

Personal Reflections on moving to the Dark Side of the Force – becoming a VENDOR!

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Disclaimer

- Everything in this presentation is Jeff's opinion, and not that of his employer or anybody else, probably.
- So, what else is new?

What's different

- Vendor, not customer (that's the Dark Side bit, eh?)
- Moving from VM advocate to IBM competitor
- Moving from "person who does things" to "person who advises people" (and "does things" in spare time)

Why?

- Old place got toxic (and has worsened)
 - "Do it or else" vs. "Do it because its right".
- Tired of pulling the same bunny (bear?) out of the hat, for example:
 - get tapped for key project, do it on VM
 - fight to justify VM, even though success
 - get blamed for being successful on VM
 - in 1.5 years, others redo elsewhere at great cost
- Wanted to see if I had the "chops" to succeed in tech company, and outside VM

What I miss

- The VM user community. There is nothing like it in the world
 - Calls, e-mails after 9/11 came from around the world – I was very touched. Thank you!
- XEDIT, REXX, CMS Pipelines for programming, daily life
 - Many other aspects of VM as well.
 - I don't miss SES (just teasing, guys)
 - (I finally found a decent editor for Unix, tho)

Sun-isms – Culture

- "It's not just a job, it's a wardrobe"
- "Never fail alone"
- It's okay to e-mail Scott, but don't send an attachment. He really, really hates them
- Do it if it makes sense
- Much less beauracracy and BS than I'd had before
- Glad I moved

Sun-isms – with competitors

- Grudging use of laptop PCs with Win98
 - We did say it was a monopoly, didn't we?
 - Controversial and argued over
 - Hardcore runs Linux or Solaris/86 on laptops
- Recognition of competitive virtues of other vendors' products
 - Most vendors have some degree of "why would any sensible person buy anywhere else".
 - Sun's gotten better since early days recognising value of (for example) mainframes

Technology Surprises

- "Wow, really?" moments. For example:
 - Almost all of real storage management, and interaction with file buffer cache
 - We let people run 3rd party filesystems?
 - May be A Good Thing: stimulated FS competition
 - Low level details, for instance, Interrupts:
 - Not all interrupts are "one shot" like 390: int line can be "held high" (so to speak) till cleared
 - Interrupts automagically get a thread context, rather than a "post from FLIH"
 - Binding of I/O interrupts to specific CPUs

Where have I seen this before?

- Parallel evolution works in computers too:
 - "TS"-like instruction before SPARC v9; then added CS/CDS style
 - File buffering scheme vs. MDC
 - "SRM" with shares!
 - "kill" command "too harsh", so POSIX added "sigsend" (think: CMS "kx" vs. "hx")
 - Low priority used to be better than high; then swapped (just like VM/SP -> VM/XA)
 - Used to have same "raise prio after short wait" trick that affected VM/SP

Different language spoken

- Is a blank X'40' or 0x20 ?
- Seeing "VM" in different contexts, eg:
"SunOS VM" still makes me twitch a little
- Upper case filenames, 8x8 convention,
space instead of "dot" seems a little weird
now. Upper case is "shouting"
- Sometimes the same word means
something completely different. Can be
confusing

Some very clever things

- Linear scale on large RAM, N-way systems
 - eg: "SMP-hot" kernel and IP stack;
Process/LWP/thread model
- Executables, data shared in RAM without magic (ex: executables mmaped and fault in)
- Pluggables: filesystems, schedulers (!), etc...
- "Slab allocator": "freecell" speed, data structure cache, release on storage pressure



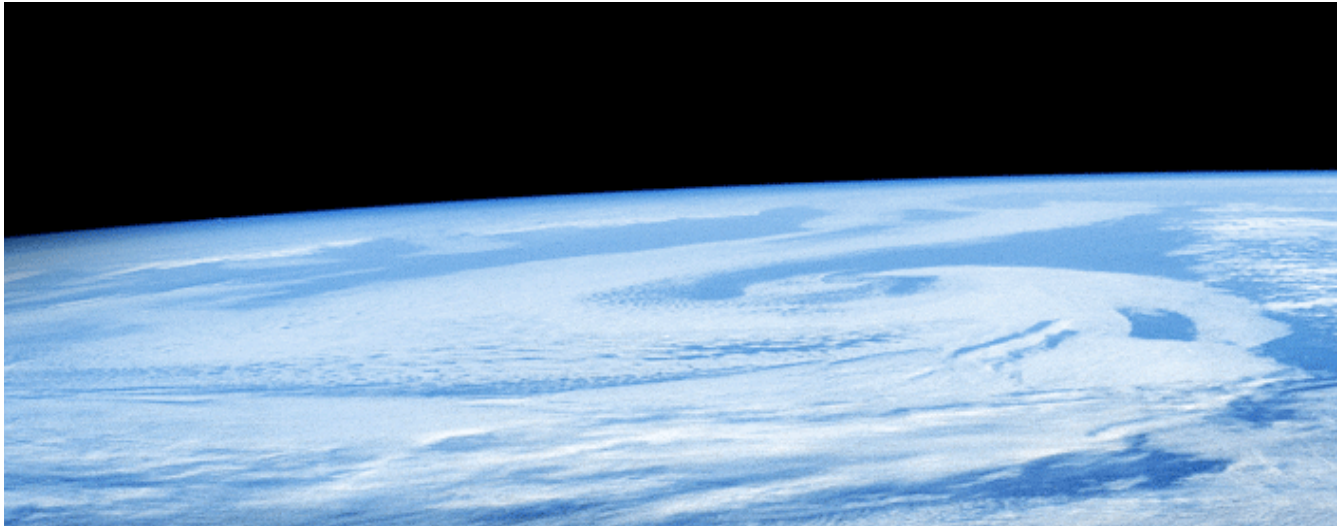
Jeff's theory of feature evolution

- "Computer systems exhibit Darwinian selection of features based on purpose and economic factors present during design"
 - MVS, VM designed for predictable batch throughput (MVS), low latency timesharing (VM) on small RAM, MIPS systems (eg: 158), evolved for larger systems
 - Solaris designed for IP, client/server on MIPS-rich and RAM-rich systems, and then evolved for SMP scale and heterogeneous workloads
- Not a "good vs. bad" issue

What's the same / experiences

- I still love VM, but appreciate other things more than before. Some very impressive tech
 - vi still sucks, though
- Have to be more careful about what I say about vendors than before
- I'm still opinionated
 - There's no rotating key in my back
 - I have been heard at Sun to say "No, that's wrong way – you need to do like <name of VM feature>





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