



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

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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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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.

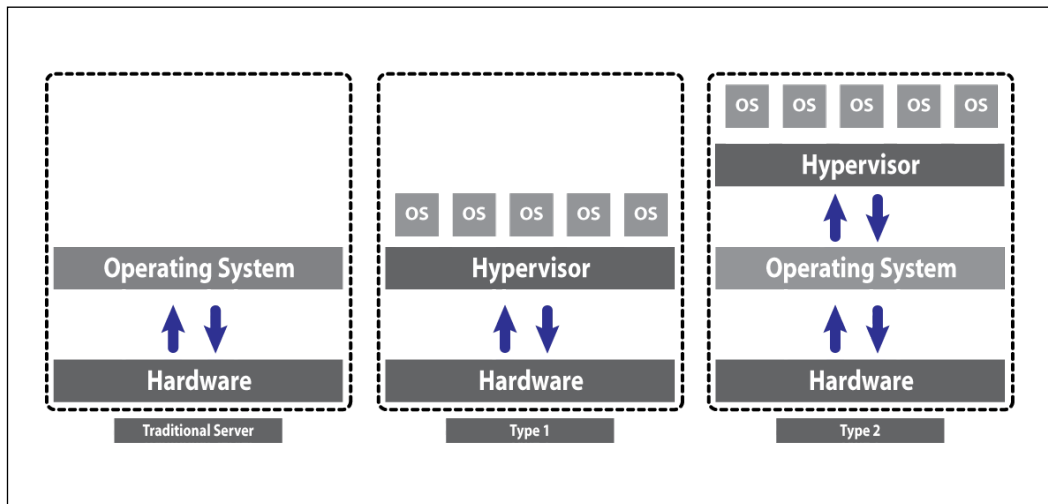
Getting started with Hypervisors

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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