Type

19. Click Create a vSphere standard switch, deselect any network adapters, and then click Next.

🚱 Add Network Wizard				
Virtual Machines - Netwo Virtual machines reach n	<b>rk Access</b> etworks through uplink adapters attached to vSph	nere standard sw	itches.	
Connection Type Network Access Connection Settings Summary	Select which vSphere standard switch will hand vSphere standard switch using the unclaimed in C Create a vSphere standard switch Intel Corporation 1350 Gigabit Net Wincica Use vSwitch0 Intel Corporation 82599 10 Gigabit Werwica Preview: Vrtual Machine Port Group VM Network 2	le the network tr etwork adapters Speed work Connecti 1000 Full Down Speed t Dual Port Net 10000 Full Physical Adapters No adapters	affic for this connection. You may also or listed below. Networks on None Networks twork Connection ⊕- ⊕-	eate a new
Help	.,		< Back Next >	Cancel

Figure 70 Network Access

20. Assign a network label, and then click **Next**.

🛃 Add Network Wizard	
Virtual Machines - Conne Use network labels to in	ection Settings dentify migration compatible connections common to two or more hosts.
Connection Type Network Access Connection Settings Summary	Port Group Properties         Network Label:       svm-iscsi-gp         VLAN ID (Optional):       None (0)         Preview:         Virtual Machine Port Group         Virtual Machine Port Group         Svm-iscsi-gp         No adapters
Help	< Back Next > Cancel

Figure 71 Connection Settings

21. Click Finish to complete.

🛃 Add Network Wizard		
Ready to Complete Verify that all new and mo	dified vSphere standard switches are configured appropriately.	
Connection Type Network Access Connection Settings Summary	Host networking will include the following new and modified standard switches: Preview:           Virtual Machine Port Group         Physical Adapters           svm-iscsi-gp         No adapters	
Help	< Back Finish C	ancel

Figure 72 Summary

22. Click Add Networking again and select a VMkernel connection type.

🛃 Add Network Wizard		_ 🗆 🗙
Connection Type Networking hardware can	be partitioned to accommodate each service that requires connectivity.	
Connection Type Network Access Connection Settings Summary	Connection Types  Virtual Machine  Add a labeled network to handle virtual machine network traffic.  Vitkernel  The Wikernel TCP/IP stack handles traffic for the following ESXi services: vSphere vMotion, iSCSI, NFS, and host management.	
Help	< Back Next >	Cancel

Figure 73 Connection Type

23. Use the newly created switch, and then click Next.

🛃 Add Network Wizard				
VMkernel - Network Acces	s			
The VMkernel reaches net	tworks through uplink adapters attached to	vSphere standard swit	tches.	
Connection Type	Select which vSphere standard switch wil	I handle the network tra	affic for this connection. You may also cre	ate a new
Network Access	vSphere standard switch using the unclai	med network adapters	listed below.	
<ul> <li>Connection Settings</li> <li>Summary</li> </ul>	O Use vSwitch0	Speed	Networks	
,	Intel Corporation 82599 10 G	igabit Dual Port Net	work Connection	
	Vmnic1	10000 Full	10.50.126.1-10.50.126.43	
	vmnic0	10000 Full		
	• Use vSwitchNutanix	Speed	Networks	
				-
	J.			
	Vitkered Part	Dhurinal Adaptant		
	VMkernel 🧕	No adapters		
	Virtual Machine Port Group			
	svm-iscsi-pg	<u>-</u> +		
1	1		1	
Help			< Back Next >	Cancel

Figure 74 Network Access

24. Assign a network label, and then click **Next**.

🛃 Add Network Wizard		<b>_</b>
VMkernel - Connection S Use network labels to in	Settings dentify VMkernel connections while r	managing your hosts and datacenters.
Connection Type Network Access Connection Settings IP Settings Summary	Port Group Properties Network Label: VLAN ID (Optional):	VM-ISCSI-PG None (0) Use this port group for vMotion Use this port group for Fault Tolerance logging Use this port group for management traffic
	Network Type:	IP (Default)
	Vilkamel Port VM-ISCSI-PG Vitual Machine Port Group svm-IscsI-pg	Physical Adapters       No adapters       Image: Comparison of the second
Help		< Back Next > Cancel

Figure 75 Connection Settings

25. Assign an IP address, and then click Next.

🛃 Add Network Wizard	
VMkernel - IP Connection	Settings
Specify VMkernel IP settin	gs
Summary Summa	C Obtain IP settings automatically C Use the following IP settings: IP Address: Subnet Mask: Edit Edit
	Preview: VMkernel Port VMkernel Q VMkernel Q VMkernel Q VMkernel Q VMkernel Port No adapters No adapters No adapters
Help	< Back Next > Cancel

### Figure 76 IP Settings

#### 26. Click Finish to complete.

Ready to Complete Verify that all new and	d modified vSphere standard switches are configured appropriately.
Connection Type Network Access Connection Settings Summary	Host networking will include the following new and modified standard switches: Preview:  VMkernel Port VMkernel



The completed networking topology must be displayed as shown in the screen shot here.

tan	dard Switch: vSwitch0	Remove Properties
	-Virtual Machine Port Group	Physical Adapters
Ρ	VDI-VLAN	🔶 🖶 🐨 vmnic1 10000 Full 🖓
+	39 virtual machine(s)   VLAN ID: 112	vmnic0 10000 Full 🖓
	-Virtual Machine Port Group	
Ρ	VM Network	·*1
+	5 virtual machine(s)   VLAN ID: 177	
_	-VMkernel Port	
Ρ	VMotion	·*11
	vmk2 :   VLAN ID: 10	
_	-VMkernel Port	
μ	Management Network	• <b>•</b> •
	vmk0 :   VLAN ID: 177	
	fe80::e :3598	
tan	dard Switch: vSwitchNutanix	Remove Properties
	-Virtual Machine Port Group	-Physical Adapters
P	svm-iscsi-pg	No adapters
+	1 virtual machine(s)	
	-VMkernel Port	
Ρ	vmk-svm-iscsi-pg	
	vmk1:	

Figure 78 Networking topology



### 4 Installing SQL Server

SQL Server Installation:

