LTS for OSM Community
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What is LTS?

Long-term support (LTS) is a product lifecycle management policy in which a stable release of computer software is maintained for a longer period of time than the standard edition.

Short term support (STS) is a term that distinguishes the support policy for the software's standard edition. STS software has a comparatively short life cycle, and may be afforded new features that are omitted from the LTS edition to avoid potentially compromising the stability or compatibility of the LTS release.

https://en.wikipedia.org/wiki/Long-term_support
Why Do We Need it?

● Production use
  ○ Upgrading with every release is not feasible
  ○ OSM might drop support before production is ready to upgrade
  ○ Consumers of OSM rely on having bug and security fixes

● Reduction of overhead
  ○ Community actively supports 3 releases: master, latest, latest-1
  ○ Bug fixes must go into all branches
  ○ With LTS, point releases for STS can be reduced
Patterns of LTS

- **Linux kernel: even/odd**
  - Even for production use, odd for feature development/unstable

- **Ubuntu**
  - Designate specific releases as LTS, interim releases are STS

- **OpenStack**
  - Maintained, Extended Maintenance, EOL

- **K8s**
  - No LTS

- **ArchLinux**
  - Rolling release, it has a stable branch and a testing branch
## Examples of LTS

<table>
<thead>
<tr>
<th>Software</th>
<th>LTS Length</th>
<th>STS Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debian GNU/Linux</td>
<td>5 Years</td>
<td>3 Years</td>
</tr>
<tr>
<td>Django</td>
<td>3 Years</td>
<td>16 Months</td>
</tr>
<tr>
<td>Firefox</td>
<td>1 Year</td>
<td>6 Weeks</td>
</tr>
<tr>
<td>Linux Mint</td>
<td>5 Years</td>
<td>6 Months</td>
</tr>
<tr>
<td>Node.js</td>
<td>18 Months</td>
<td>12 Months</td>
</tr>
<tr>
<td>Ubuntu</td>
<td>5 Years / 10 Years ESM</td>
<td>9 Months</td>
</tr>
<tr>
<td>Windows 10</td>
<td>10 Years</td>
<td>18 Months</td>
</tr>
</tbody>
</table>
What We Do Now

v10
v11
v12
v13
v14
v15

Dec 2021
June 2022
Dec 2022
June 2023
Dec 2023
June 2024
Dec 2024
LTS for 24 Months, STS for 6 Months
What does that mean for bug fixes?

- **LTS**
  - Production bugs
  - Security patches
  - Minor bugs or bugs not experienced in production might not be backported
  - Protect integrity of branch
  - **No new features in LTS point releases**
  - Point releases on demand for security/critical issues

- **STS**
  - Any bug reported against that version
  - Possibility of new feature in point release
  - Point releases on fixed schedule
New Features

- **LTS**
  - Firm cut off date: feature must be merged 1 month before LTS release
  - Release notes must include list of all bugs fixed
  - Rigorous testing needed
  - Documented and tested upgrade procedures from LTS to LTS

- **STS**
  - Lax cut off date for features
  - Features can be put into point release
  - Release notes may be limited to features only
  - Upgrades not guaranteed
Procedure for Approving Changes in LTS

- LTS must be tightly controlled and kept stable
- Only approved bug fixes should go into LTS
- Need to define procedure
  - How to recognize production bugs
  - What to do with trivial bugs from STS/master development
  - What level of testing is needed
  - Robot test or at least unit tests added for every bug fix!
Challenges

- 2 year span and support for helper libraries
- VIM and K8s cluster connections/API can be deprecated along the way, the upgrade path is not clear sometimes
- Helper "modules" or applications also have their lifecycle
What version to keep as LTS

- V10.0 [X]
- v11.0
- v12.0
Thank you