



P r o f e s s i o n a l E x p e r t i s e D i s t i l l e d

Getting Started with XenDesktop[®] 7.x

Deliver desktops and applications to your end users, anywhere,
anytime, with XenDesktop[®] 7.x

Craig Thomas Ellrod

[PACKT] enterprise 
PUBLISHING professional expertise distilled

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BIRMINGHAM - MUMBAI

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A great thanks to my wife and my twins for letting me have the time to review this book.

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I would like to thank my intern students who have joined me to learn XenDesktop® and reiterated all the basic concerns and questions about the XenDesktop® technology from their perspective.

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After staying for half a year in Australia, he picked up a job as a consultant in a mid-sized company, where he helped customers with his big stock of knowledge and a deep understanding of technical coherences.

Furthermore, he writes books and professional articles on different IT technologies. If he finds interesting problems at work, he writes their description and solutions for them on his blog at <http://www.jhmeier.de>.

I wish my new born daughter, Evi, an awesome and wonderful life.
May all her wishes be fulfilled.

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I would not have been able to contribute to this book without the support of my charming wife, Ning, and creative inspirations from my daughter, Raylin. I credit my passion for learning, to my brother, Alex, who has raised me along with my loving parents, Irene and Ray. I would like to give a final thank you to all my friends, family, and colleagues who have supported me over the years.

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I would like to thank Packt Publishing for giving me the opportunity to review this book. This book is well-written by the author and the project is well-coordinated by the project coordinator.

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Table of Contents

Preface	1
Chapter 1: Designing a XenDesktop® Site	11
The core components of a XenDesktop® Site	11
Terminology and concepts	13
Server side	13
Hypervisor	13
Database	13
Delivery Controller	13
Studio	14
Director	14
StoreFront	14
Virtual machines	14
The Virtual Desktop Agent	14
Server OS machines	14
Desktop OS machines	15
Active Directory	15
Desktop	15
XenApp®	15
Edgesight®	15
FlexCast®	16
Storage	17
The client side	17
Receiver	17
System requirements	18
Receiver	18
StoreFront 2.1	18
Databases	19
Studio	20
Delivery Controller	20
Director	21
The Virtual Delivery Agent (VDA)	21

Table of Contents

Server host	22
Active Directory	23
Designing a basic XenDesktop® Site	23
Scenario	23
Common Citrix® communication ports	24
Summary	27
Chapter 2: Installing XenDesktop®	29
Planning the XenDesktop® installation	30
Step 1 – installing the controller (XD1)	32
Installing the components on XD1	33
Configuring a Site	38
Step 2 – installing StoreFront (XD2)	41
Installing the components on XD2	41
Creating a server certificate and adding a Site binding	41
Installing StoreFront	46
Step 3 – installing Director (XD3)	47
Installing the components on XD3	47
Step 4 – creating the virtual desktop and application delivery master images	48
Step 5 – installing the Virtual Delivery Agent on the master images	49
Creating the desktop master images	50
Creating the application master images	53
Step 6 – configuring the StoreFront server	56
Step 7 – creating the machine catalogs	58
Creating desktops	58
Creating the application servers	64
Step 8 – creating the delivery groups	67
Creating desktop delivery groups	68
Creating the application delivery groups	69
Installation checkpoint	72
Step 9 – installing Citrix Receiver™ on the client devices	75
Step 10 – testing the connection	77
Testing the desktops	77
Testing the applications	77
Summary	79
Chapter 3: Managing Machine Catalogs, Hosts, and Personal vDisks	81
Machine catalogs	81
Prerequisites	82
Creating the master images	82