- 1. From the SQL VM, access the SQL setup files (go to file share, copy locally, insert DVD, download,etc.)
- 2. Run Setup.exe, in the left pane, click **Installation**, and then select **new stand-alone installation**.
- 3. Click **OK** to continue past the discovery operation.
- 4. On the Language selection page (if displayed), click Next.
- 5. On the **Product Key** page, type PID, and then click **Next**.
- 6. Accept license terms, and then click Next.
- 7. Enable setup to download and use update files, and then click Next.
- 8. Note any warnings or issues from the report, and then click Next.
- 9. Select SQL Server Feature Installation, and then click Next.
- 10. Database Engine Services, Management Tools (basic & completed), and SQL Client Connectivity SDK features must be installed. Other features can be installed as required. Click **Next** until you arrive at the instance configuration.
- 11. Select **Default instance** on the **Instance Configuration** page and click **Next**. On the **Disk Usage** page, click **Next** again.
- 12. Change the SQL service accounts to the required domain user accounts determined in the prerequisites. Make sure to specify the domain account and password. Click **Next** to continue. **Server Configuration**

Specify the service accounts a	and collation configuration.				
Setup Support Rules	Service Accounts Collation				
Setup Role					
Feature Selection	Microsoft recommends that you us	se a separate account for each SQL Server servic	:e.		
Installation Rules	Service	Account Name	Password	Startup Type	
Instance Configuration	SQL Server Agent	NT Service\SQLSERVERAGENT	•	Manual	~
Disk Space Requirements	SQL Server Database Engine	NT Service\SQLSERVERAGENT		Automatic	$\neg$
Server Configuration	SQL Server Browser	< <browse>&gt;</browse>		Disabled	~
Database Engine Configuration					

Figure 79 Server Configuration

13. Set to mixed mode authentication, specify a password for the SA account, and add domain user(s) or group(s) to be used for SQL administration.

14. On the **DataBase Engine Configuration** page, click the **Data Directories** tab. Change the database, log, and temp locations to the corresponding drives configured during the SQL VM creation. Unless you want to designate specific folders, the existing paths can be retained with only the drive letter being changed (for example "D:\Program Files\Microsoft SQL Server\MSSQL11.MSSQLSERVER\MSSQL\Data"). Click **Next**.



Figure 80 Database Engine Configuration

- 15. Click **Next** on the **Error Reporting** page and click **Next** again on the **Installation Configuration Rules page**.
- 16. To begin installation, click Install and after completing the installation process, click Close.

# 5 Installing XenDesktop or XenApp 7.5

- 1. Save the .iso file that contains the installation files.
- 2. On the Welcome page, click **XenDesktop**.

Deliver applications and desktops to any on any device. • Secure mobile device management • Hybrid cloud cloud and enterprise provisioning	user, anywhere,	
Centralized and flexible management     Manage your delivery according to your needs:		
XenDesktop Deliver applications and desktops	Start	
	Cancel	
CITRIX		

Figure 81 XenDesktop Welcome page

3. On the XenApp 7.5 page, click Delivery Controller.

ivery Controller	Virtual Delivery Agent for Windows	Citrix Director	
Delivery Controller Start here. Select and install the Delivery Controller and other essential services like License Server and StoreFront.	Virtual Delivery Agent for Windows Server OS Install this agent to deliver applications and desktops from server-based VMs or physical machines.		05217.103
		Citrix License Server	
		Citrix StoreFront	
	Virtual Delivery Agent for Windows Desktop OS		
	Cannot be installed on this operating system.	Citrix Studio	
		Universal Print Server	

Figure 82 XenApp 7.5 page



4. Click I have read, understand, and accept the terms of the license agreement, and then click Next.

XenApp 7.5	Software License Agreement
	Printable vers
Licensing Agreement	20197-200-000
Core Components	CITRIX LICENSE AGREEMENT
Features	This is a legal agreement ("AGREEMENT") between you, the Licensed User, and Citrix Systems Inc. Citrix Systems International GmbH or Citrix Systems Axis Pacific Ptv I to
Firewall	Your location of receipt of this product or feature release (both hereinafter "PRODUCT")
Summary	or technical support (hereinafter "SUPPORI") determines the providing entity hereunder (the applicable entity is hereinafter referred to as "CITRIX"). Citrix Systems, Inc., a
Install	Delaware corporation, licenses this PRODUCT in the Americas and Japan and provides SUPPORT in the Americas. Citrix Systems International GmbH, a Swiss company wholly
Finish	owned by Citrix Systems, Inc., licenses this PRODUCT and provides SUPPORT in Europe, the Middle East, and Africa, and licenses the PRODUCT in Asia and the Pacific (excluding Japan). Citrix Systems Asia Pacific Pty Ltd. provides SUPPORT in Asia and the Pacific (excluding Japan). Citrix Systems Japan KK provides SUPPORT in Japan. 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 AGREEMENT, DO NOT INSTALL AND/OR USE THE PRODUCT.
	<ol> <li>GRANT OF LICENSE. This PRODUCT contains software that provides services on a computer called a server ("Server Software") and contains software that allows a computer to access or utilize the services provided by the Server Software ("Client Software"). This PRODUCT is licensed under a user model ("User Model"), a device model ("Device Model") or concurrent user model ("Concurrent User or the server to be a se</li></ol>
	I have read, understand, and accept the terms of the license agreement
	I do not accept the terms of the license agreement
	Back Next Cancel

Figure 83 XenApp 7.5 License Agreement



5. Select the check boxes as shown in the screen shot, and then click Next.



Figure 84 Core Components



6. If you have an SQL server already installed, leave the **Install Microsoft SQL Server 2012 Express** check box clear. Else, select the check box to install an Express version.



Figure 85 XenApp 7.5 Features





7. Read the information under the Firewall section, and then click Next.

Figure 86 XenApp 7.5 Firewall Settings

#### 8. Click Install.



Figure 87 Installation Summary

9. After the installation is successfully completed, click Finish.



Figure 88 Successfully Installation



# 6 Installing a StoreFront Server

1. Mount XenDesktop 7.5 CD or ISO file and when the CD auto launches, click Citrix Storefront.



Figure 89 Extend Deployment



2. Accept the agreement and click **Next** to continue.



Figure 90 Software Licence Agreement



3. Click Next to continue.



Figure 91 Core Components


4. Click Next to continue.



Figure 92 Firewall configuration



### 6.1 Configuring Store Front

1. Start Desktop Store Front and on the welcome page, and then click **Create a new deployment**.



Figure 93 Citrix StoreFront



2. Type the URL for server with StoreFront installed. Click **Next** to continue.

StoreFront	Create New Deployment
	Confirm the base URL for services hosted on this deployment. For multiple server deployments,
Race LIRI	specify the load-balanced URL for the server group.
Store Name	Race (10)
Delivery Controllers	base once
Remote Access	

Figure 94 Create New Deployment

3. Type a store name, and then click **Next** to continue.

	Create Store
StoreFront	Store Name
	Choose a name that helps users identify the store. The store name appears in Citrix Receiver as part of the user's account.
Store Name Delivery Controllers Remote Access	Store name: My Store
	Next Cancel

Figure 95 Create Store

4. To add a delivery controller, click the **Add** button.

		Create Store		
	Dell'ann Cont			
StoreFront	Delivery Contr	ollers		
	Specify the deliv	ery controllers and servers for	r this store.	
✓ Store Name	Delivery control	llers:		
Delivery Controllers	Name	Туре	Servers	
Remote Access				
		Edit		
	Add	Eurt		
			Back	Cancel

Figure 96 Create Store



5. Type the FQDN of the desktop delivery controller and select the protocol used for connections, that is, HTTP OR HTTPS, and then click **OK**.

