

# Build Your Own VMware ESXi and Microsoft Hyper-V lab at Home, Using Affordable and Efficient Hardware.

Security BSides Boston, Saturday, May 18 2013

featuring... “vZilla”

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WHO, WHAT, WHEN, WHERE, WHY, AND  
MOST IMPORTANTLY, HOW?

# WHO?

IT Professionals.

We often find their work environment may be prohibitive for “playing,” for self-train, and getting ready for certification.

- Traveling the country, 30 of these 50 states, I met many who seek the same sort of home lab concept, largely for the same reasons. Cost is always the biggest concern, and time commitment to such projects is second.

# WHAT?

A nice efficient server.

What if you could build your own virtualization platform, using “off the shelf” components?

- a fun lab “playground” for you leverage at will, with considerably more grunt than your laptop
- a boring-is-good “production” server, for something a little more mundane, such as centralized backups?
- “kick the tires” on Virtual Appliances and iSCSI, NAS, Storage Spaces, whatever floats your boat...

# WHEN?

Anytime.

Particular handy when preparing for certification.

Especially handy if you're a home-office worker, like I've become.

# WHERE?

Your basement.

Even better, keep part of it in your mother's basement.\*



\*I'll get back to that, when you'll see that I'm actually not kidding.

# WHY?

Cost, convenience.

Used server-class gear may seem to be a great idea, until you try it at home, issues include:

- Heat
- Noise
- Power

Yea, that's a big one. 650 watts to run dual power supply Xeon I had an opportunity to measure, that's around \$1000 per year in electricity in our region, New England.

If you like to fiddle, consider building a more suitable for home use server instead, learning a lot along the way.

There will be pressure to serve your family well (backups).

Such a project likely makes you better at your day job as well (better real-world skills, and more peace of mind).

# WHY ME?

I'm a little twisted, let me explain.

I kind of like it when things go wrong on my system, because it's fun when I then get it right. I then enjoy the peace of mind I've earned, knowing I can make it far less likely to happen again, for me, and for everybody.

I don't particularly enjoy it when things go wrong on other's personal systems, which is why I simply revert to yesterday's backup, to get us both back to more important things in life.

I'm the kind of guy that prefers an SSD in my laptop for my C: drive, and a RAID0 of 1TB drives for my D: drive, see [TinkerTry.com/zillas](http://TinkerTry.com/zillas).

Need I say more?



# HOW

- [TinkerTry.com/vzilla](http://TinkerTry.com/vzilla), the efficient Core i7 beast within
- sweat the details: handles power outages and drive failures
- run a wide variety of Windows OSs, even Windows 8
- run variety of Windows Servers
- run Penguiny stuff (aka, Linux), and many more
- run like the wind, aren't SSDs great?
- nesting, yes, nesting, I'll explain
- This presentation is available at [TinkerTry.com](http://TinkerTry.com) tonight, just click the [Presentations](#) button!
- LET THE DEMO BEGIN...

# Demo

- Show Windows 8 VM, attaching USB webcam remotely, for a live view
- The selection of parts and the build
- Breaking past that 2TB barrier using RDM mapping or USB 3.0 pass through.
- Affordable RAID Enclosure by MediaSonic.
- Fast RAID by LSI, the 9265-8i, uses SSD to cache reads and writes

# Sites

[Practical ways to deal with VMware ESXi 5.0's 2TB virtual disk size limitation I abuse RAID arrays, and I'm not ashamed to admit it, Episode 2, Mediasonic HFR2-SU3S2](#)

[ESXi 5.1 has USB 3.0 support, sort of...](#)

[The reasoning behind vZilla's storage configuration](#)

[The reasoning behind vZilla's use of the LSI 9265-8i RAID Controller \(hint: SSD for RAID5 read-and-write caching\)](#)

[ESXi 5.1 host with LSI 92xx RAID adapter can run a VM with fully functional MegaRAID Storage Manager UI, here's how](#)

[VMware ESXi 5.1 can run Microsoft Hyper-V Server 2012 VMs, nice!](#)

[Windows Server 2012 Essentials article list](#)

[How to use a CyberPower UPS solution for proper automated shutdown of your VMware ESXi lab during power outages, including all VMs](#)

[Paul Braren's guest blogger articles on IT Pro Guru Blog by Systems Management Expert Dan Stoltz](#)

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# Thank you!

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