



Foreword

If you're reading this, you're likely already taking part in the IT revolution that is driven by server and desktop virtualization. The revolution has been unfolding since VMware was founded in 1998, but its speed has clearly accelerated over just the past two to three years. Helping people keep up with this rapid pace of change is what makes education, training, and reference materials such as this book so valuable.

A lot has changed since the first edition of *Deploying the VMware Infrastructure* was published in 2008, most notably the release of VMware vSphere 4 in May of 2009. VMware vSphere was the most ambitious software product release ever undertaken at our company, and it certainly ranks among the biggest releases in our industry as a whole. From a numbers standpoint, the development of vSphere encompassed more than 3,000,000 engineering hours by well over 1,000 talented engineers over a three-year period. And from a technical standpoint, vSphere's new capabilities clearly mark the arrival of the fourth generation of virtualization.

As the first "cloud computing operating system," vSphere was designed to help transform IT-owned and operated datacenters into efficient and safe *private clouds*. VMware vSphere was also designed for service providers, hosters, and other companies looking to transform their datacenters into enterprise-friendly *public clouds*. Lastly, this release creates the foundation for connecting these different cloud types into a *hybrid cloud* that is based on open standards and that provides the flexibility needed to truly enable the delivery of IT as an efficient and customer-friendly service.

While VMware vSphere includes more than 150 new features when compared to Virtual Infrastructure 3.5, it is the significant advancements in performance, scalability, availability, security, and management that are particularly exciting. For example, vSphere includes the ability to apply security and policies that follow virtual machines as they migrate across the network, obviating previous regulatory and organizational challenges with virtualizing certain tier-one applications. Taken together, these advances give organizations the capability and confidence to virtualize 100% of their datacenters.

Furthermore, a rich set of APIs have enabled hundreds of other companies to integrate their products directly into vSphere. The industry leaders in compute, storage, security, and networking are taking advantage of these APIs by creating solutions that go far beyond the capabilities possible in a physical infrastructure. At the same time, a large number of start-ups and smaller companies are creating entirely new products and offerings that exploit the many capabilities that VMware vSphere delivers.

vCenter Orchestrator, and Site Recovery Manager help automate IT processes, while vCenter Chargeback assists in the organizational transformation of IT infrastructure to a

service. The just-released VMware View 4 also builds upon vSphere to deliver the most efficient virtual desktop infrastructure on the market.

A lot of important considerations go into designing and optimizing a virtualized datacenter. A business plan typically must first be created to sell the use case to senior management. A comprehensive architectural design follows, encompassing not only the deployment and configuration of vSphere, but also optimizing compute, storage, and network resources. Effective implementation of security, management, and automation tools are essential to a successfully virtualized datacenter.

In *Foundation for Cloud Computing with vSphere 4*, authors Arrasjid, Epping, and Kaplan met the challenge of covering these topics in under 120 pages. It is an easy and valuable read whether for virtualization novices or experienced IT consultants with years of ESX experience.

I'll close by wishing you pleasant reading and a great experience on your virtualization journey.

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December 2009