

Aidan Finn

MASTERING

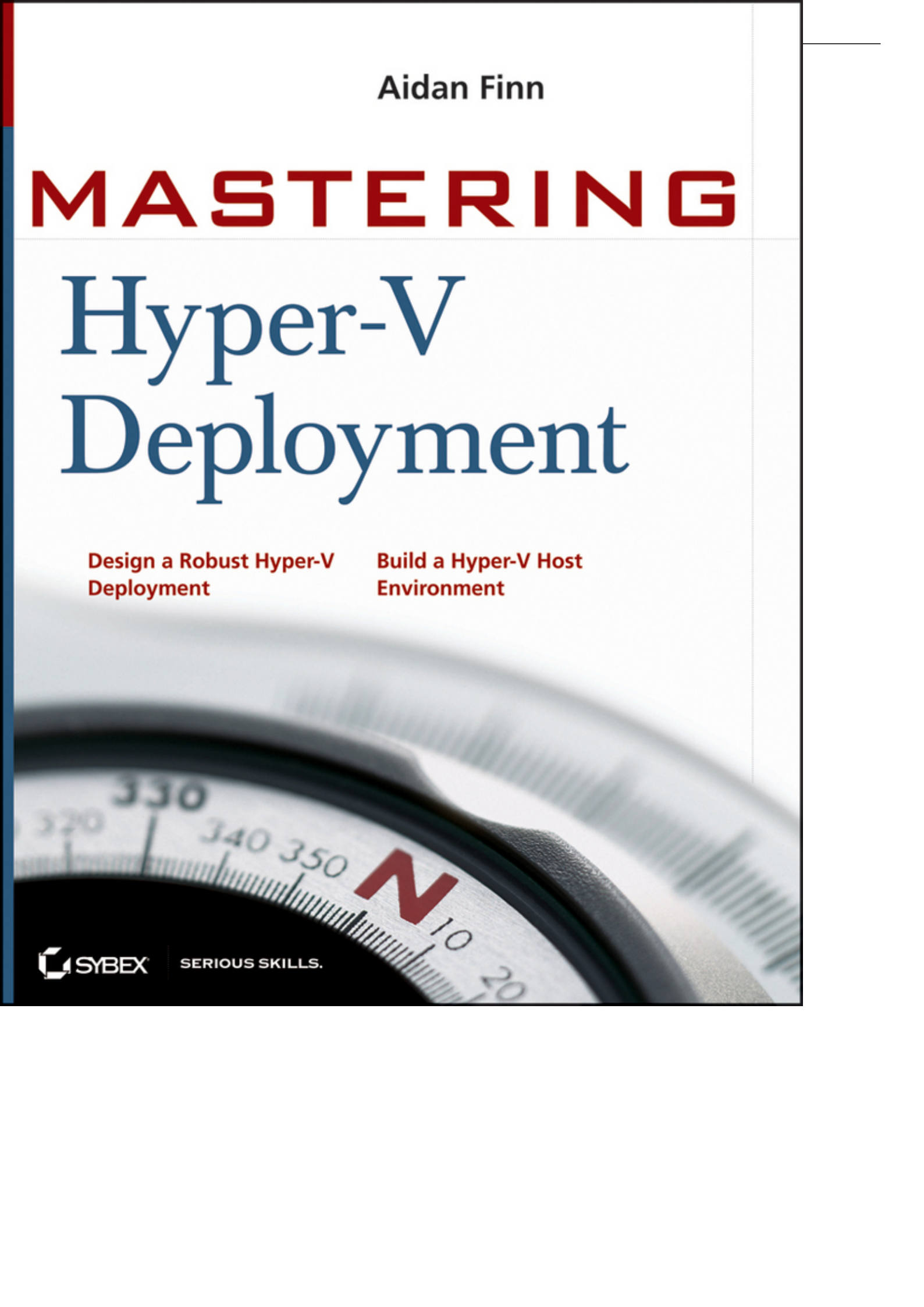
Hyper-V Deployment

**Design a Robust Hyper-V
Deployment**

**Build a Hyper-V Host
Environment**



SERIOUS SKILLS.





Mastering

Hyper-V™ Deployment

Mastering Hyper-V™ Deployment

Aidan Finn

Patrick Lownds



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A handwritten signature in black ink, appearing to read 'Neil Edde', written in a cursive style.

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To my family who made this possible.

Acknowledgments

So many people have helped with this book — many more people than I can thank here; after all, I have to think of the rain forests.

I knew that I would need help with writing this book. The deadlines would be tight, and the book needed to include some topics I haven't had much experience with. I asked fellow virtualization Microsoft Valuable Professional (MVP) Patrick Lownds to help with some of the chapters. Patrick is a detail-oriented person, and I knew he would provide you with complete knowledge in subjects that I have not dealt with. I could not have completed this book without his help. This book is a better product because of Patrick's knowledge and his willingness to share.

I was asked if I had a preference for the person who would be the technical reviewer for the book. This person had to ensure that everything we wrote was valid. I wanted someone with that expertise but also a person who would question me and raise alternative points of view. Hans Vredevoort was my first and ideal choice. Hans, a respected clustering MVP and virtualization expert, is a consultant in the Netherlands who works with all the technologies in this book. Hans didn't let me down; he corrected many mistakes and made me think, and I thank him for his efforts.

