



ELISA
Enabling **Linux** in
Safety Applications



WORKSHOP

NASA Goddard 2024

SGI Interest Survey Results

WHAT WE LEARNED

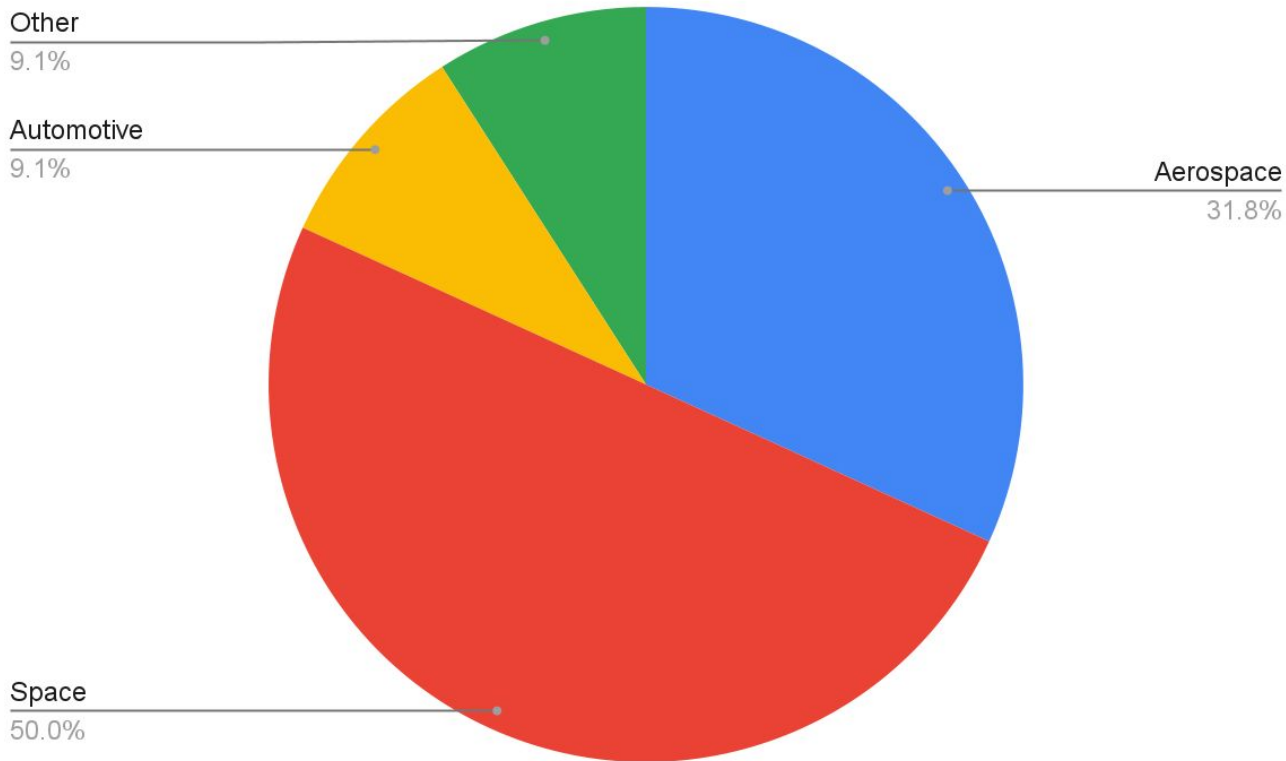
Areas of Interest

- **Configuration:** predefined starting point
- **Bootloader / Updates:** Take into account the safety implications.
- **User Space:** support the most common apps/workflows

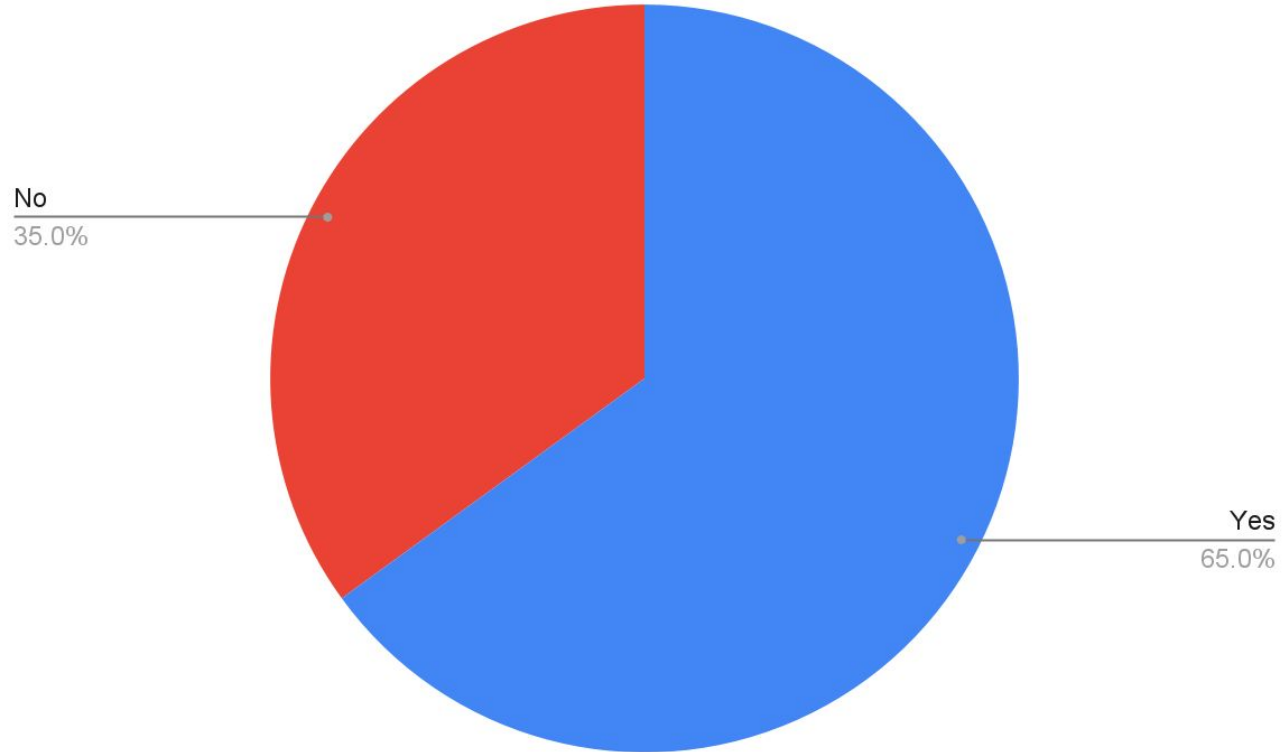
Number of total answers

20

People Responded



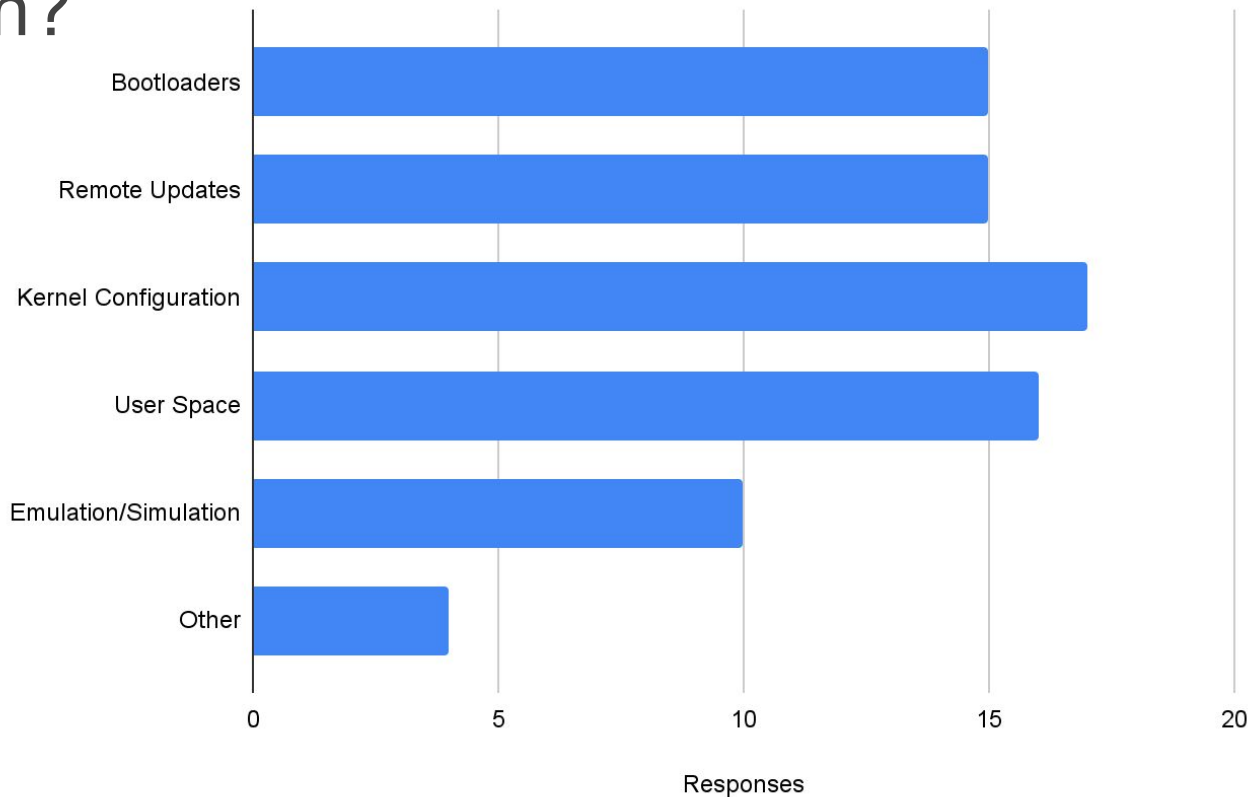
Are you currently using Linux for space-based projects?