	Add Delivery Controller
Display name:	My Controller
Туре:	<ul> <li>XenDesktop</li> <li>XenApp</li> <li>AppController</li> <li>VDI-in-a-Box</li> </ul>
Servers (in failover order):	ctx-ddc
	Add Edit Remove
Transport type:	HTTPS -
Port:	443
	OK Cancel

Figure 97 Add Delivery Controller



6. On the **Remote Access** page, select **None**, and then click **Next** to continue.

	Create	Store
		and the second sec
StoreFront	Remote Access	
StoreFront	Add NetScaler Gateway applian	ices to provide user access from external networks.
of Share Name	-	
Store Name     Delivery Controllers	Remote access:	None     No VDN turnel
Remote Access		Full VPN tunnel
	NetScaler Gateway appliances:	
	Default appliance:	Add
		Back Create Cancel

Figure 98 Create Store



7. Click **Create** to continue, and then click **Finish** to complete the configuration wizard.



Figure 99 Create Store



8. Click **Stores** in the left pane to display configuration details. Select actions to change the configuration, if required.

File       Action       Yes	#	Citrix StoreFront	
Image: Christ Store Front       Image: Christ Store Front         Image: Christ Store Front       Image: Christ Store For Web         Image: Christ Store For Web       Nutlexticated Advertised Store URL         Image: Christ Store For Web       Nutlexticated Advertised Store URL         Image: Christ Store For Web       Nutlexticated Advertised Store URL         Image: Christ Store For Web       Nutlexticated Advertised Store URL         Image: Christ Store For Web       Nutlexticated Types         Image: Christ Store For Web       Nutlexticated Store For Web	File Action View Help		
It in StoreFront       Actions         Stores       Name       Authenticated       Advertised       Stores       Create Store       C	🗢 🔿 🙎 🖬 👔 🗊		
Server Group Authentication Stores Netexiver for Web Netexiver for Web Netexizef Sateway Beacons Stores NTNX-CTX-C1 Yes Yes http://ctx-storefront/Citrix/MyStore NTNX-CTX-C1 Yes Yes http://ctx-storefront/Citrix/NTNX-CTX-C1 My Store My Store My Store My Store Overview Authenticated: Yes Authenticated: Yes Authenticated: Yes Authenticated: Yes Authenticated: Yes Status Status Status Service using HTTP not HTTPS. Status Service using HTTP not HTTPS. Status Service using HTTP not HTTPS. Status Service using HTTP not HTTPS. Status	🗱 Citrix StoreFront	eizuv.	Actions
Store       Name       Authenticated       Advertised       Store URL       Create Store         My Store       Yes       Yes       http://ctx-storefront/Citrix/MyStore       Create Store         NTNX-CTX-C1       Yes       Yes       http://ctx-storefront/Citrix/MYStore       Create Store         Wy Store       Yes       http://ctx-storefront/Citrix/MTNX-CTX-C1       Create Store       Create Store         My Store       NTNX-CTX-C1       Yes       http://ctx-storefront/Citrix/MTNX-CTX-C1       Create Store         My Store       My Store       My Store       My Store       My Store         Multi-Store Provisioning File       View       My Store       Mile Store         Multi-Store Provisioning File       My Store       Manage Delivery Controllers       Manage Delivery Controllers         Authenticated:       Yes       Authenticated:       Yes       Manage Citrix Receiver Updates       Integrate with Citrix Online         Like       http://ctx-storefront/Citrix/MyStore       Manage Citrix Receiver Updates       Integrate with Citrix Online       Eport Provisioning File         Configure Legacy Support       Remove Store       Help       Help	Server Group	currix	Stores 🔺
Receiver for Web   NetScaler Gateway   Beacons     My Store     Status        Status	Stores	Name Authenticated Advertised Store URL .	Create Store
<ul> <li>NTNX-CTX-C1 Yes Yes http://ctx-storefront/Citrix/NTNX-CTX-C1</li> <li>Export Multi-Store Provisioning File</li> <li>View</li> <li>Refresh</li> <li>Help</li> <li>My Store</li> <li>Authenticated: Yes</li> <li>Advertised: Yes</li> <li>URL: http://ctx-storefront/Citrix/MyStore</li> <li>Status</li> <li>Service using HTTP not HTTPS.</li> </ul>	Receiver for Web	My Store Yes Yes http://ctx-storefront/Citrix/MyStore .	Create Store for Unauthenticated Users
View       ▶         Wy Store       ☑ Refresh         Overview       Hide Store         Authenticated:       Yes         Advertised:       Yes         URL:       http://ctx-storefront/Citrix/MyStore         Status       Integrate with Citrix Online         Export Provisioning File       Configure Legacy Support         Remove Store       ☑         Itelp       Integrate with Citrix Online         Export Provisioning File       Configure Legacy Support         Remove Store       Itelp	NetScaler Gateway	NTNX-CTX-C1 Yes Yes http://ctx-storefront/Citrix/NTNX-CTX-C1 .	Export Multi-Store Provisioning File
My Store   Overview   Authenticated: Ves   Advertised: Ves   URL: http://ctx-storefront/Citrix/MyStore   Status   Manage Citrix Receiver Updates   Integrate with Citrix Online   Expot Provisioning File   Configure Legacy Support   Remove Store   I Help	Y beacons		View 🕨
My Store       My Store         Overview       Hide Store         Authenticated: Yes       Yes         URL:       http://ctx-storefront/Citrix/MyStore         Status       Integrate with Citrix Online         Status       Service using HTTP not HTTPS.			Q Refresh
My Store       ▲         Overview       ▲         Authenticated:       Yes         Advertised:       Yes         URL:       http://ctx-storefront/Citrix/MyStore         Status       ■         Arrow Store       ■         Manage Citrix Receiver Updates       ■         Integrate with Citrix Online       ■         Export Provisioning File       Configure Legacy Support         Remove Store       ■         Image Diverse       ■			😰 Help
My Store       Hide Store         Overview       Authenticated: Ves         Advertised: Ves       URL: http://ctx-storefront/Citrix/MyStore         Status       Export Provisioning File         Configure Legacy Support       Remove Store         Image Delivery Controllers       Export Provisioning File         Configure Legacy Support       Remove Store         Image Delivery Controllers       Export Provisioning File         Configure Legacy Support       Remove Store			My Store
Overview       Authenticated: Ves         Advertised: Yes       Ves         URL:       http://ctx-storefront/Citrix/MyStore         Status       Export Provisioning File         Configure Legacy Support       Remove Store         Image Delivery Controllers       Integrate with Citrix Online         Export Provisioning File       Configure Legacy Support         Image Delivery Controllers       Integrate with Citrix Online         Export Provisioning File       Configure Legacy Support         Image Delivery Controllers       Integrate with Citrix Online         Export Provisioning File       Configure Legacy Support         Image Delivery Controllers       Image Delivery Controllers         Image Delivery Controllers       Image Delivery Controllers </td <td></td> <td>My Store</td> <td>Hide Store</td>		My Store	Hide Store
Authenticated:       Yes         Advertised:       Yes         URL:       http://ctx-storefront/Citrix/MyStore         Status       Export Provisioning File         Configure Legacy Support       Remove Store         Image: Status       Remove Store         Authenticated:       Yes         URL:       http://ctx-storefront/Citrix/MyStore		Overview	Manage Delivery Controllers
Authenticated:       Yes         Advertised:       Yes         URL:       http://ctx-storefront/Citrix/MyStore         Status       Export Provisioning File         Configure Legacy Support       Remove Store         Image Citrix Receiver Updates       Integrate with Citrix Online         Local Status       Help			Enable Remote Access
Advertised:       Yes         URL:       http://ctx-storefront/Citrix/MyStore         Status       Integrate with Citrix Online         ▲ Service using HTTP not HTTPS.       Remove Store         Image: Help       Help		Authenticated: Yes	Manage Citrix Receiver Updates
Status       Export Provisioning File         ▲ Service using HTTP not HTTPS.       Remove Store         ☑       Help		URL: http://ctx-storefront/Citrix/MyStore	Integrate with Citrix Online
Status  Service using HTTP not HTTPS.  Configure Legacy Support  Remove Store  Help			Export Provisioning File
▲ Service using HTTP not HTTPS.     Remove Store		Charburg	Configure Legacy Support
A Service using HTTP not HTTPS.		Status	Remove Store
		A Service using HTTP not HTTPS.	P Help
		1	

