Deprecating Code

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OvS At a Glance

3.6.0 Releases, by the Numbers

- 716 entries in AUTHORS.rst: from Aaron Conole to 张强 (Zhang Qiang)
- 20k+ commits in main branch (since Git move in 2009)
- 916 .c, .h, or .py files; 464kloc
- 47th release listed in NEWS; 1st was v0.90.5, in 2009)

But What About Old Code?

- It seems that after 15 years of development, some may be present
  - Compatibility with old dependencies
  - Unmaintained features and ports

- How do we want to handle this?

Minimum Distribution

- Defacto minimum Ubuntu 14.04
  - End of legacy support: April ~~2026~~ 2029*
  - OpenSSL: 1.0.2g → no OVS SSL support†
  - Python: 3.4.0 → OVS needs manual build of Python 3.7+
  - GCC: 4.8.2
  - Kernel: 3.13

[*] Source: https://ubuntu.com/about/release-cycle
[†] OpenSSL v1.1.1+ is required for SSL support

New Minimum Distribution

- Natural next choice would be Ubuntu 16.04
  - End of legacy support: April 2031*
  - OpenSSL 1.0.2g → still no OVS SSL support†
  - Python 3.5.1 → still need manual build of Python 3.7+
  - GCC 5.3.1
  - Kernel 4.4

[*] Source: https://ubuntu.com/about/release-cycle
[†] OpenSSL v1.1.1+ is required for SSL support

More Modern Minimum Distribution

- Ubuntu 20.04 would provide SSL support
  - End of legacy support: April 2035*
  - OpenSSL 1.1.1.d
  - Python 3.8.2
  - GCC 9.3.0
  - Kernel 5.4
- But this seems likely to get ahead of too many users

[*] Source: https://ubuntu.com/about/release-cycle

Minimum Kernel Version

- No explicit minimum Kernel version
  - Recently fixed to build on Kernels older than 4.1*
  - Ubuntu 16.04 support implies support of 3.13

- Proposal
  - Drop support for OOT Kernel module
    - Expected to allow significant cleanup
  - Minimum Kernel version of v3.12
    - Includes VXLAN Tunnel support†
  - Consider later move to minimum kernel version of v4.4
    - Also includes Conntrack and Geneve tunnels†

[*] f83d2e4d53ad ("netlink: Fix build on kernels < 4.1 due to missing RTA_VIA.")
[†] https://docs.openvswitch.org/en/latest/faq/releases/

Minimum GCC Version

- Would facilitate moving to a more recent C standard
- For reference, the Kernel recently moved a minimum of GCC 8.1.0*
  - But still uses C standard gnu11
- May be easier if OOT Kernel module support is removed

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[*} commit 118c40b7b503 ("kbuild: require gcc-8 and binutils-2.30")

Somewhat Unsupported

- Windows Port
  - Little used
  - Difficult to maintain
- AVX512 Support
  - Also little used?
  - No active maintenance
  - Some risk encountered: Downfall*

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[*] https://downfall.page/

Discussion

- What is our approach minimum distro, Kernel, GCC, ...?
- Do we want to remove old code?
- What is our approach?
  - Deprecation schedule?

Credits

- Ilya Maximents: much background information