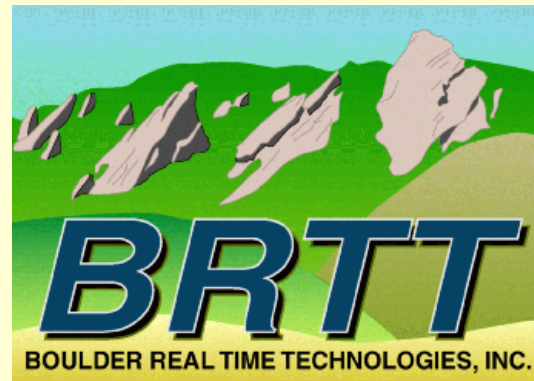




BRTT Platform Support: Policy Guidelines



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Enterprise Software (cf. research)

- Two of the valid approaches to software:
 - “Enterprise”
 - “Research”
- We offer goodwill support for research as feasible...however:

Antelope is Enterprise Software.

- Small ship in a large sea of technologies

“Research” Software

broad-based problem solving

- “Basic research is what I am doing when I don’t know what I am doing”
 - » Wernher von Braun, 1957
- Ordered steps:
 - 1) Acquire a generic machine/OS for broad-use problem-solving
 - 2) Install a host of different tools that may be of use, and add new ones as they become available
 - 3) Require additional packages to adapt to and conform with chosen software ecosystem(s)
 - 4) Start figuring out new things

“Enterprise” Software

mission-driven operation

- Ordered steps:
 - 1) Accept mandate for a monitoring mission
 - 2) Choose the software that best meets that mission
 - 3) Choose an OS that runs that software
 - 4) Choose appropriate hardware for that OS / mission size
 - 5) Monitor Earth according to clearly stated objectives
- *Note the completely opposite order of foundation decisions between “Enterprise” and “Research”*

Antelope Platform Support

- Original choice of Sun/Solaris motivated by:
 - Design of Unix based on small well-defined tools allowed assembly of building-blocks usable in engineering systems
 - flexible system construction within our domain
 - developer efficiency
 - Community experience with scientific computing
 - Floating point support
 - Vertical integration of hardware+software
 - reliable server deployments
 - tractable and robust problem-solving

Antelope Platform Support

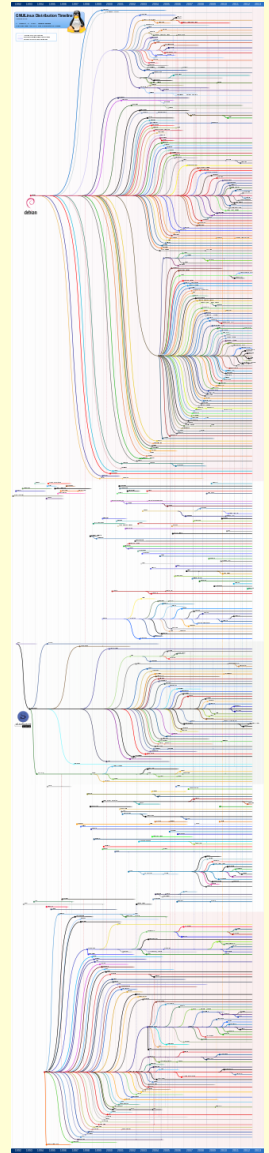
- Current platform choices:
 - Mac OSX 10.8, 10.9
 - Emphasis on workstation interaction
 - RHEL/CentOS Linux
 - Emphasis on use as compute-server
- Retains Unix-based ‘toolbox’ engineering
- Broad currency of OS and supporting hardware

Mac pros and cons

- Pros:
 - Vertical integration of hardware and software
 - Unix substrate
 - Excellent user interaction / graphics
 - Nice development platform
 - Instruments, dtrace, clang, sourcetree
- Cons:
 - No enterprise-class hardware
 - OS changing frequently: iOS'izing, sandboxing
 - Hard to get / run previous versions
 - Not always clear where Apple is going

Linux pros and cons

- Pros:
 - Enterprise-grade hardware available
 - Unix substrate
 - Easier to acquire and run previous versions
- Cons:
 - No vertical hardware/software integration
 - Huge diversity of extant versions
 - Inimical to commercial software
 - *hardware identification for licensing*
 - GPL/LGPL ecosystem



Wikipedia

Linux pros and cons

- Irrelevant:
 - List price
 - acquisition cost swamped by
 - mission cost
 - cost of ownership — salaries etc.

Mac OS Policy Guidelines

- We intend to support OSX for as long as we can
 - at mercy of Apple technology changes
- Support for latest OSX at time of Antelope release
- Good faith effort but no promises to keep our latest Antelope running on the latest OSX released after Antelope
 - patches or workarounds for ‘gotchas’ on new OSX’s
 - Changes to the minimum-necessary OSX are slaved to Apple forward-compatibility decisions; currently at OSX 10.8

Linux OS Policy Guidelines

- We can support one, at best two versions
 - Current RHEL / CentOS chosen by our enterprise users
 - Porting, even from one Unix to another, is very expensive
- We intend to keep the minimum-necessary version as stable as possible (i.e. multiple years)
 - drivers: preponderance of user base; licensing issues
- New major-version support in flux due to licensing
 - CentOS 7 / Antelope 5.4 works only with IP-based licensing
 - see companion talk on licensing
 - Feedback from users?

Thank You

