Addressing Cultural Barriers Faced When Deploying Linux on z/VM

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SHARE 9324
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Outline

• My perspective
• The need for the two worlds to accept each other
• What each world thinks of the other
• What you can do to ease the pain
My Perspective

• Experience with a product that deploys Linux on z/VM instances
• Exposure to both VM and Linux folk
• Roots are with the Linux world, particularly with Linux on different architectures
• I have learned some lessons the hard way
A note about generalizations

• Grouping people isn’t an exact science, but can help you identify patterns
• We can all identify exceptions to these generalizations
The need for Integration

- Linux on z/VM really is a great platform!
- Typically adopted in one of three ways:
  - VMers using Linux for the first time (most likely)
  - Linux people using z/VM for the first time (rare, access to hardware is difficult)
  - VMers and Linux people coming together (true consolidation, still rare)
Prejudices

- Human beings are naturally xenophobic
- Learning something new and different is normally difficult
The Value of Community

- Community is vital when there are significant obstacles
- both z/VM and Linux communities are driven by technical goals, although those goals are different
z/VM Community

- Right here, at SHARE
- VMers do it at work, then take it a step further
- lots of appreciation on software vendors
Linux Community

- Young people and a young community
  - often inexperienced
  - can learn a lot from the z/VM community
  - little experience with software aging, few backward compatibility problems

- myth: everyone in the Linux community understands open source and software licensing
Types of Linux Communities

There’s now two different communities:

• Community of Developers
  – programmers who created Linux
  – often don’t understand software vendors

• Community of Users
  – people trying to do real work
  – often sys admins with a history with other UNIX platforms
Both Communities have had Tough Times

For better… or worse:

- VMers: decline of IBM support for z/VM in the 90’s
- Linux: hurt by failed startups and tech market slump (eg. VA Software)
The Worlds are Different

Don’t sweat the small stuff:

• terminology is different
  – disk vs. DASD
  – memory vs. storage
  – operator vs. sys admin

• editors

• terminals
The Important Differences are in Values

- The big stuff is what matters: values
- The two communities are used to different things
Things VMers Value

- Process and structure
  - many groups each responsible for one part
  - “process leads to predictability” is foreign to the young ones
- Control and reliability
  - used to running mission critical systems
- Total utilization
  - expensive hardware and shared systems
  - need for efficiency
- Backward compatibility
Values of Linux Community

• Enterpreneurial spirit: “let’s see if this works…”
• flexibility, Linux everywhere
  – embedded and appliances
  – small and big IA32 servers
  – multiarchitecture (Sparc, PPC, MIPS, m68k, etc)
• knowing a little about a lot
• interoperability
• open source
• free (like beer) software
Typical complaints from Linux folk

- “This platform is too slow”
- “This process is too slow”
- “How could you not know about TCP/IP?”
- “These guys do not understand security”
Typical complaints from VMers

• “These punks know nothing about software development”
• “There’s no measurement tools”
• “Who do I buy Linux from?”
• “These guys do not understand security”
• Networking is far more difficult than you’d expect
• Hipersockets are truly great, but:
  – still poorly documented (there’s no “Hipersockets HOWTO”)
  – closed source Linux drivers mean the Linux community can’t help
  – poorly tested and integrated by Linux distribution vendors
  – new to both VMers and Linux folk
Management Problems with Networking

- Typical mainframe shops have a separate group for networking
- That group often doesn’t understand either Linux or z/VM
Improvements to Linux on z/VM

- There’s a lot of room for improvement
  - faster (scheduling, memory management, etc)
  - better drivers
  - more reliable
  - better cross-platform management tools
  - more applications
Improved Documentation

- More z/VM newbies are to be expected
- IBM documentation likely to get better
- Linux HOWTOs need to be written
Linux on z/VM Community

• This community will grow through both Linux and z/VM communities
Easing the pain

- What you can do
- Try it!
  - VMers: install Linux on a cheap PC and play around
  - Linux folk: use the LCDS
- Grow the community
Some suggestions

- Expect some culture shock
- Expect networking problems
- Don’t sweat the small differences
- Spend time and play before deploying
- Be patient with people without your experiences
- Contribute back to the community
Questions

- Please, fill out the evaluations! Session 9324
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