Figure 100 Citrix StoreFront



9. Select **Authentication** in the left pane, and then click **Configure Trusted Domains** in the **Actions** pane.

a	Citrix StoreFront	>	ĸ
File Action View Help			
<ul> <li>Citrix StoreFront</li> <li>Server Group</li> <li>Authentication</li> <li>Stores</li> <li>Receiver for Web</li> <li>NetScaler Gateway</li> <li>Beacons</li> </ul>	CITRIX:         Authentication Method       Enabled         User name and password       Yes         Domain pass-through       Yes         Smart card       No         HTTP Basic       Yes         Pass-through from NetScal       No         Authentication Service       No         Authentication service collects user credentials once and grants access to all stores on this server.         Overview       Token validation service:         Number of enabled methods:       3         Status       Service using HTTP not HTTPS.	Actions         Authentication         Add/Remove Methods         View         Refresh         Help         User name and password         Configure Trusted Domains         Manage Password Options         Disable Method         Help	
Manage domain display options ar	nd restrictions		_

Figure 101 Citrix StoreFront



10.	lf you	want to	type	domain	details,	click	Add.
-----	--------	---------	------	--------	----------	-------	------

Configure Trusted Domains	
Allow users to log on from:	
Trusted domains:	
Add Edit Remove	
OK Cancel	

Figure 102 Configure Trusted Domains

Add/Remove Authentication Methods
Choose the authentication methods with which users can authenticate to stores on this server.
✓ User name and password
🗹 Domain pass-through 🛕
🗹 Smart card 🛕
HTTP Basic
Pass-through from NetScaler Gateway
OK Cancel

### Figure 103 Add/Remove Authentication Methods

Store Front is now installed and ready to accept connections.

# 7 Configuring XenDesktop 7.5 Site

1. Start Desktop Studio, and on the Welcome page, click **Deliver applications and desktops to your users**.

12	Citrix Studio		_ <b>D</b> X
Ele Action Dev Help			
🗱 Citrix Studio	citary		Actions
	cirkix		Citrix Studio 🔺
	Welcome		Yew F
			ci Refresh
	Welcome to Citrix Studio		👔 Hdp
	To begin, select one of the three options below.	6-0	
		CONTRACTOR OF A DESCRIPTION OF A DESCRIP	
	Site actup		
	Deliver applications and desktops to your users		
	Remote PC Access		
	Enable your users to remotely access their physical machines		
	Scale your deployment		
	Connect this Delivery Controller to an existing Site		

Figure 104 Configuring XenApp 7.5 site

2. To create a fully configured, production-ready site, leave the default selection as-is, type an appropriate name of the new site, and then click **Next**.

	Site Setup
Studio	Introduction
Introduction Database Licensing Connection Network Storage App-V Publishing Summary	Vou have two options when creating a new Site. The simplest option is to automatically create a fully configured, production-ready Site. The second, more advanced option is to create an empty Site, which you must configure yourself. What kind of Site do you want to create? A fully configured, production-ready Site (recommended for new users) An empty, unconfigured Site Site name:
	Back Cancel

Figure 105 Citrix Studio Site name



3. In the **Database** section, type appropriate names in the text boxes, and then click **Test connection**. After making sure that the connection is successfully started, click **Next**.

tudio	Database
	The database stores all Site configuration, logging, and monitoring data. Database server location:
Database	Database name:
Licensing Connection	Test connection
Network	If you do not have permission to edit this database, generate a script to give to your database administrator.
App-V Publishing	Generate database script (Optional)
Summary	

Figure 106 Assigning database



#### 4. Click OK.



Figure 107 Creating database automatically



5. Type information about your licensing server, and then click **Connect**.

	Site Setup
Studio	Licensing
<ul> <li>Introduction</li> <li>Database</li> <li>Licensing</li> <li>Connection</li> <li>Network</li> <li>Storage</li> <li>App-V Publishing</li> <li>Summary</li> </ul>	I want to: Use the free 30-day trial You can add a license later. Use an existing license The product list below is generated by the license server. Product Model
	Allocate and download Browse for license file Back Next Cancel