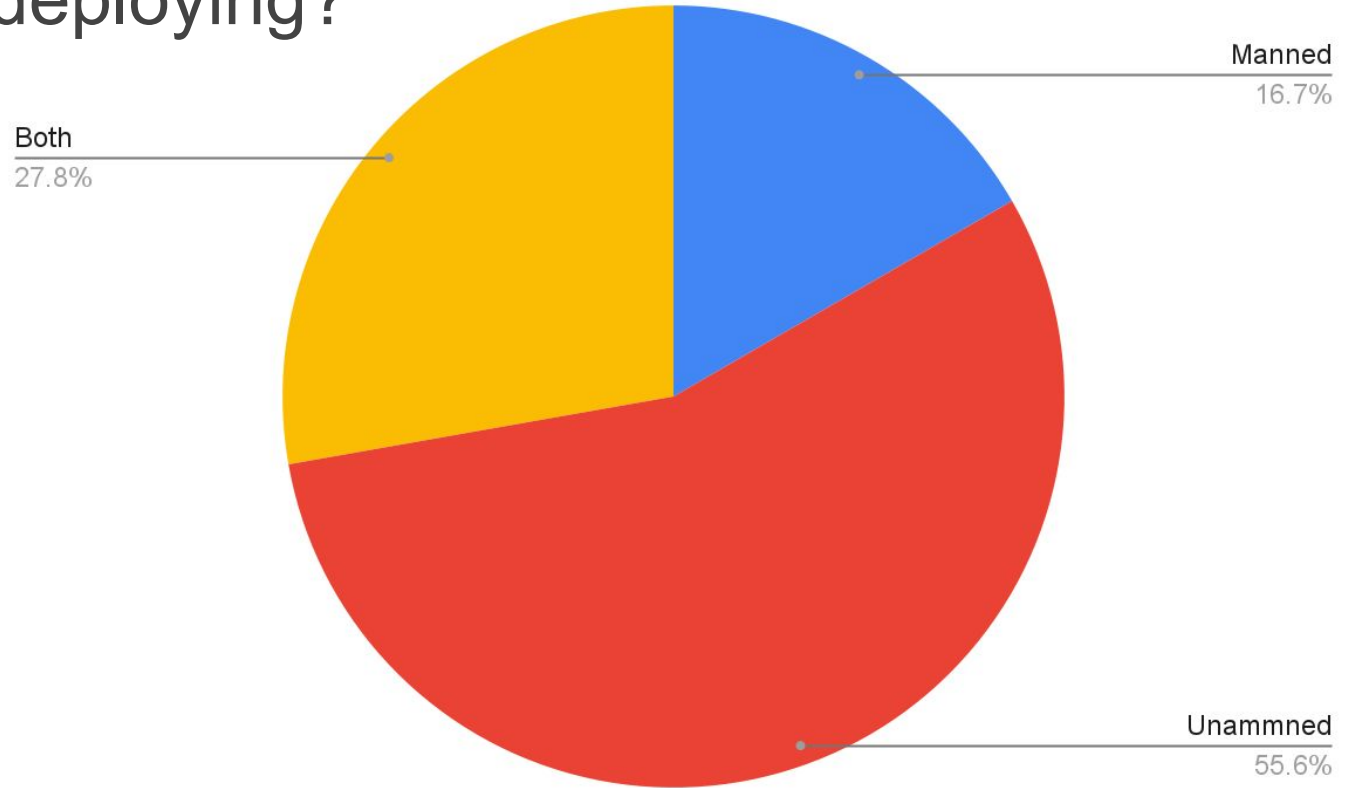
Which areas are you most interested in?

Other:

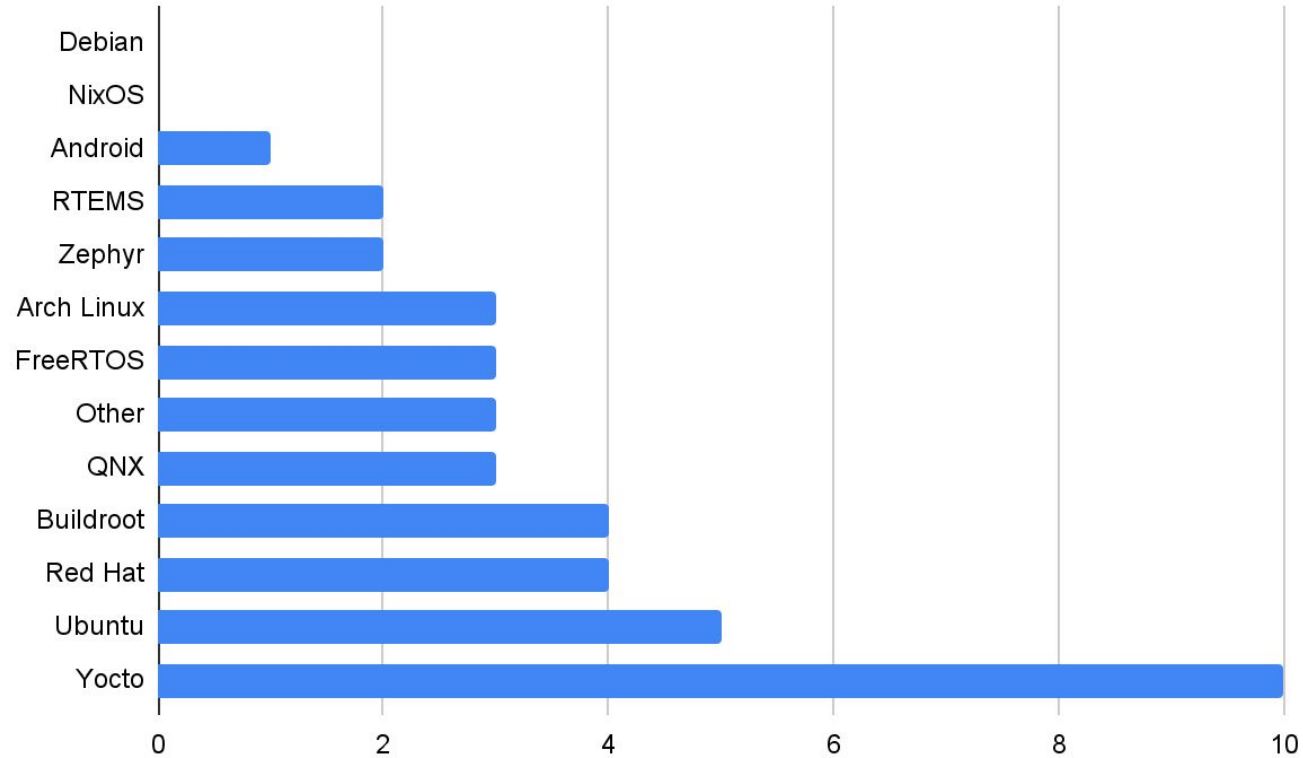
- Qualification & Certification
- Build Systems



