What's new with SUSE® Linux Enterprise Server 10 SP4 for IBM System z

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Agenda

• Introduction
• System z specific
  ‒ Hardware support
  ‒ Usability improvements
  ‒ Software additions/removals/updates
• Non-System z specific
  ‒ Security enhancements
  ‒ Usability improvements
  ‒ Software additions/removals/updates
• Questions (I'll also take questions during the talk.)
Introduction

• Service Pack 4 is (almost certainly) the last service pack for SLES10. Final service packs are usually focused on new hardware enablement. As such, major changes are to be avoided as much as possible.

• Even so, we had a number of new enhancements for System z and in general.

• As usual, lots and lots of bug fixes and small enhancements that were created for SP3 have been included.

• Note that I will not be talking about any features introduced in SLES10 GA through SP3. This is only about changes introduced in SLES10 SP4.
### SUSE Linux Enterprise Standard Platform Lifecycle

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- 10-year lifecycle (7 years General Support, 3 years Extended Support)
- Major releases every ~4 years, service packs every 16-18 months
- Six month upgrade window
- Long Term Service Pack Support – extend upgrade window or extend major release lifecycle
### SUSE Linux Enterprise

#### Current Platform Lifecycle

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<th>2009</th>
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- SUSE announces Service Pack releases and development and product schedules to customers and partners
- Dependable release timing
- Predictability for planning rollouts and migrations
System z specific
Hardware support
Hardware Support

• Enhanced qeth for new network device type support
  - OSX/OSM CHPID
  - z196 and z114 systems (Fate #309788, IBM # 63600)

• Optimized Latency Mode (OLM) toleration
  - Limited # of stacks can access an OLM OSA Express 3
  - This will provide meaningful a message if you're rejected (Fate # #309789, IBM # 63602)

• FICON - HyperPAV enablement
  - (Fate # 309805, IBM # 63563)
Usability improvements
Usability Improvements

• Dump on panic - Prevent reipl loop
  - Update to the s390-tools
  - New DELAY_MINUTES keyword in dumpconf (Fate # 309790, IBM # 63603)

• snIPL enhancement to trigger SCSI dump on remote container (Fate # 309791, IBM # 63604)

• zipl support for device mapper devices, with restrictions
  - Physical device is of type DASD or SCSI
  - All blocks on the logical device correspond to blocks on the same physical device
  - Adjacent blocks on the logical device correspond to adjacent blocks on the physical device
  - Access to block 0 of the physical device
Usability Improvements (2)

- Openssl-libica toleration for 4K keys when using the crypto hardware
  - Current implementation blocks usage of the crypto hardware for supported algorithms when one algorithm not supported by the hardware uses the card while it is shared with other processes.
  - Actually considered a bug fix. (Fate # 309850, IBM # 63612)
Software updates/additions/removals
Software Updates/Additions/Removals

• snIPL to 2.1.9 (Fate # 309792, IBM # 63606)
• Added 31bit compat library for c++ Boost (Fate # 309795, IBM # 63610)
Non-System z specific
Security enhancements
Security enhancements

- chroot of sftp for openSSH (Fate # 305918)
- Implement sudo options SETENV and NOSETENV
  - Keeps “untrusted” users from malicious/errant manipulation (Fate # 309458)
- Include DH Groups 22-24 for Strongswan
  - Don't ask me what this means. See http://w3.antd.nist.gov/usgov6/TSTs/IKEv2_v1.0_C.html (Fate # 309537)
Usability improvements
Usability Improvements

• Updated AutoFS kernel module
  - Fixes several very difficult-to-fix-otherwise bugs
  - In conjunction with updating userspace tools (Fate # 309394)

• Reserve ports for applications using fixed port numbers
  - Such as IMPI, NFS, home-grown applications
  - Prevents daemons from grabbing ports that other daemons need
  - Introduces /proc/sys/net/ipv4/ip_local_reserved_ports (Fate # 310019)

• Change MPIO defaults to exclude friendly names
  - If incorrect friendly names are used with MPIO, corruption can occur on the filesystems. See TID 7001133. (Fate # 310081)
Usability Improvements (2)

• Extend lscpu virtualization detection
  - Current only recognizes x86_64 and x86 Hypervisors
  - Now extended to System z and PPC64 (Fate # 310255)

• Libraries created on SLES11 can now be used for compilation/linking on SLES10
  - Could be accomplished before with --hash-style=both, but that could have other effects on applications. (Fate # 310795)
Software updates/additions/removals
Software Updates/Additions/Removals

• BIND 9.6
  - Provides DNSSEC support (Fate # 308859)
• Java 1.4.2 SR13 FP5 (Fate # 309752)
• Java 5 SR12 (Fate # 309845)
• SBLIM Java CIM Client 1.3.9.1 (Fate # 309756)
• AutoFS 5.0.5 (Fate # 310757)
• squashfs v3 (Fate # 312500) ??????
Questions
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