Figure 108 Licensing information



6.	Type the address	of your	hypervisor	and valid	credentials.	Click Next.
----	------------------	---------	------------	-----------	--------------	-------------

Select a Connection type. If machine management is not used (for example when us hardware), select 'No machine management.'  Introduction Connection type: Citrix XenServer Connection address: Connection address: Connection User name: Network Password:	using physical
<ul> <li>✓ Introduction</li> <li>✓ Database</li> <li>✓ Database</li> <li>✓ Licensing</li> <li>Connection</li> <li>User name:</li> <li>Introduction</li> <li>Wetwork</li> <li>✓ Password:</li> </ul>	
Database     Connection address:     Connection     User name:     Network     Password:	
Connection         User name:           Network         Password:	
Network Password:	
Storage         Connection name:           App-V Publishing         The Connection name appears in Studio; it helps administrative Connection.	itrators identify
Create virtual machines using: Studio tools (Machine Creation Services) Other tools	

Figure 109 Network connection



7.	Type the name of the reso	ources, and then click Next.
----	---------------------------	------------------------------

Name for these resources:	
The second	mbination in Caudia
The resources name helps identity this storage and network co felect one or more networks for the virtual machines to use	mpination in Studio.
Name	+
Network 0	
Private VLAN	
	The resources name helps identify this storage and network co ielect one or more networks for the virtual machines to use:           Name           Image: Network 0           Image: Private VLAN

Figure 110 Assigning network resources



8. Select the type of storage on the basis of hypervisor configuration. Click **Next**.

Studio	storage
	Select one or more storage devices for the new virtual machines:
	Name
✓ Introduction	SSD-128GB
Ø Database	SATA-1TB
✓ Licensing	
✓ Connection	
✓ Network	
Storage	
App-V Publishing	
Summary	
	Percent which storage (Decision OF each decision more)
	Personal vbisk storage (besktop OS only): Leant note
	Use same storage for virtual machines and Personal vDisks
	Use different storage for Personal vDisks

Figure 111 Selecting storage device



9. Do not edit the setting under App-V-Publishing. Click **Next**.

Studio	App-V Publishing			
	Do you want to add an App-V publishing server to this deployment?			
	No			
<ul> <li>Introduction</li> </ul>	() Yes			
✓ Database				
✓ Licensing	App-V management server:			
✓ Connection	http://MyManagementServer.example.com:81			
V Network	App-V publishing server:			
✓ Storage	htta://MuRublichingServer.example.com/87			
App-V Publishing				
Summary	Test connection_			
	a summary summary summary summary summary summary summary			

Figure 112 App-V-Publishing Server



#### 10. Click Finish.

Studio	Summary	
<ul> <li>Introduction</li> <li>Database</li> <li>Licensing</li> <li>Connection</li> <li>Network</li> <li>Storage</li> <li>App-V Publishing</li> <li>Summary</li> </ul>	Site name: Database server: Database name: License server: Connection type: Connection address: Connection name: Create virtual machines with: Networks: Virtual Machine storage: Personal vDisk storage: App-V:	XenApp75 Citrix XenServer® XenServer Studio tools (Machine Creation Services) Network 0 Use same storage as Virtual Machines Not configured

Figure 113 Finish Site Setup

11. Verify the installation. You can also click **Test Site Configuration** to verify the site configuration.

### 8 Installing Server 2012 and RDSH

It is assumed you are familiar with installing Windows Server 2012. The screen shot here shows the last task in installation where you are prompted for a password. After you type credentials, the host is connected to the domain.

Setting	gs
Type a password for t	he built-in administrator account that you can use to sign in to this computer.
User name	Administrator
Password	
Reenter password	
واب	Finish

Figure 114 Logging in to Windows 2012 Server



1. Log in to the VM as a domain account with permissions to add the required roles. Start the Server Manager application. Click **Add roles and features**, and then click **Next**.

Server Mar	nager 🕨 Dashboard	• 🕲	Manage Tools	View Help
Dashboard	WELCOME TO SERVER MANA	SER		^
Local Server				
All Servers		Configure this local server		
■ File and Storage Services ▶		configure this local server		
	QUICK START			
	2	Add roles and features		
	3	Add other servers to manage		
	WHAT'S NEW	Create a server group		=
		Periodic d server groop		
	LEARN MORE			Hide
	ROLES AND SERVER GROUPS			
	Roles: 1   Server groups: 1   Serv	ers total: 1		
	File and Storage	1 Local Server 1		
	Manageability	Manageability		
	Events	Events		
	Performance	3 Services		
	BPA results	Performance		
		BPA results		
		0.042.00011.0000042300		
		9/15/2014 5:22 AM		5-32 AM
			<b>~</b> (	8/15/2014

Figure 115 Configuring local server



#### 2. Click Next.



Figure 116 Roles and Features



3. Click Remote Desktop Services installation, and then click Next.



Figure 117 Remote Desktop Services installation



4. Click **Standard Deployment**, and then click **Next**.



Figure 118 Standard Deployment



5. Because you have to install a session-based solution, click **Session-based desktop deployment**, and click **Next**.

<b>a</b>	Add Roles and Features Wizard	_ <b>D</b> X
Select deployme	nt scenario	DESTINATION SERVER Standard deployment selected
Before You Begin Installation Type Deployment Type Deployment Scenario Role Services RD Connection Broker RD Web Access RD Session Host Confirmation Completion	<ul> <li>Remote Desktop Services can be configured to allow users to connect to programs, and session-based desktops.</li> <li>Virtual machine-based desktop deployment</li> <li>Virtual machine-based desktop deployment allows users to connect to that include published RemoteApp programs and virtual desktops.</li> <li>Session-based desktop deployment</li> <li>Session-based desktop deployment allows users to connect to session published RemoteApp programs and session-based desktops.</li> </ul>	virtual desktops, RemoteApp
	< Previous Next >	Deploy Cancel

Figure 119 Session-based desktop deployment



6. On the Review role Services page, click Next.



Figure 120 Review role services



7. Click Next.

2	Add Roles and Features Wizard	_ <b>_ _</b> ×
Specify RD Conr	ection Broker server	DESTINATION SERVER Standard deployment selected
Before You Begin Installation Type Deployment Type Deployment Scenario	Select the servers from the server pool on which to install the RD Con Server Pool Co	nection Broker role service. cted
Role Services RD Connection Broker	Filter:	OSPREY.COM (1)
RD Web Access RD Session Host Confirmation Completion	FC-RDSH.OSPREY.COM 10.50.176.28	
	Image: Computer(s) found     1 Computer(s) found	mputer(s) selected
	< Previous Next >	Deploy Cancel

Figure 121 RD Connection Server



8. For this deployment, all services are being deployed on a single RDSH host. These roles can be broken out across multiple servers, because it is the best practice in an Enterprise environment. Click **Next**. Under the **Server Pool** section, select the local host or a dedicated web access server, and then click **Next**.