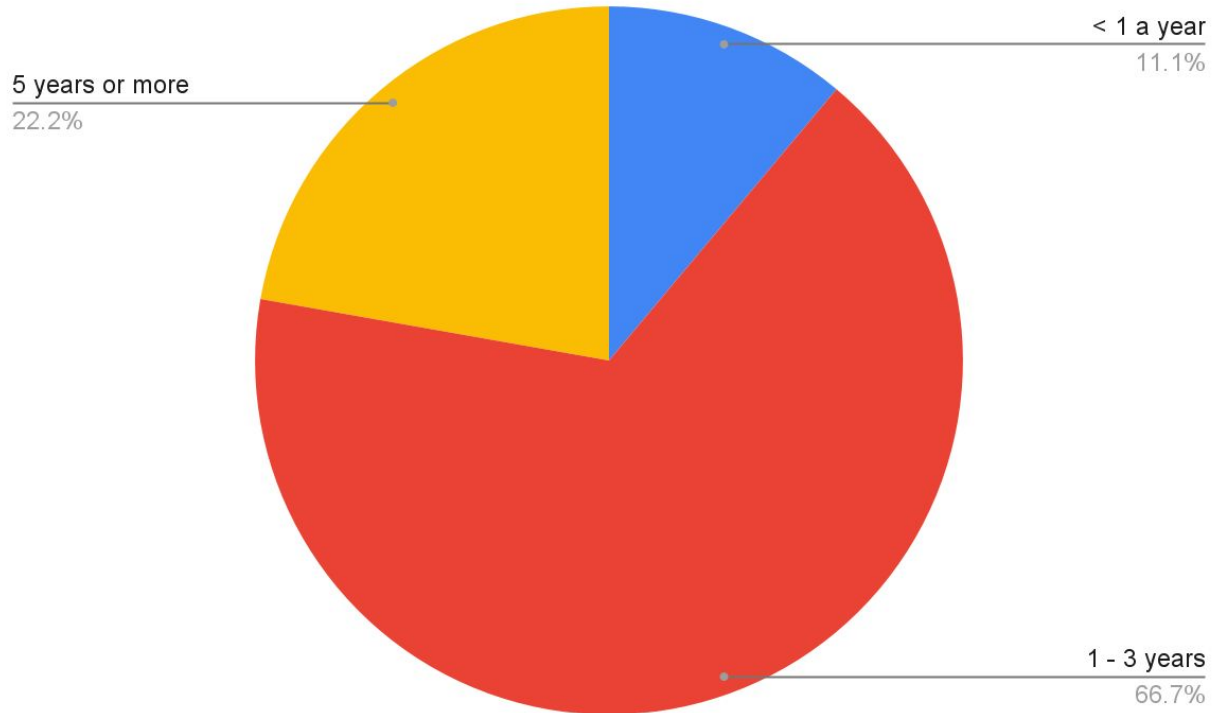
For Space/Aerospace: Are you currently deploying?



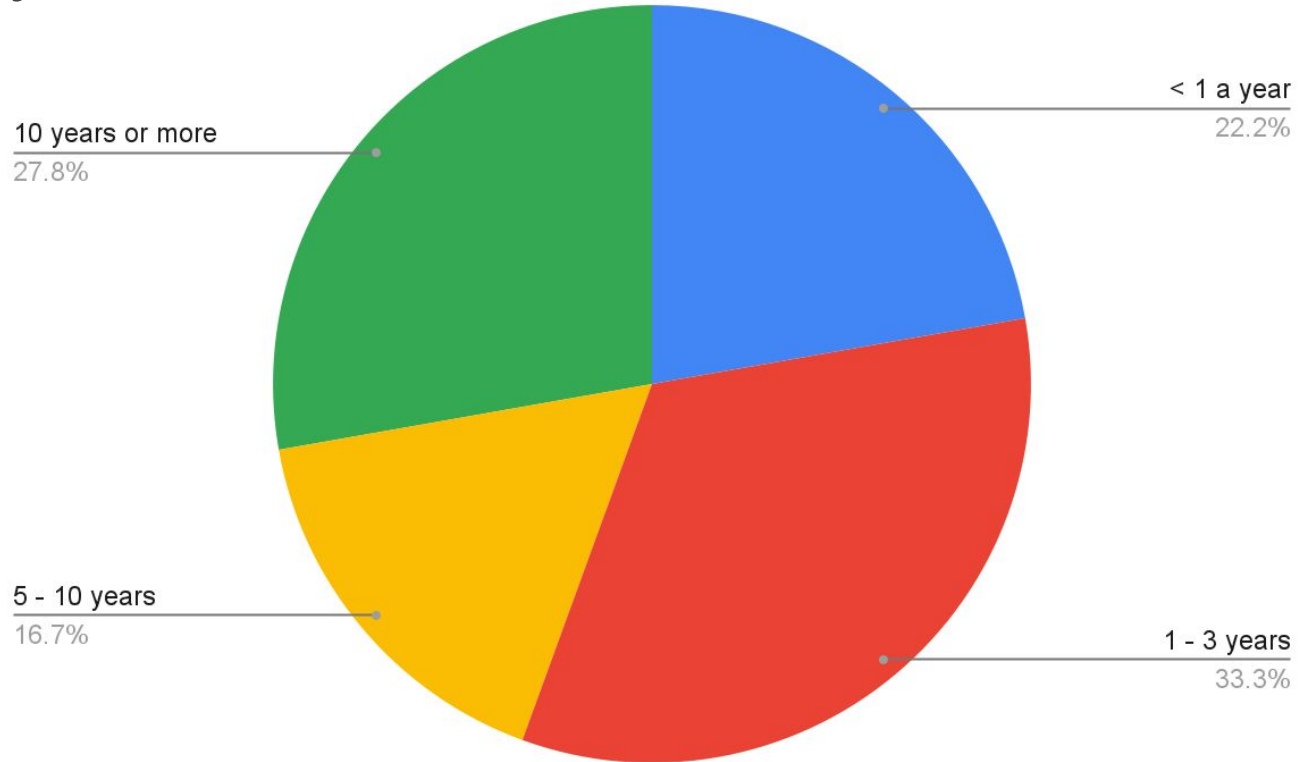
Which of the following distributions are you currently using on target



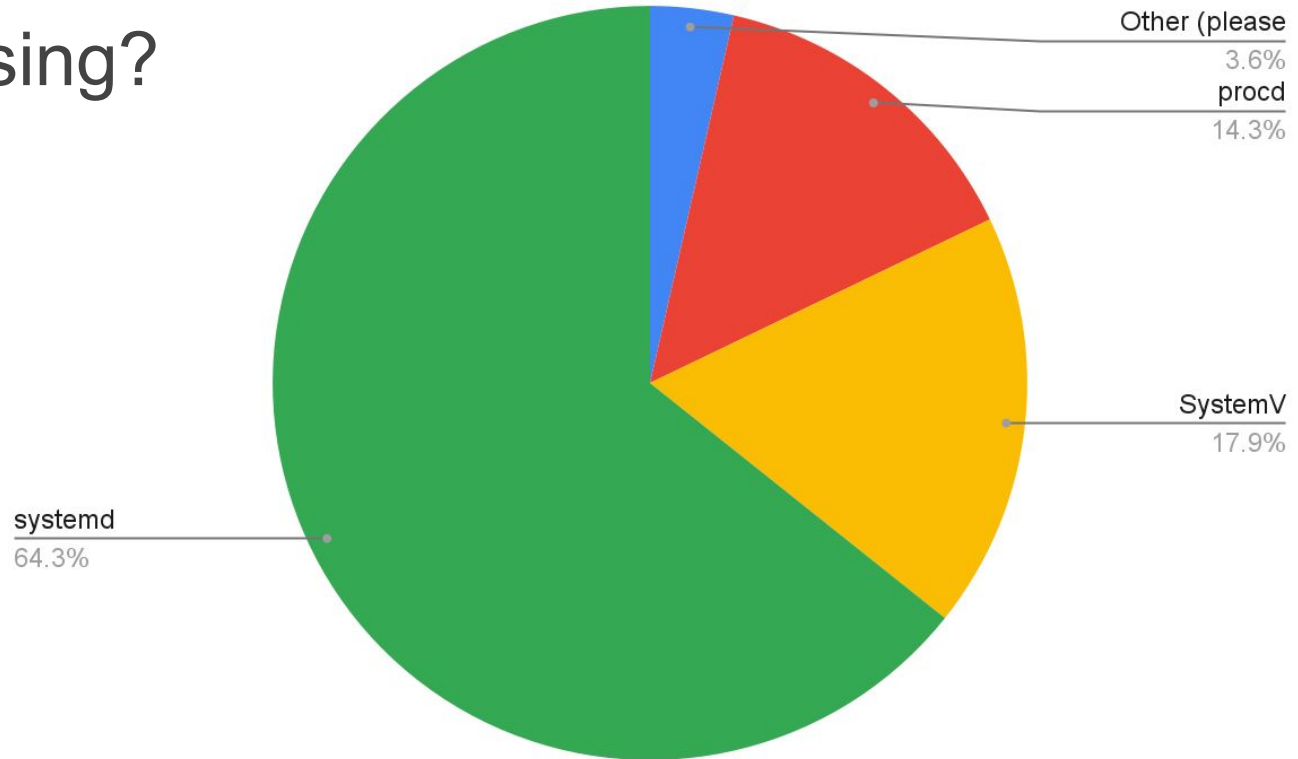
For Space/Aerospace: What is the expected development life cycle of the system/mission?