Adding and configuring the virtual machines	83
Creating the computer accounts	83
Creating a machine catalog	84
Operating systems and hardware	84
Machine management	86
User experience	87
Managing the machine catalogs	88
Taking a snapshot of the master image	89
Updating the master image	90
Reverting to a previous master image	92
Managing the Active Directory computer accounts	93
Adding machines to a machine catalog	94
Modifying a machine catalog	95
Renaming a machine catalog	95
Deleting a machine catalog	96
Managing the hosts	96
Managing Personal vDisks	100
Updating Personal vDisks used by the master images	102
Adjusting the space available for applications	103
Disabling automatic resizing	104
Reallocating user profiles	104
Summary	104
Chapter 4: Managing Delivery Groups	105
Managing the delivery groups	105
Creating a delivery group	106
Editing a delivery group	107
Managing desktop sessions	109
Logging off or disconnecting sessions	109
Sending messages to users	109
Managing the delivery group resources	110
Adding and reallocating desktops	110
Locating desktops, sessions, and delivery groups	111
Shutting down and restarting desktops	112
Removing desktops from delivery groups	113
Deleting desktops from delivery groups	114
Restricting access to desktops	114
Securing the ICA® protocol communications	116
Managing power settings for desktops	117
Importing and exporting user data	118
Enabling and disabling the maintenance mode	119
Managing the server load	120
Managing the hosted applications	122
Application desktop delivery groups	123
Application sharing	123
Publishing applications to multiple desktop groups	124
Content redirection	124

Table of Contents

Creating an application	125
Managing application sessions	127
Modifying the applications	127
Managing the Delivery Controller environment	129
Controller discovery	129
Adding, moving, or removing Delivery Controllers	132
Moving a Virtual Delivery Agent (VDA) to another Site	134
Active Directory OU-based controller discovery	134
Using SSL on controllers	136
Changing the default HTTP and HTTPS ports	136
Summary	137
Chapter 5: Managing Policies	139
XenDesktop® Studio versus Microsoft Group Policy Editor	140
Administrative roles	140
Working with policies	141
Navigating policies	141
Accessing policies	142
Searching policies	143
Creating policies	143
Creating a policy in Studio	144
Creating a policy in Microsoft Group Policy Editor	144
Configuring policies	146
Configuring policy settings	146
Best practices for designing policy settings	147
Applying policies	147
Using default values	147
Using filters	148
Implementing multiple policies	151
Implementing priorities	151
Implementing exceptions	153
The resulting set of policies	154
Running the Citrix® Group Policy Modeling Wizard	154
Running the Microsoft Group Policy Results tool	155
Troubleshooting policy scenarios	156
Comparing policies	157
Implementing policies with NetScaler Gateway™	158
Implementing NetScaler Gateway™ policy filters	158
Summary	160
Chapter 6: Managing Printing	161
How printing works	161
Using locally attached printers	162
Using network attached printers	162

Using default printing, preferences, and drivers	163
Setting printing preferences	164
Printing policies	165
Universal Print Server and Driver	166
Autocreation of printers	169
Mapping printers and drivers	171
Optimization of printing	174
Summary	179
Chapter 7: Virtualizing USB Support	181
USB devices in virtualization	181
How XenDesktop® uses USB redirection	183
Enabling USB support	184
Preventing the mapping of USB devices	187
Using USB mass storage	187
USB redirection with XenApp® versus XenDesktop®	189
Using USB automatic redirection	189
Using voice and video	189
Summary	191
Chapter 8: Virtualizing Storage and Backup	193
XenDesktop® storage considerations	194
Desktop storage	194
High Availability	195
Performance	196
IOPS	196
Personal vDisk	196
XenDesktop® storage requirements	198
Virtual desktop storage requirements – dedicated desktop model	199
Virtual desktop storage requirements – dedicated shared desktop model	201
Virtual desktop storage requirements – shared hosted desktop model	203
Backup and restore	203
Backing up a SQL Server	203
Restoring a SQL Server	205
Backing up and restoring VMs and user data	206
USB mass storage	207
Summary	207