<b>a</b>	Add Roles	and Features \	Wizard			x
Specify RD Web A	Access server			DEST Standard dep	INATION SER\ loyment selec	VER ted
Before You Begin	Select a server from the se	rver pool on which	to install the R	D Web Access role service.		
Installation Type	Install the RD Web Acc	ess role service on	the RD Connec	tion Broker server		
Deployment Type	Server Pool			Selected		
Depioyment Scenario				Computer		
RD Connection Broker	Filter:			Computer		
RD Web Access	Name	IP Address	Operating	<ul> <li>OSPREY.COM</li> <li>EC-RDSH</li> </ul>	(1)	
RD Session Host	EC-RDSH OSPREV COM	10 50 176 28	-			
Confirmation		101001110120	-			
Completion						
			1			
	<		>			
	1 Computer(s) found			1 Computer(s) selected	E.	-
		< Pre	evious Ne	ext > Deploy	Cance	el

Figure 122 RD Web Access Server



9. Select the session host(s) from the available servers, and then click Next.

<b>b</b>	Add Roles and Features Wizard
Specify RD Sessio	DESTINATION SERVER Standard deployment selected
Before You Begin Installation Type Deployment Type Deployment Scenario	Select the servers from the server pool on which to install the RD Session Host role service. If more than one server is selected, the RD Session Host role service will be deployed on all of them.           Server Pool         Selected
Role Services RD Connection Broker RD Web Access	Filter:     Computer       Name     IP Address     Operating       FC-RDSH     FC-RDSH
RD Session Host Confirmation Completion	FC-RDSH.OSPREY.COM     10.50.176.28       <     III       >     1 Computer(s) found
	< Previous Next > Deploy Cancel

Figure 123 RD Session Host servers



10. Select the Restart the destination server automatically if required check box, and then click Next.



Figure 124 Confirm selections



When the roles are installed and configured, the server automatically restarts.

6	Add Roles and	d Features Wizard			X
View progress	The selected Remote Desktop S	Services role services are being ins	DES Standard de stalled.	TINATION SEF ployment sele	(VER cted
Installation Type	Server	Progress	Status		_
Deployment Type	RD Connection Broker role s	ervice			
Deployment Scenario Role Services	FC-RDSH.OSPREY.COM		Pending		
	RD Web Access role service				
	FC-RDSH.OSPREY.COM		Pending		
RD Session Host					
	RD Session Host role service				
Completion	FC-RDSH.OSPREY.COM		Pending		
		< Previous Next >	Deploy	Canc	el

Figure 125 Roles and Features Configured



## 9 Installing Citrix VDA on an RDSH Session Host

1. Start the CITRIX Xendesktop 7.5 installation session by using the media.



Figure 126 Instal Citrix VDA

The Citrix main page is displayed.



2. Click XenDesktop installation, and then click Start.

Deliver applications and desktops to any on any device. • Secure mobile device management • Hybrid cloud, cloud and enterprise provisioning • Centralized and flexible management Manage your delivery according to your needs:	y user, anywhere,
XenApp Deliver applications XenDesktop Deliver applications and desktops	Start
	Cancel
CİTRIX	

Figure 127 XenDesktop installation



3. Click Virtual Delivery Agent for Windows.



Figure 128 Virtual Delivery Agent for Windows



4. Click Create a Master Image, and then click Next.



Figure 129 Environment


5. Click **Next** to install VDA.



Figure 130 Core components



6. In the **Controller address** box, type the FQDN name of the Desktop Controller that will manage your Delivery group, and then click **Next**.

Environment	Configuration	
Core Components	How do you want to enter the locations of your Delivery Controllers?	
Delivery Controller	Do it manually	
Features		
Firewall		
Summary	Controller address:	
Install	ctx-ddc.osprey.com	
Finish	Test connection Add	
	Note: Any Group Policies that specify Delivery Controller locations will override settings provided here.	

Figure 131 Delivery Controller

7. Select the check boxes as shown in the screen shot here, and then click Next.



Figure 132 XenDesktop 7.5 Features



#### 8. Click Next.



Figure 133 Setting firewall

9. Click Install to continue and complete the installation.



Figure 134 Installation Summary



# 10 Creating a Catalog for RDSH

Start the DDC and create a new Catalog.



Figure 135 Catalog Creation



11. Click Windows Server OS for standardized server, and then click Next.



Figure 136 OS selection



12. Click Another service or technology.



Figure 137 Machine management



13. Under Virtual Machines section, click Add VMs, add appropriate VMs, and then click Next.

Studio	Virtual Machines		
	Import or add virtual mad	hines and their computer AD accounts.	
	VM name	Computer AD account	
<ul> <li>Introduction</li> <li>Operating System</li> <li>Machine Management</li> <li>Virtual Machines</li> </ul>	CTX-XAGOLD1	Enter computer account name	
	CTX-XAGOLD10	Enter computer account name	
	CTX-XAGOLD11	Enter computer account name	
Summary	CTX-XAGOLD12	Enter computer account name	
	CTX-XAGOLD2	Enter computer account name	=
	CTX-XAGOLD3	Enter computer account name	
	CTX-XAGOLD4	Enter computer account name	
	CTX-XAGOLD5	Enter computer account name	
	CTX-XAGOLD6	Enter computer account name	
	CTX-XAGOLD8	Enter computer account name	
	Remove	Import list Export list Ad	d VMs

Figure 138 Virtual Machines



# 11 Creating a Session Host Delivery Group

	Create Delivery Group
Studio	Getting started with Delivery Groups
Introduction	Delivery Groups are collections of desktops and applications that are created from Machine Catalogs. Create Delivery Groups for specific teams, departments, or types of users, and base them on either a desktop or a server operating system.
Machines	Make sure you have enough machines available in a suitable Catalog to create the Delivery
Delivery Type	Groups that you need.
Users	
StoreFront	
Summary	
	Don't show this again
	Back Next Cancel

Figure 139 Delivery Groups



1. In the left pane, click **Machines**. In the **Choose the number of machines for this Delivery Group** box, type or select a number to indicate the number of servers you want in the Delivery Group, and then click **Next**.