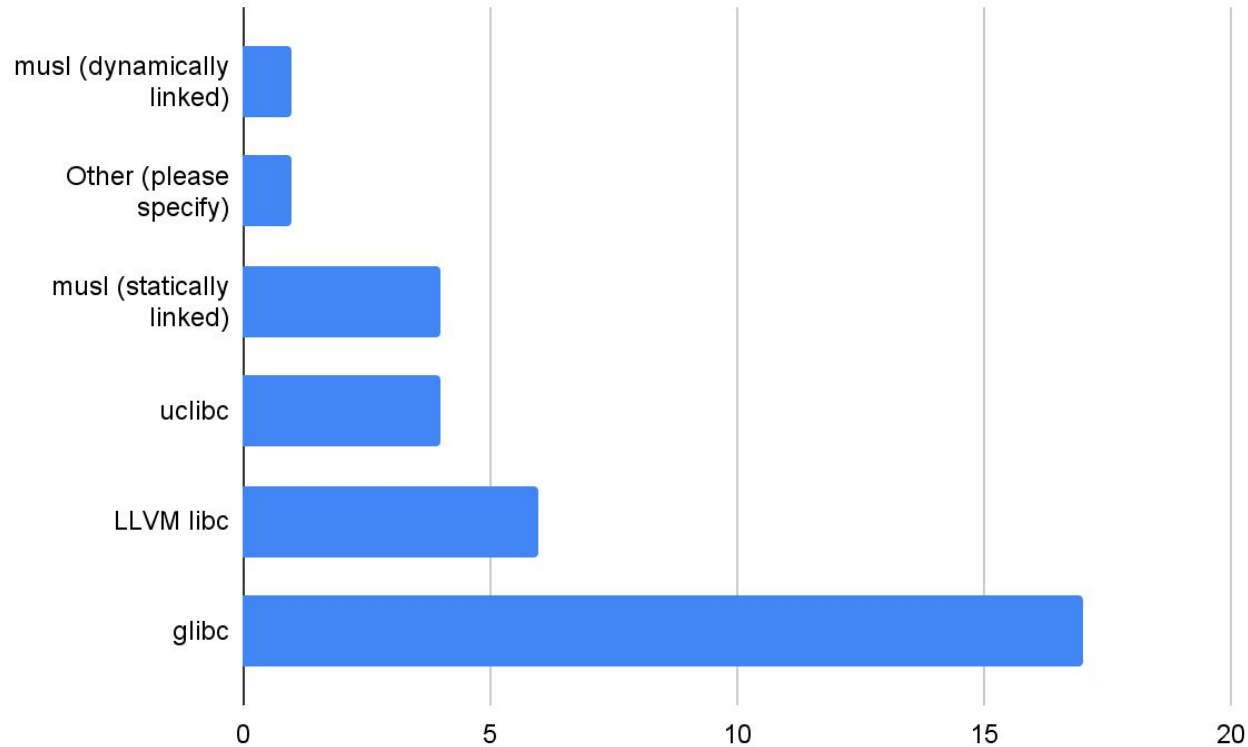
For Space/Aerospace: What is the expected operational life cycle of the system/mission?



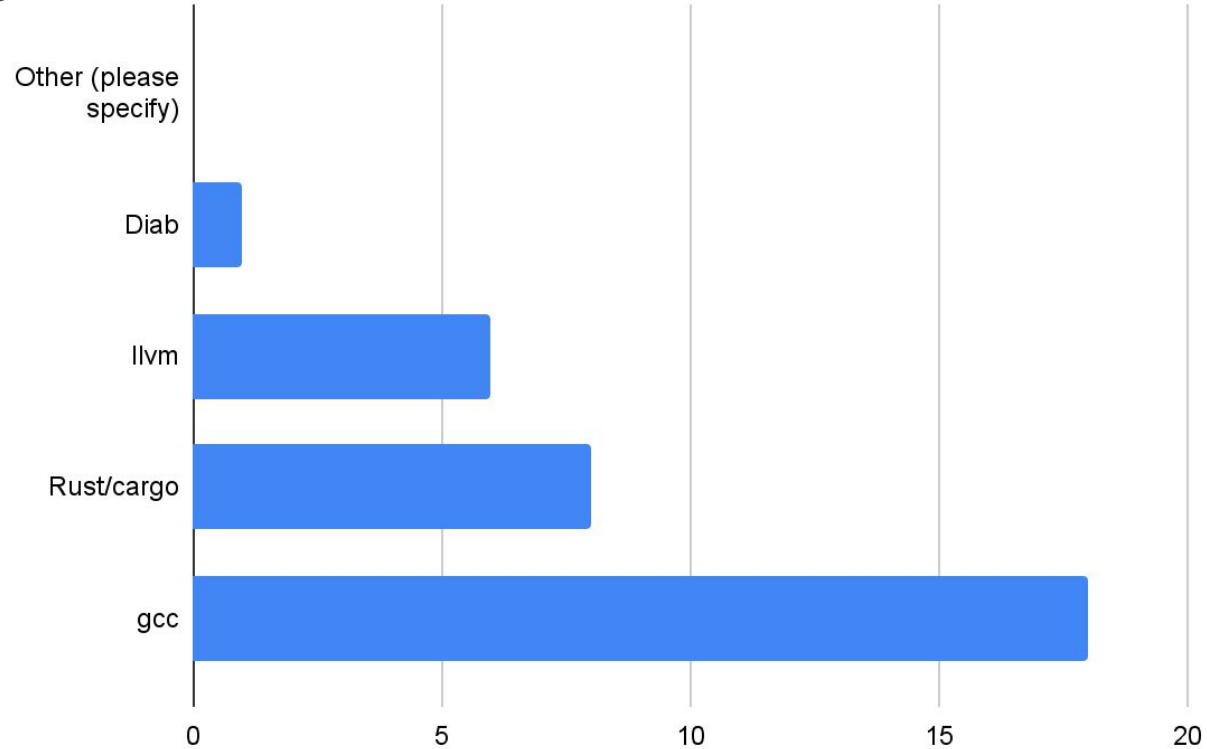
Which of the following System Daemons are you currently using?