There are many people at Sybex who made this book possible. Rachel Gigliotti and Kim Wimpsett corrected my many grammatical mistakes, made it more understandable, and improved the quality of this book. Sara Barry managed the project and was always a joy to work with. Sara is the person who kept us on schedule and juggled all the pieces when the inevitable problems would occur. I also have to thank Agatha Kim. I approached Agatha with a very raw concept, and she helped me mold the idea into this book. I could not have done this without her faith in this project and the chance that she took with me, a first-time lead author.

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Mark Minasi is a friend, mentor, and inspiration for me. Not only have I learned a considerable amount from Mark over the years, but he gave me my first opportunity as an author. I will be forever grateful for his belief in me and his endless encouragement. Mark is the rare person who enjoys helping and seeing others succeed.

Finally, I have to thank my family and friends. My mother and father brought me up to always seek further education, to investigate why things work, and to think independently. They, and my sister, have been supporters without whom I would never have reached this point.

—Aidan Finn

About the Author

Aidan Finn (B.Sc., MCSE, MVP) has been working in IT since 1996. He has worked as a consultant, contractor, and systems administrator for various companies in Ireland and with clients around Europe. In recent years, Aidan has worked with VMware ESX, Hyper-V, and Microsoft System Center. Currently, Aidan is working as a senior infrastructure consultant in Dublin, Ireland.

Aidan is the leader of the Windows User Group in Ireland. He regularly speaks at user group events and conferences about Windows Server, desktop management, virtualization, and System Center. Aidan was also a Microsoft Most Valuable Professional (MVP) on System Center Configuration Manager in 2008. He was awarded MVP status with virtual machine expertise in 2009. He is a member of the Microsoft Springboard STEP program and is one of the Microsoft System Center Influencers. Aidan has worked closely with Microsoft, including online interviews, launch events, and road shows, and has worked as a technical reviewer for the Microsoft Official Curriculum course on Windows Server 2008 R2 virtualization.

Aidan wrote four chapters of *Mastering Windows Server 2008 R2*.

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Patrick Lownds (MCSE, MCTS, and MVP) has been working in the IT industry since 1988. He has worked as a junior IT analyst, systems engineer, consultant, and solution architect for various companies within the United Kingdom, working across a number of industry verticals for clients in the United Kingdom and Europe. In recent years, Patrick has worked with Citrix XenServer, VMware ESX, Microsoft Hyper-V, and a number of Microsoft System Center products. Currently, Patrick is working as a solution architect with Hewlett Packard and is based in Wood Street, London.

Patrick is the co-founder and co-contributor of the Microsoft Virtualization User Group in the United Kingdom. He regularly speaks at user group events and conferences about Windows Server, virtualization and System Center and is a member of the Microsoft System Center Influencers program. Patrick is a Microsoft Most Valuable Professional (MVP) and was awarded MVP status with the virtual machine expertise in 2009.

Patrick has worked closely with Microsoft for a number of years, including technology adoption programs, events, and road shows, and was a technical reviewer for *Microsoft Hyper-V Security Guide*.

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Foreword

After many years and many missteps, Microsoft has given us a top-quality server virtualization tool, Hyper-V Server. It's about time, then, for us Windows types to understand it. After all, if you already have Windows Server 2008 or 2008 R2, then Hyper-V is essentially free and in the box, so why not take it through its paces and see what it can do for you?

In my life as a technologist, I've been lucky enough to have seen great changes in the computer business. The 1970s brought us personal computers, and the 1980s brought us operating systems and useful applications for those computers. The 1990s brought an explosion of networking and *internetworking*, which led to another explosion: a massive increase in the number of computers needed to *run* that Internet. Fortunately, the 21st century's first decade brought virtualization, the technology that's gone furthest in reducing the number of computers needed to run the world. Virtualization is a technology that can save money, make IT greener, and ease the task of keeping our computers running reliably. Virtualization can do those things, however, only if we take the time to truly understand virtualization technology or, alternatively, if we're smart enough to find someone with the knowledge, tenacity, and hard-earned battle scars to handle that virtualization stuff for us, and to do it well.

In my life as an employer, a colleague, or a friend to techies of all stripes, I've been lucky to have worked with many folks in the IT community. Rarely, however, do I meet someone who doesn't just learn the minimum necessary to get by in some IT-related task. Of course, we *all* want to understand things "down to the bare metal," but as a rule, time pressures on and off the job often conspire to keep that from happening. My friend Aidan Finn is an exception to that rule, though. Once he gets interested in a subject, he refuses to leave it alone until he has mastered it as fully as is possible—and that quality is why I'm pleased that this book has found its way out of his cranium and onto the printed page.

Server virtualization can deliver much, but it's not all wine and roses, and newcomers to Microsoft Hyper-V shouldn't expect that a few wizards will be sufficient to get them up and running. Which servers are appropriate to virtualize, and which are not? How can you back up and, more important, *restore* virtual machines? Can you uproot and transplant an existing physical server into a virtual machine, and how best might you do that? Is it dangerous to run domain controllers as virtual machines? Will you find securing a virtual system harder than securing a physical one? Those are questions that I hear on my online forum—a forum that Aidan has been an active member for years—nearly every day. And nearly every day, Aidan is the guy (or *one* of the guys—it's a smart and feisty lot) with the answer, so if you're looking for Hyper-V help, you've come to the right place.

With that said, I think it's time for me to grab a seat, dig into a bucket of popcorn, and let Aidan take the stage. Come join me; there's an empty chair over here! The show is about to begin, and you don't want to miss any of it!

—Mark Minasi

Author of *Mastering Microsoft Windows Server* series

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