	Create Deliv	very Group	
Studio	Machines		
	Select a Machine Catalog. The was created.	e Type column is a summary of choices m	ade when the Catalog
✓ Introduction	Catalog	Туре	Machines
Machines	NTNXRDSH	RDS Manual Random	1
Delivery Type	NTNXRDSH		
Users			
StoreFront			
Summary			
Sammary			
	Choose the number of machin	nes for this Delivery Group:	1 - +
		Back	ext Cancel

Figure 140 Selecting servers for Delivery Group



2. Click Desktops and Applications, and then click Next.



Figure 141 Assigning Delivery type



3. Click Add users, and then add users or groups that have access the delivery group.

Studio	Users
	Assign users:
<ul> <li>Introduction</li> <li>Machines</li> <li>Delivery Type</li> <li>Users</li> <li>Applications</li> <li>StoreFront</li> <li>Summary</li> </ul>	OSPREY\Domain Users
	Add users Remove users

Figure 142 Adding delivery group users



4. Click Next, unless you want to customize specific applications.



Figure 143 Adding applications



5. Select the Storefront server(s) you want to use, and then click Next.



Figure 144 Selecting storefront servers



6. In the **Delivery Group name** box, type a unique name for the delivery group, and then click **Next**.

Studio	Summary	
	Machine Catalog:	NTNXRDSH
<ul> <li>Introduction</li> </ul>	Machine type:	Windows Server OS
✓ Machines	Allocation type:	Random
✓ Delivery Type	Machines added:	1 unassigned
✓ Users	Delivery type:	Desktops and Applications
Applications	Users:	OSPREY\Domain Users
	Storefronts:	1
✓ StoreFront	Scopes:	-
Summary	Delivery Group name:	
	NTNXRDSH	
	Display name:	
	NTNXRDSH	
	Delivery Group description	n, used as label in Receiver (optional):
	Nutanix Session Hosts	

Figure 145 Assigning delivery group name



# 12 Creating a Catalog for Machine Creation Services

#### 1. Start the DDC and create a new Catalog.



Figure 146 Catalog Creation



2. Click Windows Desktop OS for standardized server, and then click Next.



Figure 147 OS selection



3. Click Citrix Citrix Machine Creation Service (MCS).



Figure 148 Machine management



4. Under the Desktop Experience section, click Yes, create a dedicated virtual machine and save changes on the local disk, and then click Next.



Figure 149 Virtual Machines

- Machine Catalog Setup Master Image Studio A Master Image is a virtual machine template. The master image you select here will be used to create all virtual machines in this catalog. Note that a master image may also be referred to as a clone image, golden image, or base image. If you select a GPU-enabled snapshot or VM, use the ✓ Introduction VDA for HDX 3D Pro for optimal performance. Important: The snapshot or Virtual Machine that you select here must have the correct version ✓ Operating System of the VDA installed. If it does not, Catalog creation may fail. ✓ Machine Management Select a snapshot (or a Virtual Machine): Desktop Experience CTX-XAGOLD9 6 Master Image 🔳 NTNX-8DTFY12-B-CVM 🚯 Virtual Machines NTNX-8DVCY12-C-CVM 6 Computer Accounts NTNX-8DVDY12-A-CVM 6
- 5. Select the snapshot from the master image you require, and then click Next.



Figure 150 Machine Catalog Setup

6. Adjust the virtual CPU and memory settings as required for your desktops, specify the number of desktops you want to create, and then click **next**.

Studio	Virtual Machines		
	Number of virtual machin	es needed:	
✓ Introduction	1 - +		
✓ Operating System	Configure your machines:		
✓ Machine Management	Name:	Citrix_XD_NTN	кстх
Desktop Experience     Master Image	Virtual CPUs:	2	2 - +
Virtual Machines	Memory (MB):	3072	3072 - +
Computer Accounts	Hard disk (GB):	24	24
Summary			

Figure 151 Machine Catalog Setup



7. Select the OU that you want to use for your desktops. This OU should have your relevant domain GPOs assigned.

Studio	Active Directory Computer Accounts
	Each machine in a Machine Catalog needs a corresponding Active Directory computer account.
	Select an Active Directory account option:
<ul> <li>Introduction</li> </ul>	Create new Active Directory accounts
<ul> <li>Operating System</li> </ul>	Use existing Active Directory accounts
🛩 Machine Management	Active Directory location for computer accounts:
✓ Desktop Experience	Domain: OSPREV.COM
✔ Master Image	
✓ Virtual Machines	Person
Computer Accounts	Computers
Summary	Contractors
	Core Infrastructure
	Selected location: Default OU
	Account naming scheme:
	TestPool-### 0-9 -
	TestDeel 012

Figure 152 Machine Catalog Setup

8. Give the catalog a unique name, and then click **Finish**.

Studio	Summary		
<ul> <li>Introduction</li> <li>Operating System</li> <li>Machine Management</li> <li>Desktop Experience</li> <li>Master Image</li> <li>Virtual Machines</li> <li>Curputer Accounts</li> </ul>	Machine type: Machine management: Provisioning method: Desktop experience: Resources: Master Image name: Number of VMs to create: Virtual CPUs:	Windows Desktop OS Virtual Machine creation services (MCS) Users connect to the same desktop each time they log on Save changes on the local disk NTNXCTX Citrix_XD_NTNXCTX 1 2	н
Summary	Machine Catalog name: TestPool Machine Catalog description for TestPool To complete the deployment, a Delivery Groups and then Creat	or administrators: (Optional) ssign this Machine Catalog to a Delivery Group by selecting e or Edit a Delivery Group.	

Figure 153 Machine catalog Setup

# 13 Creating a Delivery group for Machine Creation Services (MCS)

1. Select Delivery Groups from the column on the left hand side of the MCS Studio and click **Next** on the welcome page.