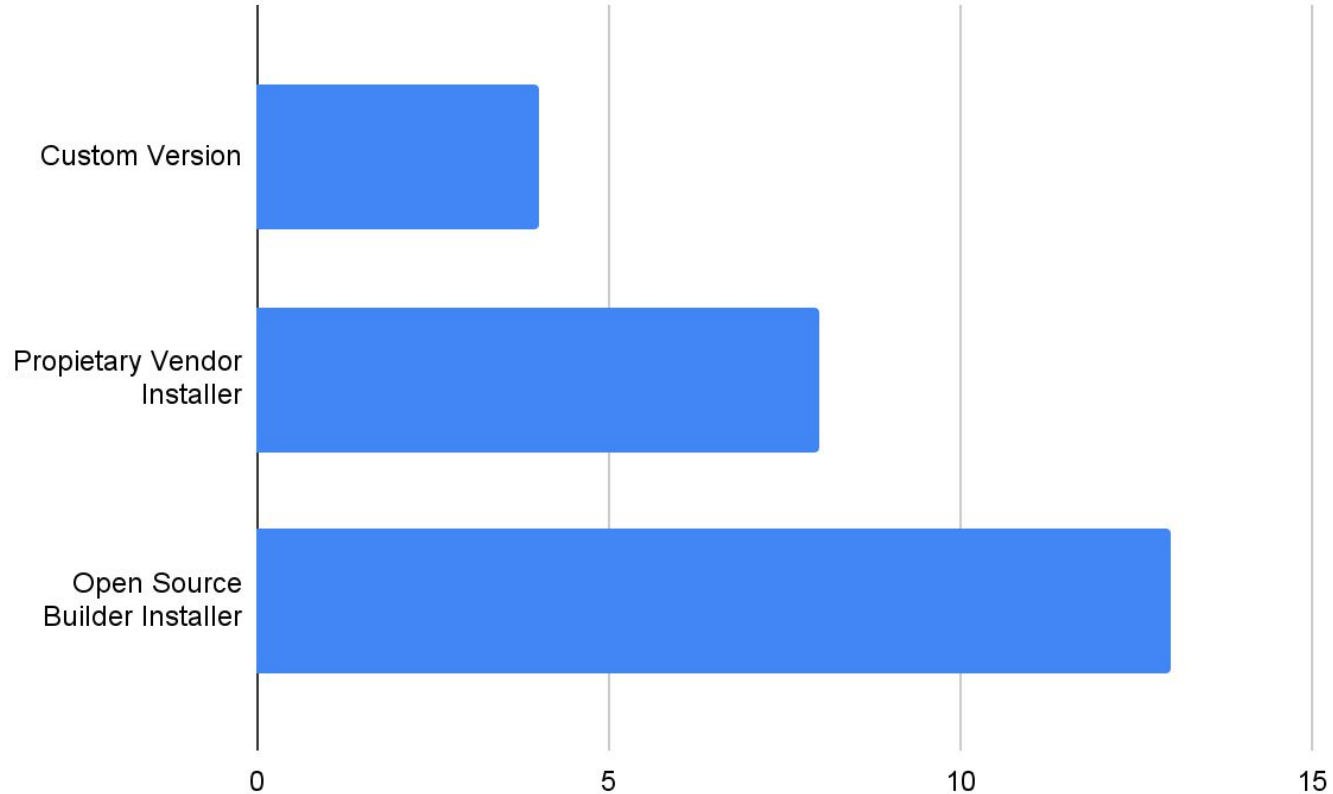
Which of the following Standard Libraries are you currently using?



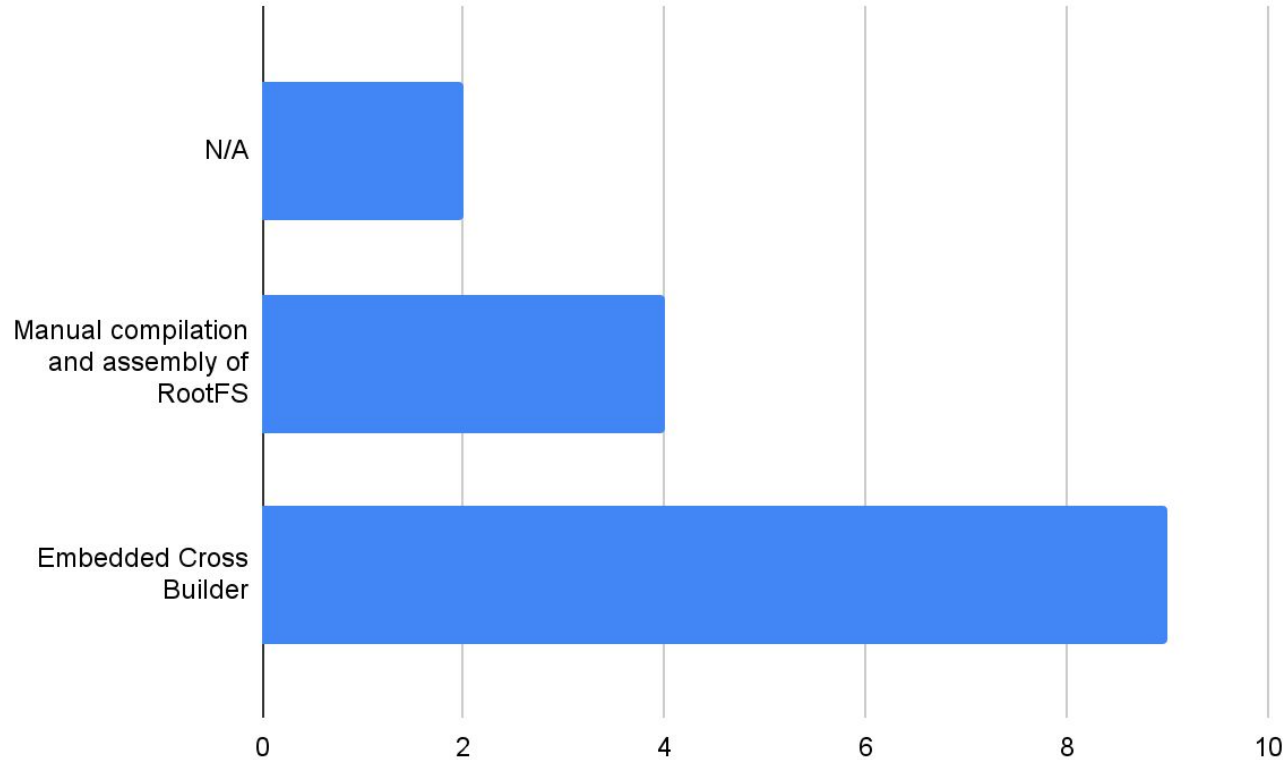
Which compilers are you currently using?



How is your target OS assembled?



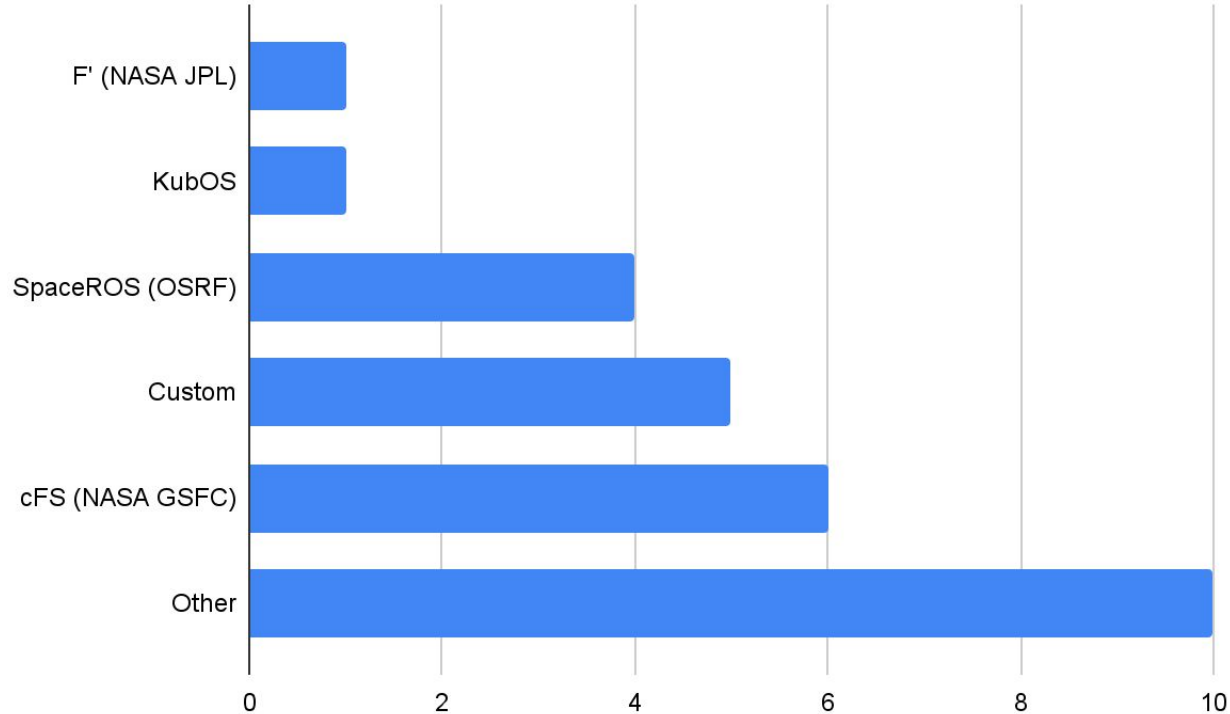
IF Custom: How are you building?