Chapter 9: High Definition Experience (HDX™)	209
Introducing high definition experience	210
HDX™ system requirements	210
The reality of HDX™	212
Aero redirection	213
Configuring Aero redirection or desktop composition redirection	213
Windows Media	215
Configuring Windows Media client-side fetching	215
Configuring real-time Windows Media multimedia transcoding	217
Flash Media	219
Configuring Flash redirection on a server	220
Configuring Flash redirection on the client	221
HDX™ 3D	223
GPU versus vGPU	224
GPU	224
vGPU	225
HDX™ 3D requirements	225
Client	225
Server	225
HDX™ GPU sharing	226
HDX™ 3D – how it works	226
Installing and configuring HDX™ 3D	227
Upgrading HDX™ 3D	229
Configuring monitors for HDX™ 3D	229
Configuring image quality	230
Configuring audio	230
Configuring webcams	231
Configuring color compression	231
Configuring network priorities	232
Adaptive display	233
Summary	234
Chapter 10: Application Delivery	235
Delivering applications	236
Differences between XenApp® and XenDesktop®	236
What's new?	236
What's gone?	237
What's changed?	238
What hasn't changed?	238
Application Delivery Controllers	238
Application Delivery Networks	240
Summary	242

Chapter 11: Working with the XenDesktop® SDK	243
Microsoft Windows PowerShell	244
PowerShell snap-ins and cmdlets for XenDesktop®	244
Using the XenDesktop® SDK	247
Creating an SDK script	248
Troubleshooting using the XD PowerShell SDK	249
Useful desktop cmdlets	249
Useful controller cmdlets	250
Site debugging tools	252
Citrix Ready®	252
Summary	252
Chapter 12: Working with Citrix Receiver™ and Plugins	253
Understanding Receiver	254
Changing the Receiver settings	255
Pushing the Receiver settings from the server	255
Changing the Receiver settings from the client's desktop	256
Using plugins	258
The online plugin	258
Using workspace control	258
Changing the resolution of the virtual desktop	259
Moving the toolbar	259
Controlling local file access	260
Accessing devices	261
Accessing USB devices	261
Accessing local microphones and webcams	262
Redirecting Flash to a local device	263
Switching between virtual desktops	264
Logging off virtual desktops	265
Disconnecting from virtual desktops	265
Restarting a virtual desktop	266
Using Desktop Lock	267
Printing in virtual desktops	268
Understanding the keyboard input	268
The offline plugin	269
The CloudBridge™ plugin	269
Running Receiver on Microsoft Windows	270
Running Receiver on Apple	270
Running Receiver on other devices	271
Summary	272
Chapter 13: Securing XenDesktop®	273
DMZ and DMZ²	274
Securing XenDesktop® with NetScaler Gateway™	275
Importing NetScaler VPX™ into XenServer®	276

Table of Contents

Installing a NetScaler® license	276
Installing an SSL certificate	279
Creating a NetScaler Gateway™ virtual server	279
Configuring NetScaler Gateway™ for StoreFront	284
Configuring NetScaler® for an ICA proxy	286
Configuring a StoreFront connection to NetScaler Gateway™	288
Exporting the StoreFront certificate	291
Importing the StoreFront certificate into NetScaler Gateway™	294
Secure Ticket Authority	297
Securing the ICA/HDX protocols	297
Securing StoreFront	298
Securing Receiver	299
Securing controller	299
IIS	299
Non-IIS	299
Changing the controller port to HTTPS	300
Securing Studio and Director	300
IIS	300
Securing the XenDesktop® to XenServer® communications	300
Using smart cards	302
Summary	302
Chapter 14: Managing and Monitoring XenDesktop®	303
Using Studio to manage the XenDesktop® Site	304
Using Director to monitor the XenDesktop® Site	305
Using HDX Insight™	310
Troubleshooting XenDesktop®	315
Troubleshooting users	316
Troubleshooting applications	316
Troubleshooting desktops	317
Troubleshooting sessions	317
Troubleshooting HDX™	317
Troubleshooting Personal vDisks	318
Third-party tools	318
Summary	319
Chapter 15: VDI in the Cloud	321
Understanding virtualization in the cloud	321
Private cloud	322
Public cloud	323