	Create Delivery Group
Studio	Getting started with Delivery Groups
Introduction Machines Delivery Type Users StoreFront Summary	Delivery Groups are collections of desktops and applications that are created from Machine Catalogs. Create Delivery Groups for specific teams, departments, or types of users, and base them on either a desktop or a server operating system. Make sure you have enough machines available in a suitable Catalog to create the Delivery Groups that you need.
	Don't show this again Back Next Cancel

Figure 154 Create Delivery Group



2. Select the number of machines from your catalog that you want to add to this group, and then click **Next**.

Studio	Machines		
	Select a Machine Catalog. T was created.	The Type column is a summary of choices ma	de when the Catalog
Introduction	Catalog	Туре	Machines
Machines	• Test	VDI MCS Static Local Disk	
Delivery Type	lest		
Users			
StoreFront			
Summary			
	Choose the number of macl	hines for this Delivery Group:	0 -+

Figure 155 Create Delivery Group

3. Click **Desktops**, and then click **Next**.

	Create Delivery Group
Studio	Delivery Type
	You can use the machines in the Catalog to deliver desktops and applications to your users.
	Use the machines to deliver:
<ul> <li>Introduction</li> </ul>	Desktops
✓ Machines	Applications
Delivery Type	
Users	
StoreFront	
Summary	
	Rack Minut Concel
	back Next Caricel

Figure 156 Create Delivery Group

4. Add the user group with permissions to access this desktop pool, and then click Next.

elect this object type:		Object Turner	
on this location:		object types	
ntire Directory		Locations	
nter the object names to select ( <u>exe</u>	<u>mples</u> ):	Check Names	ailable, you must add users. You can ys.
Advanced	OK	Cancel	
Summary			
	Add users Re	move users	

Figure 157 Create Delivery Group

5. Select your Storefront server, and then click **Next**.

Studio	StoreFront
<ul> <li>✓ Introduction</li> <li>✓ Machines</li> <li>✓ Delivery Type</li> <li>✓ Users</li> <li>StoreFront</li> <li>Summary</li> </ul>	You can configure Receiver on the machines in this Delivery Group so that users can access additional applications that aren't on the machines. Receiver can use a different StoreFront server (that you select here or in the Configuration > StoreFront node) compared with the servers (listed in the Citrix StoreFront console) used for connections to the machines themselves How do you want to configure Receiver on the machines in this Delivery Group? Manually, using a StoreFront server address that I will provide later Automatically, using the StoreFront servers selected below Select the StoreFront servers for Receiver: Receiver Storefront URL Thtp://ctx-storefront/

Figure 158 Create Delivery Group

6. Give the Desktop group a unique name and click **Finish** to complete the process.

Studio	Summary	
<ul> <li>Introduction</li> <li>Machines</li> <li>Delivery Type</li> <li>Users</li> <li>StoreFront</li> <li>Summary</li> </ul>	Machine Catalog: Machine type: Allocation type: Machines added: Delivery type: Users: Storefronts: Scorefr	Test Windows Desktop OS Static 5 unassigned Desktops OSPREY\Domain Users 1
	Delivery Group name: Example: Finance Win OS Display name: Example: My Desktop Delivery Group descriptio	n, used as label in Receiver (optional):

Figure 159 Create Delivery Group

7. After creating pool, right-click the pool on it, and then click Edit.

Studio	Users
	Assign users:
Users	Domain Users (OSPREY\Domain Users)
Machine allocation	
Delivery Type	
User Settings	
StoreFront	
Power Management	
Access Policy	
	Add users Remove users

Figure 160 Edit Delivery Group

8. Click **Power Management** to allow you change the hours that users can connect to their desktops.

Studio	Power manage machines: Weekdays 👻	Weekdays 👻		
lisers	Peak hours: 00:00 03:00 06:00 09:00 12:00 15:00 18:00 21:00	00		
Machine allocation	During peak hours:			
Delivery Type	When disconnected 0 mins No action -			
User Settings	When logged off 0 mins No action			
StoreFront	During off-peak hours:			
Power Management	When disconnected 0 mins No action -			
Access Policy	When logged off 0 mins No action -			

Figure 161 Edit Delivery Group

Note that while access is available via the console, you must update the power settings for the Desktop group using powershell to make sure your VMs remain turned on as per the below set of cmdlet's.

9. Open powershell, and then load the Citrix Cmdlets by running the following command asnp Citrix\*



Figure 162 Windows powershell

10. Run the following command to make sure desktops remain turned on.

Set-BrokerDesktopGroup "Desktop Group Name" - PeakBufferSizePercent 100

## 14 Deploying Virtual Desktop Master Image

#### 14.1 Deploying Virtual Desktop

Do the following tasks, if provisioning virtual desktops.

## 14.2 Setting up Desktop Template (Gold Image)

### 14.3 Creating Template VM

Suggested on the basis of user types used by Dell.

**NOTE**: Solution is provided on the basis of using full clones for persistence (Standard provisioning) and recommended disk format is VMDK. Make sure Master Image is placed in the same container as the Desktop pool for faster deployment.

Provision a Gold image by doing the following tasks:

Machine Creation Services - Master Image

- Create Base VM (specify Disk size, Network, Memory etc)
- Install Windows 8.1
- Install required application software
- Optimize Windows 8.1 using Citrix Optimization best practices
- Add VM to the Domain
- Install the Citrix VDA
- Create a reference Snapshot
- Create a machine catalog and Delivery group via XenDesktop Setup Wizard

Installing Citrix VDA Agent

Mount the XD7.5 ISO to the master image virtual machine and select installation for the Desktop VDA.

**NOTE**: There are two options but only the desktop agent will be made available for installation. Make sure you add the DNS name of the Delivery Controller, this will connect all newly provisioned desktops to the DDC.

Refer to VDA installation section for RDS for the installations tasks.

## 14.4 Optimizing Desktop OS

Make sure you use the Citrix desktop optimization script which can be downloaded from the Citrix website which can be used to optimize desktop settings for a VDI environment including disabling unnecessary services.

#### Windows 8.x Optimization

A new feature in Win 8.1 is Automatic Windows Maintenance, which is a feature of the dism tool that checks the system and application for update compatibility and file integrity. By default, the system scheduled task runs at 1 A.M. everyday, or any time after 10 min of idle time. When the system runs, the tiworker.exe process consumes 100 percent CPU on any recently booted desktop VMs, possibly overloading servers.

The administrator accounts cannot change the services because the services(idle time check and automatic check) run as a SYSTEM. You must get SYSTEM rights to disable services.

You can still run the checks manually even if the services are disabled. You must have psexec.exe (sysinternals) on the Master Image VM to fix this problem.

The following are the three scheduled tasks that must be disabled on your desktop template.

```
psexec \\SERVERNAME -s schtasks /change /tn
"\Microsoft\Windows\TaskScheduler\Maintenance Configurator" /DISABLE
psexec \\SERVERNAME -s schtasks /change /tn
"\Microsoft\Windows\TaskScheduler\Idle Maintenance" /DISABLE
psexec \\SERVERNAME -s schtasks /change /tn
"\Microsoft\Windows\TaskScheduler\Regular Maintenance" /DISABLE
```

Turn off the master image and take a snapshot for reference.