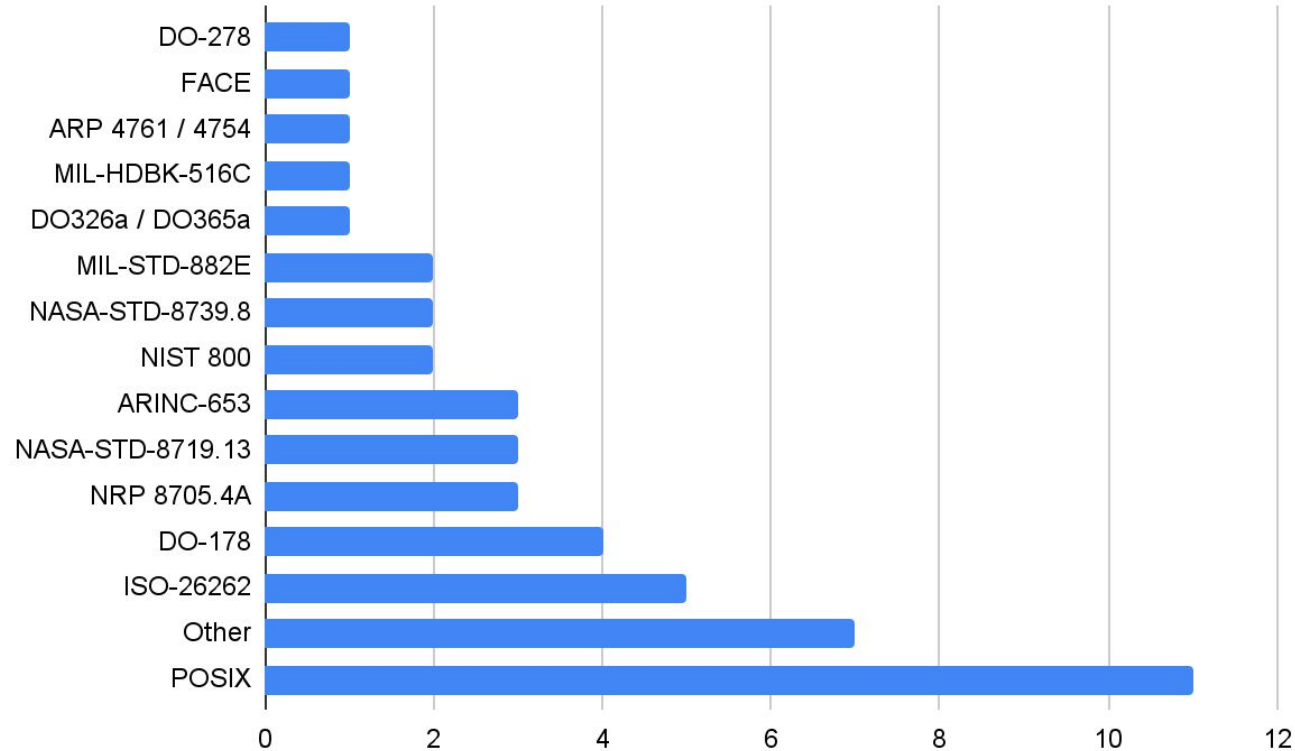
Are you currently using any of the following Flight software stacks?

Other:

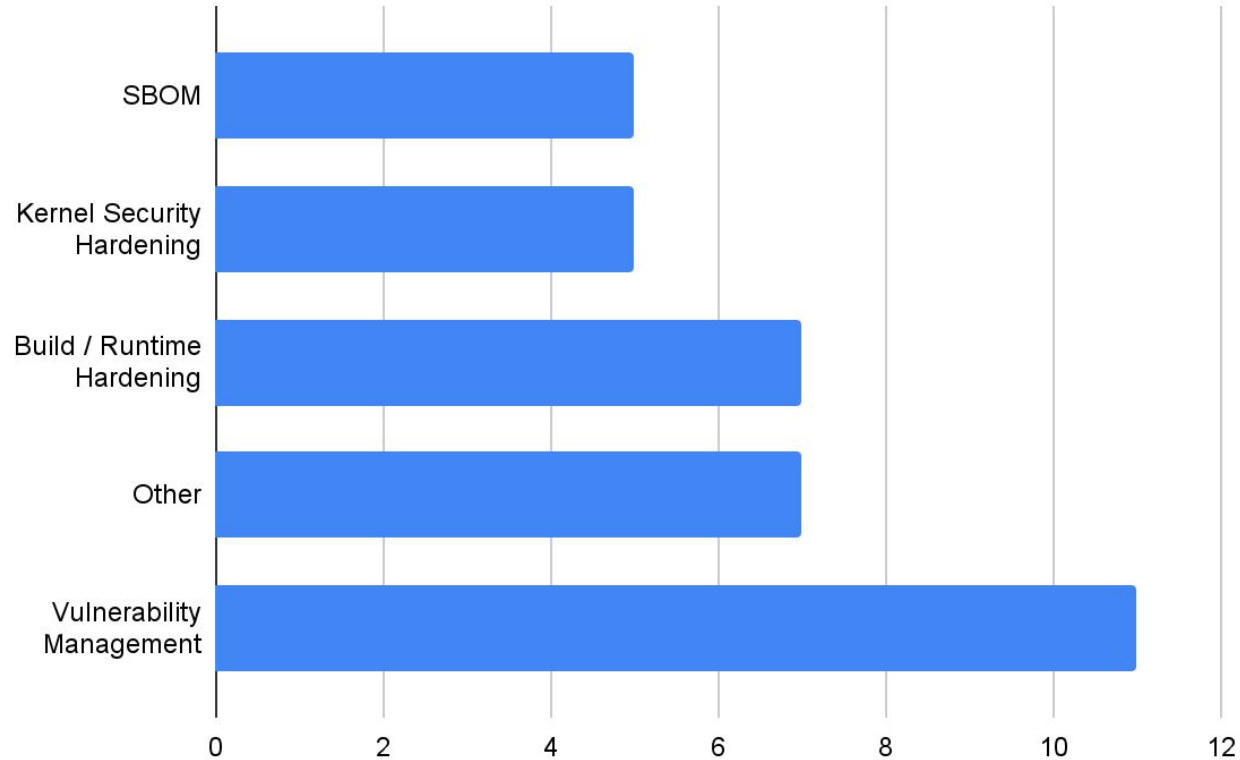
- N/A
- Custom
- Just experimenting at moment.
- LVCUGEN
- Odyssey's ENCORE Flight Software Framework
- POSIX
- Planning to use Fprime



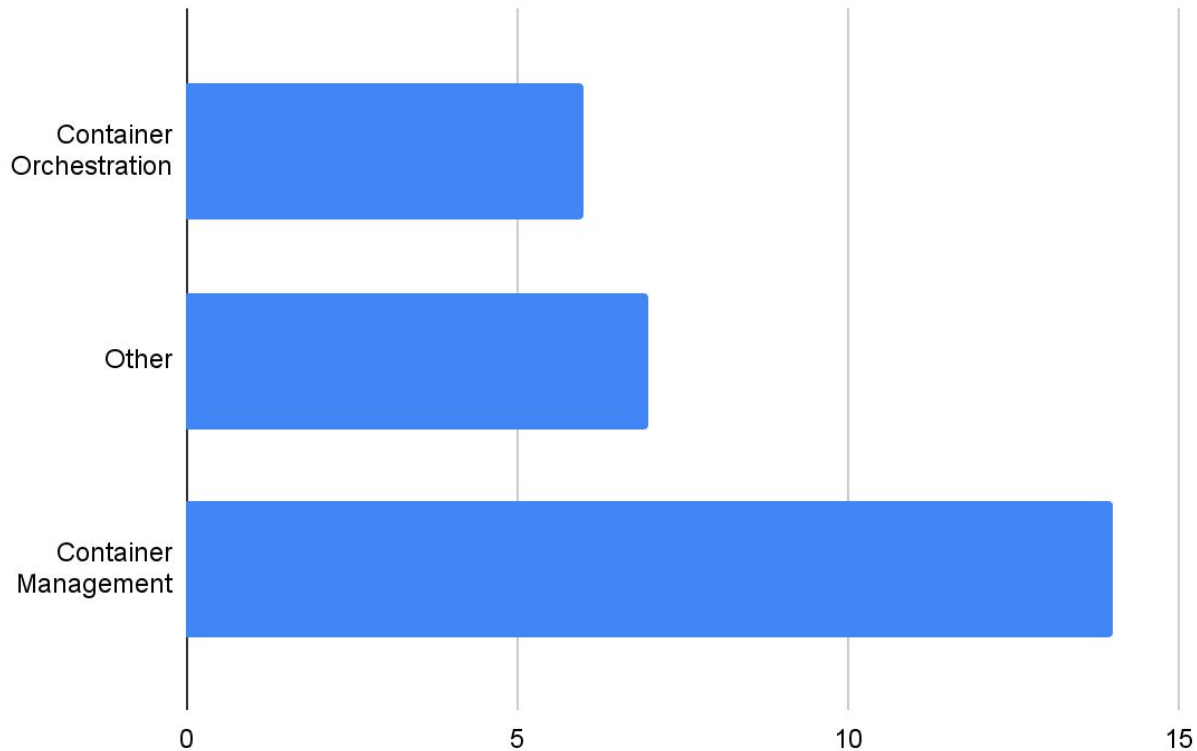
Which of the safety/security standards do you need to conform with?



