SERVER VIRTUALIZATION: HELP FROM THE CROWD

Top 15 Tips from Small Business IT Pros

To help small businesses equip themselves with the tools to implement server virtualization successfully, CDW asked small business IT managers on the CDW Corporate Advisory Board (CAB) and Spiceworks, the social network for IT, about their tips for other small businesses considering server virtualization. From the best place to start to the biggest pitfalls and how to avoid them, the small business IT managers share their experiences with server virtualization. CDW has compiled their best advice here.

Starting with virtualization:

1. Don’t let your company size deter you. “I wasn’t sure we were big enough for virtualization until I dug into it. There are so many great resources on the Internet. My experience with virtualization has been awesome. Setting up servers, as well as the maintenance, is so slick and easy.” – CAB member

2. Consider all benefits of virtualization. “Server virtualization just made sense financially and environmentally for us. Consolidating equipment that was end-of-life saves energy and space. Less equipment means it is quieter too. Newer machines are more powerful, so they can run the same tasks as older machines without breaking a sweat.” – Spiceworks member

3. Plan the investment and keep your eye on the long-term savings. “First thing we did was wait until we needed a big server and storage refresh. We are a small business with only about 15 servers. The biggest sticking point for me was the SAN storage, because that will be your biggest expenditure. Our software costs are actually cheaper now. Not only do I have Live Migration of virtual machines, but with the Windows 7 Server Pack 1, we now have the ability to use dynamic RAM on the virtual machines!” – CAB member

Selling the boss on the investment:

4. Keep it simple and focus on business benefits. “I focused on the rapid recoverability and specific business needs when telling management why we should invest in server virtualization. But typically, I didn’t get down to detailed specifics unless needed. It’s not about the server being physical or virtual – heck, how many bosses know how many servers you have now? We just need to tell them why server virtualization is the best cost/fit for the business.” – Spiceworks member

5. Talk about bang for the buck. “Server virtualization pretty much sold itself: minimized downtime, cost savings, manageability, improved disaster recovery, the maturity of the product – you get the idea. Using the VMware editions comparison chart and a handy IT budget we worked out the best bang-for-buck solution.” – Spiceworks member

6. Management understands that time is money; stress disaster recovery benefits. “Short term, the most compelling aspect of server virtualization is how it improves disaster recovery. I can make images of my servers now, but they won’t do me much good if the original servers are destroyed and I can’t replace them. I can make images of virtual machines using the backup capability I have and know that I can then put a new virtual system on a new server or servers and restore from my images.” – CAB member

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Pitfalls to watch out for:

7. **Be sure you have backup power.** “One risk is that if the power to one physical server goes down, it could take out the five or more servers it hosts. Good battery backups are nice and can help with this...” – CAB member

8. **Think about your data and application backup methods.** “I’ve found through experience that using traditional backup methods for virtualized systems is dangerous and short-sighted. It’s something that many people fail to consider when planning or deploying a new virtualized system stack, unfortunately, and definitely merits additional research and planning to maximize value from a virtualized platform.” – CAB member

Lessons learned:

9. **Don’t rush — set a timeline that makes the most sense for you.** “The biggest lesson I learned is to spread your server virtualization project out over more time. I don’t think it added any risk to our IT operations to roll server virtualization out in a fresh install method.” – CAB member

10. **Test. Always test the systems before launching.** “One thing I wish someone had told me is that virtualizing things doesn’t excuse you from basic testing. Always reboot your physical host, via reset button or power cord if you can, once the system has all of its services running on it. Make sure when it reboots it requires no user interaction for the services to come back up.” – CAB member

11. **Avoid virtual server sprawl.** “It is really easy to go over the top with virtualization. Keep the number of virtual machines to a minimum, creating new ones only when services don’t play well together, or when you need to limit access to a server to different groups of people. Otherwise you’re just paying money for the overhead in virtualizing and managing more servers, when instead you could stack services and manage fewer servers.” – CAB member

12. **Your host servers will be very busy, so beef up the RAM.** “Get as much RAM as you can. I won’t get anything now with less than 48GB. The other lesson was that moving the servers to a SAN improved performance a ton.” – CAB member

13. **Organize your new system with an eye on the future.** “One lesson I would give is to think big. How is your plan going to scale if your infrastructure grows 10x or 100x? Think about everything from the naming convention of servers to how you run your network cables. Plan on growing before you ever get started and it will make the process much easier in the long run. Virtualization does add more risk, as you have more eggs in fewer baskets. Just make sure you have enough baskets.” – CAB member

14. **Look at your existing systems’ performance to estimate resource needs.** “Before starting our virtualization project, I gathered performance logs to try to gauge how many resources I needed... It’s difficult to gauge how multiple virtual machines sharing the same drive array will perform with 100 percent accuracy until you actually do it. Memory, if anything was the easy part. Add up the RAM you need from performance monitoring and add 10 to 15 percent for overhead (without over committing).” – CAB member

15. **Anticipate data protection needs when assigning data classifications to your host servers.** “We learned that it is important to place like data classifications on each hosted operating system. It makes no sense to place critical data on the same hardware as non-essential data. It is a lesson on protection of Personally Identifiable Information.” – CAB member

To learn more about server virtualization at small businesses, download CDW’s Small Business Virtualization Roadmap report at [CDW.ca/virtualization](http://CDW.ca/virtualization)