State of SELinux

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Birthdays

- SELinux is turning 18 years old
  - First release December 22, 2000
- Part of mainline Linux for 15 years
  - Linux v2.6.0-test3 released August 9, 2003
- Part of Enterprise Linux for 13 years
  - RHEL 4 released February 15, 2005
- Part of Android for 5 years
  - Android 4.3 released on July 24, 2013
  - Enabled on ~96% of devices (as of July 23, 2018)
Kernel Changes

- New access controls for eBPF
- Added proper SCTP access controls
- Support SO_PEERSEC on socketpair(2) sockets
Userspace Changes

- Toolchain support for SCTP and InfiniBand objects
- Improvements to semanage and semodule
  - List home directory entries with ‘semanage fcontext -l’
  - Enable/disable multiple modules at once with semodule
- Python 3 support for selinux-gui
Reference Policy Changes

- Migrated to the “SELinuxProject” on GitHub
  - All SELinux development in one place (sorta)
- Merged the “contrib” sub-module into the main repo
- Two releases this year with enablement and fixes
Who is SELinux? (kernel since Sept 1, 2017)

- Change summary
  - 71 change sets
  - 31 developers
  - 3055 lines added
  - 1725 lines removed

- Top 10 by lines changed
  - Stephen Smalley: 1947 (62.7%)
  - Richard Haines: 438 (14.1%)
  - Peter Enderborg: 182 (5.9%)
  - Chenbo Feng: 166 (5.3%)
  - Eric W. Biederman: 71 (2.3%)
  - Jann Horn: 45 (1.5%)
  - Alexey Kodanev: 32 (1.0%)
  - Paul Moore: 27 (0.9%)
  - Richard Guy Briggs: 27 (0.9%)
  - Greg Kroah-Hartman: 26 (0.8%)
Who is SELinux? (userspace since Sept 1, 2017)

- Change summary
  - 170 change sets
  - 20 developers
  - 7024 lines added
  - 7143 lines removed

- Top 10 by lines changed
  - Nicolas Iooss 5413 (61.3%)
  - Petr Lautrbach 805 (9.1%)
  - Jan Zarsky 707 (8.0%)
  - Stephen Smalley 569 (6.4%)
  - Marcus Folkesson 438 (5.0%)
  - James Carter 332 (3.8%)
  - Vit Mojzis 310 (3.5%)
  - Richard Haines 107 (1.2%)
  - Jason Zaman 45 (0.5%)
  - Yuli Khodorkovskiy 25 (0.3%)
Who is SELinux? (policy since Sept 1, 2017)

- Change summary
  - 214 change sets
  - 24 developers
  - 120905 lines added
  - 3553 lines removed

- Top 10 by lines changed
  - Chris PeBenito 117494 (96.6%)
  - Sven Vermeulen 1591 (1.3%)
  - Dave Sugar 808 (0.7%)
  - Richard Haines 440 (0.4%)
  - Jason Zaman 393 (0.3%)
  - Guido Trentalancia 189 (0.2%)
  - Christian Göttscbe 159 (0.1%)
  - Luis Ressel 134 (0.1%)
  - Nicolas Iooss 123 (0.1%)
  - James Carter 56 (0.0%)
How to Get Involved

• Kernel (official)
  • git://git.kernel.org/pub/scm/linux/kernel/git/pcmoore/selinux.git

• Kernel (mirror) / Userspace / Reference Policy / Tests
  • https://github.com/SELinuxProject

• Mailing Lists
  • https://www.nsa.gov/what-we-do/research/selinux/mailing-list.shtml
  • http://oss.tresys.com/mailman/listinfo/refpolicy

• Me
  • @securepaul
  • paul@paul-moore.com