Hybrid cloud	323
Personal cloud	324
Your cloud	325
Summary	325
Appendix A: Creating a Domain Certificate Authority	327
Appendix B: XenDesktop® Policy Settings Reference	331
Audio policies	333
Bandwidth policies	334
Redirection policies	335
Desktop UI policies	338
Graphics and multimedia policies	338
Caching policies	342
Multistream traffic policies	342
Printing policies	342
ICA® policies	345
Keep alive policies	346
Autoreconnection policies	346
Mobility policies	347
Session policies	347
Time zone policies	349
Load management policies	349
Delivery Agent policies	350
HDX™ 3D policies	351
Appendix C: Creating Self-signed Certificates for NetScaler Gateway™	353
Enabling SSL on NetScaler Gateway™	353
Creating a self-signed root CA certificate	354
Creating a public-facing server certificate	357
Installing the root CA and public certificates	359
Linking the public and root CA certificates	361
Viewing the root CA and server certificate bindings	362
Binding the certificates to the NetScaler Gateway™ VIP	362
Testing the certificates	364
Testing the NetScaler Gateway™ connection	365
Testing NetScaler Gateway™ with a Windows client	365
Appendix D: Using Public CA-signed SSL Wildcard Certificates on NetScaler Gateway™	373
Enabling SSL on NetScaler Gateway™	374
Creating a certificate request	374

Table of Contents

Submitting the request to the public CA	378
Installing the public-signed wildcard certificate	380
Binding the public-signed certificate to the NetScaler Gateway™ VIP	382
Testing NetScaler Gateway™ and certificates	383
Index	385

Preface

Citrix® XenDesktop® is a desktop virtualization and VDI solution that delivers a Windows desktop experience as an on-demand service to any user, anytime, anywhere. It suits all types of workers such as task workers, knowledge workers, or mobile workshifting workers. XenDesktop® quickly and securely delivers complete desktops or applications while providing a high-definition user experience.

XenDesktop® is a desktop virtualization solution that optimizes the delivery of desktops, applications, and data to end users. It includes all of the capabilities to deliver desktops, applications, and data securely to every type of user in an enterprise. Instead of managing thousands of static desktop images, you can manage and update the desktop OS and applications once, from one location.

Getting Started with XenDesktop® 7.x provides comprehensive details on how to design, implement, and maintain a desktop delivery Site using XenDesktop®. Along the way, you will also learn about management, policies, printing, USB support, storage and backup, High Definition User Experience (HDX™), application delivery, the XenDesktop® SDK, Citrix Receiver™, and about running XenDesktop® from the cloud.

If you are reading this book, you have most likely heard of the concept of desktop virtualization. You may have done some basic research on the topic or have installed a previous version of XenDesktop®. In any case, XenDesktop® 7 is different from the previous versions. So, if you are a desktop virtualization veteran or are new to the game and starting your Proof of Concept, this book will be helpful. In this book, we will walk you through the implementation of Citrix® XenDesktop® for a small deployment to help you understand not only how to install the product, but also how the desktop and application technology works.