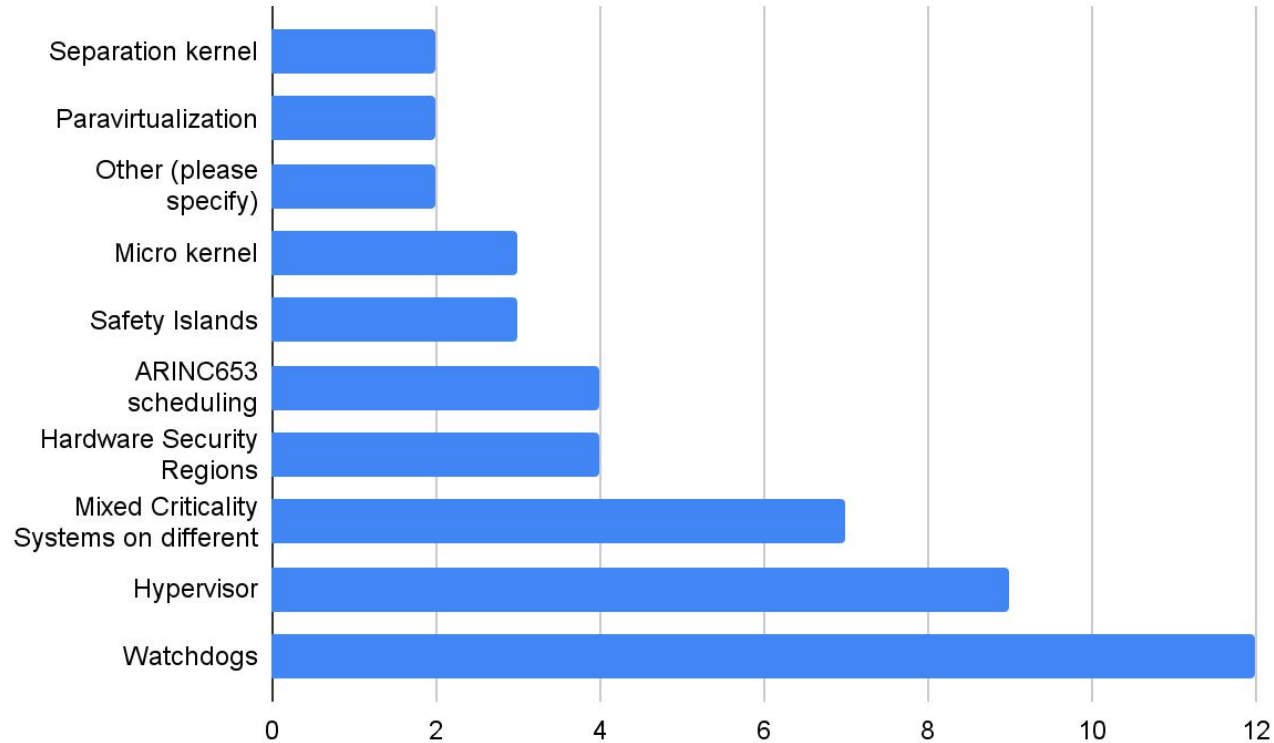
Are you currently using any of the following security practices?



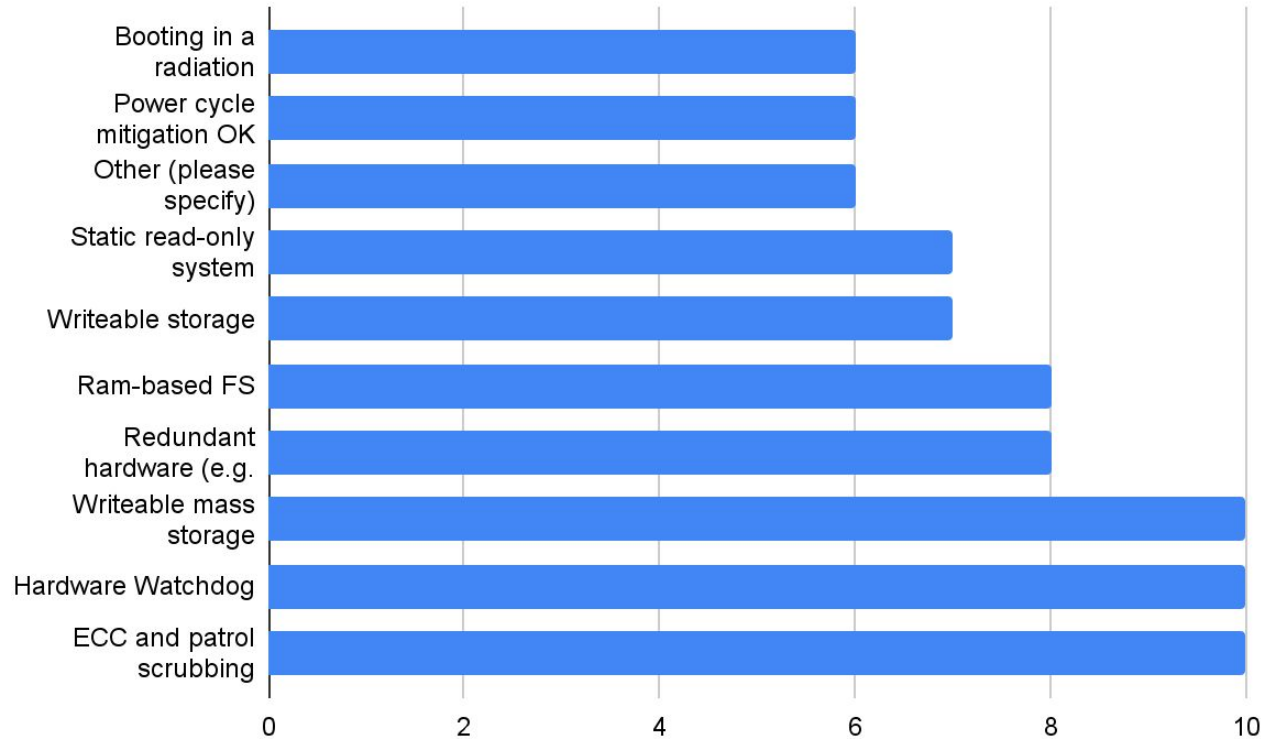
Are you managing orchestration with any of the following tools?



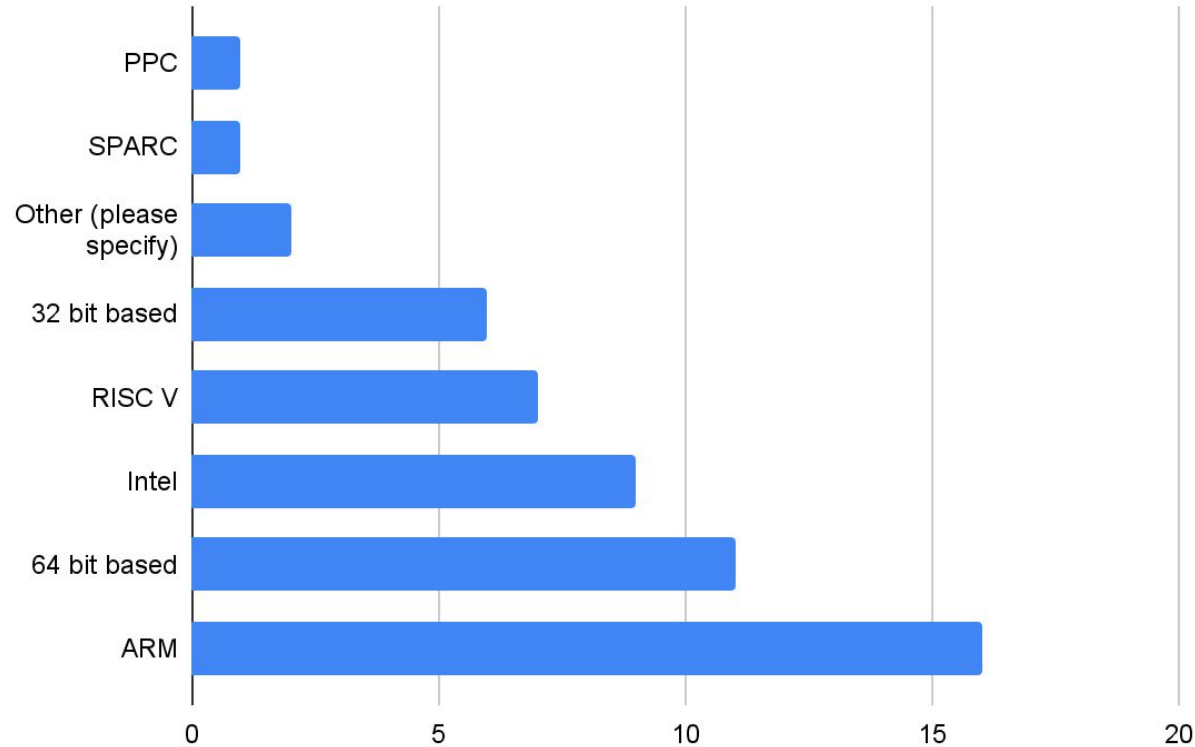
What system design elements are you currently using?



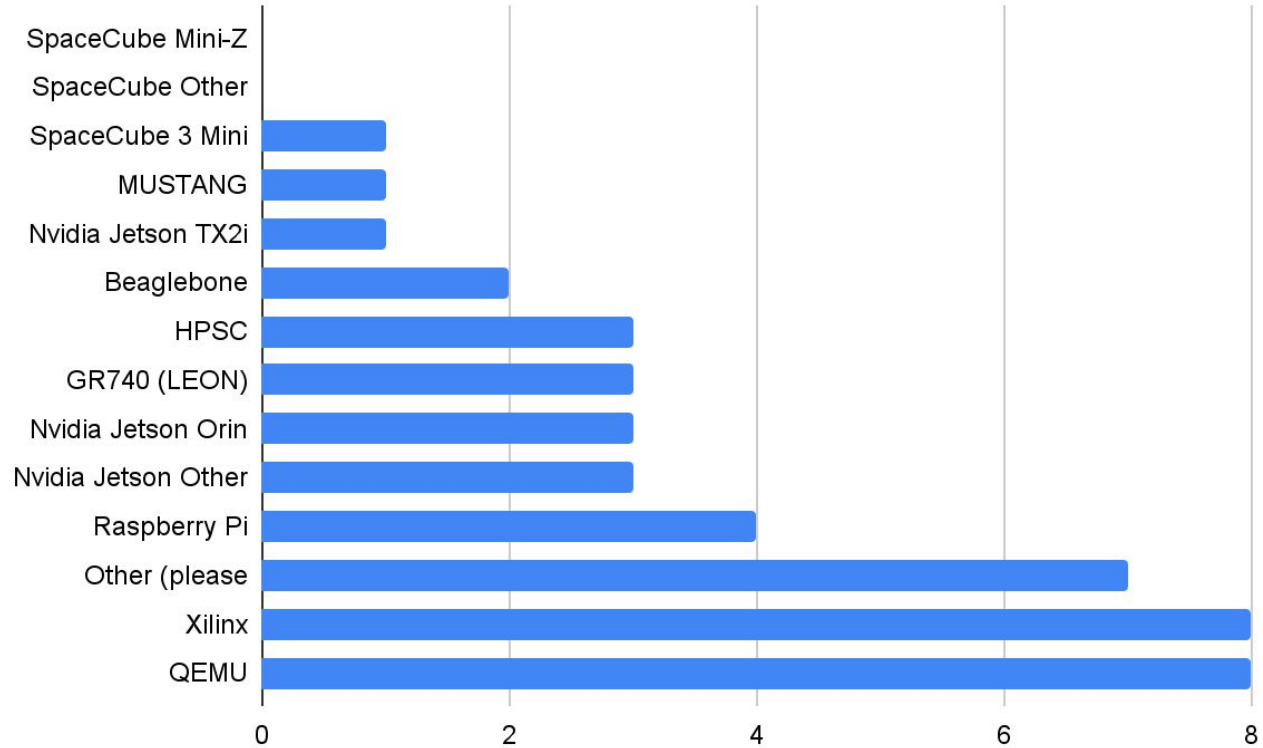
When it comes to Radiation Hardening, which of the following is important to you?



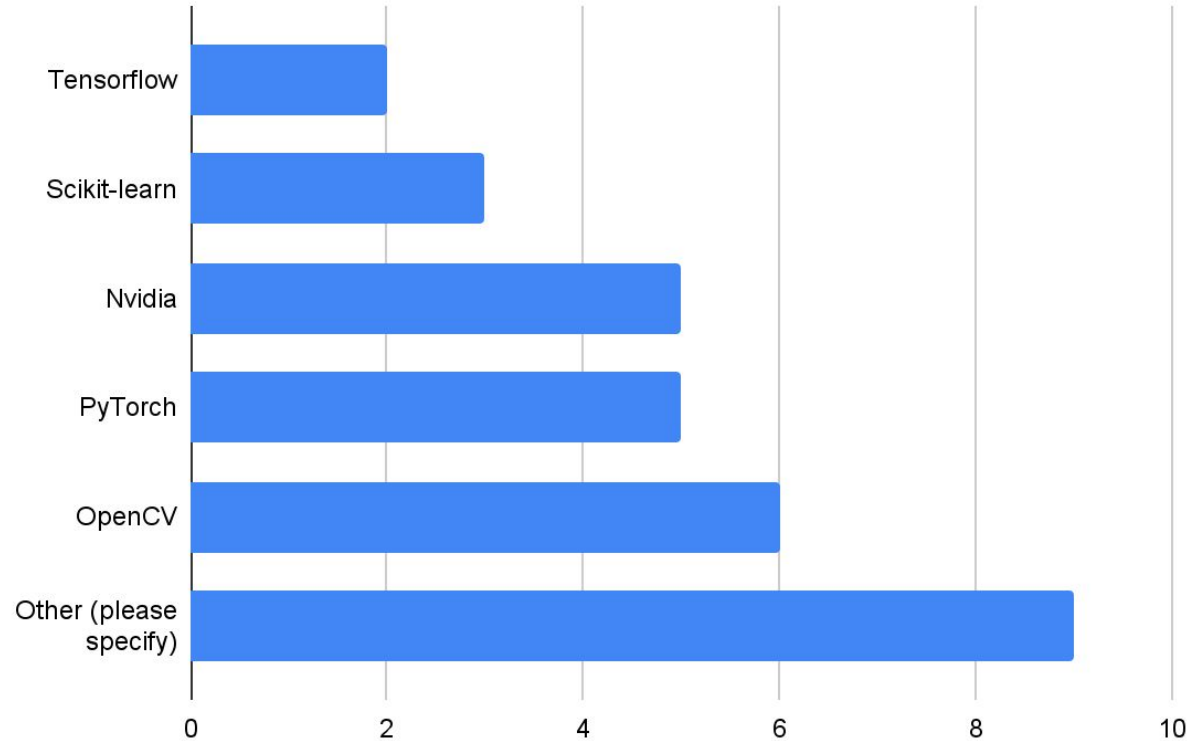
Which of the following hardware architectures do you need to support?



Please mark the hardware platforms you are planning or currently using



Are you planning or currently supporting any of the following AI/ML libs?



Are there any other libraries that you need to support in a linux distribution?

In no specific order:

- N/A
- Confidential, cannot share
- glibc (incl. math lib), pcap
- gpio support, com support libs
- libcsp (Cubesat Space Protocol)
- musl
- Our customers' demands vary.
- Spacewire
- too many to list
- yocto, embedded telemetry agent
- ZMQ