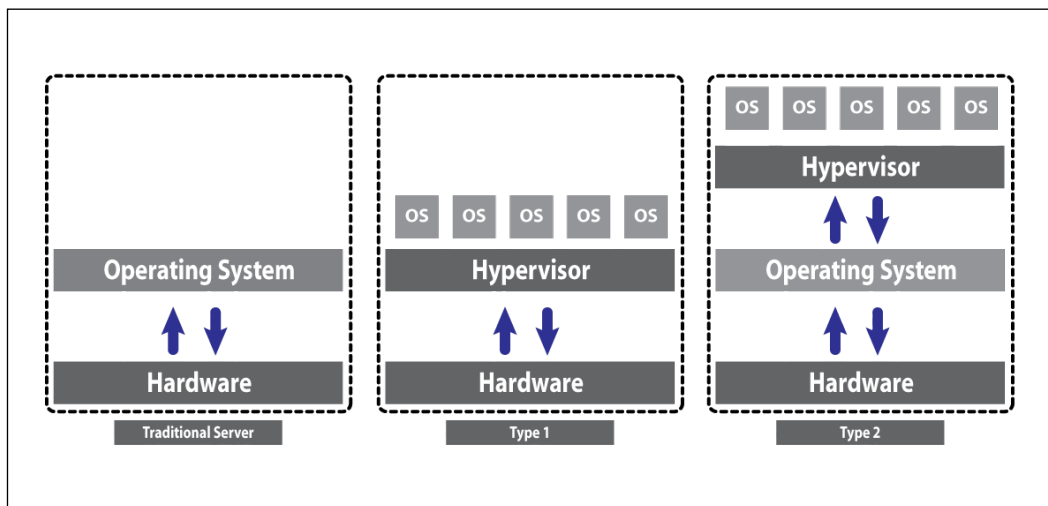
Getting started with Hypervisors

Before you get started, you need to understand what a Hypervisor is. A Hypervisor is an operating system that hosts multiple instances of disparate operating systems. It can also be defined as a software that can create and run virtual machines. The Hypervisor software runs on a server hardware that has been enabled for virtualization. Once this is installed, you can then install several instances of different operating systems onto the Hypervisor. The Hypervisor was the game changer because instead of running one operating system per server, you could now run X number of operating systems on one server, and thus save space and money.

There are several vendors that make Hypervisors, such as Citrix® XenServer®, VMware ESX, Microsoft Hyper-V, and KVM. There are Type 1 Hypervisors that run directly on the server hardware; these are also known as bare-metal Hypervisors. There are Type 2 Hypervisors that run on top of an operating system, which then runs on the server. As you can imagine, Type 1 Hypervisors have been touted to have better performance as they interact directly with the server hardware resources.

Citrix® XenServer® is a Type 1 Hypervisor. Citrix® XenDesktop® runs on Citrix® XenServer®. It can also run on VMware ESX and Microsoft Hyper-V. This book will focus on the use of XenDesktop® running on XenServer®.

The following diagram gives you a visual idea of the differences between the types of Hypervisors as compared to traditional servers and how the interaction between these components contend for hardware resources, which ultimately affects the performance and sizing of hardware resources:



What this book covers

Chapter 1, Designing a XenDesktop® Site, starts by defining the pieces or components that make up a XenDesktop® Site along with the terminology and concepts involved. We then set out to design a basic XenDesktop® architecture, ending with a network diagram that we will use as a roadmap for the remainder of the book.

Chapter 2, Installing XenDesktop®, explains the installation of XenDesktop® as you now know what it looks like via a network diagram and what it sounds like from the components, terminology, and concepts learned. This chapter discusses how to use the plan that is built in the previous chapter and then execute the plan to start deploying the XenDesktop® Site.

Chapter 3, Managing Machine Catalogs, Hosts, and Personal vDisks, discusses how to use machine catalogs, hosts, and Personal vDisks for XenDesktop®. After you create a XenDesktop® Site with the initial desktops and applications, you may want to expand the Site. Machine catalogs contain a group of computers or desktops that define the hosting infrastructure for desktops and applications.

Chapter 4, Managing Delivery Groups, discusses in detail how to manage delivery groups for desktops and applications. Delivery groups are collections of machines that deliver desktops and applications to users.

Chapter 5, Managing Policies, explains that Citrix® policies are the best way to control connections, security, and other settings in XenDesktop®. Everything is done with policies, at least when it comes to giving users access and managing sessions.

Chapter 6, Managing Printing, explains that printing in XenDesktop® is handled the same way it is handled in XenApp. You can print using printers that are connected locally or networked; so, we discuss how to do this. We also talk about the installed printer drivers and controlling printers with policies.

Chapter 7, Virtualizing USB Support, discusses how USB support allows virtual desktops to access the local USB resources connected to the user/client device. XenDesktop® also provides direct connectivity support for some devices, such as keyboards, mice, and smart cards. Think about it; if you use a virtual desktop, you won't have a physical USB port to plug in to on that virtual machine, so we have to use the USB port on our client device and somehow map this to the virtual desktop.

Chapter 8, Virtualizing Storage and Backup, discusses the storage and backup requirements for XenDesktop®. You need storage for the XenDesktop® Site and the individual virtual desktops. A virtual desktop deployment is very dynamic, and the storage infrastructure needs to be able to accommodate it.

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