Open Source Software (OSS) and Total Cost of Ownership (TCO)

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Open Source Software (OSS) is Commercial!

- "Open Source Software is software for which the human-readable source code is available for use, study, reuse, modification, enhancement, and redistribution by the users of that software" [DoD 2009]

- OSS almost always commercial per U.S. law; a commercial item is "(A) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and that (i) has been sold, leased, or licensed to the general public…" [41 USC 403]

  - See also FAR 2.101, DFARS 212.212 & 252.227-7014(a)(1)

- Government & and contractors at all tiers must prefer commercial software [10 USC 2377, FAR part 12]; government must conduct (commercial) market research in procurement prep [41 USC 253a]

  - Government employee/contractor who ignores OSS is breaking the law
  - A rational decision must evaluate total cost

See: "Open Source Software Is Commercial", DACS Software Tech News, Feb 2011, http://journal.thedacs.com/issue/56/151

- Total cost of ownership (TCO) = Total cost of system over *entire* lifecycle

- TCO is sensitive to specific circumstances
  - No "OSS (or proprietary) always cheaper"
  - What are your requirements? Environment? Architecture? All matter, must determine first

- Term "TCO" is misleading for software
  - Normally license, not own – more like a lease
  - For OSS, analogy isn't bad; rights similar to an owner
  - For proprietary software you do *not* have the rights of a typical physical property owner (often can't review, modify, maintain, comment) – comparison misleading

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- Hardware costs (including purchase price and hardware maintenance)

- Direct software costs (including purchase price and support and maintenance)

- Indirect software costs (especially administration of licenses, transition)

- Staffing costs (inc. installation, training)

- Support costs

- Downtime

Source: "Open Source: Open for Business",
Computer Sciences Corporation (CSC)

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- ## Don't think short-term!
  - ### How long do you plan to do that task?
  - ### For government, this may be a long time – decades
  - ### Software lifecycle often ≠ hardware lifecycle (Y2K)
- ## Lock-in & transition
  - ### Proprietary suppliers may try to lock you into their solution. You may already be there.
  - ### If it's hard to switch later, future prices will be *much* higher
  - ### Transition (switching) costs can be substantial, but over the long term you may still save a lot of money
  - ### Must plan, try to do in stages

- Potential OSS advantages
  - OSS often costs less to initially acquire
  - Upgrade/maintenance costs often less
  - Practically no license management costs
- OSS is never "free" in the cost sense
  - There's always installation costs
  - Time is money
  - But OSS is often a bargain

- InformationWeek 2005 survey: GNU/Linux was cheaper than mainframe systems, Windows, and Unix according to 70% of business technology professionals

- TheOpenEnterprise.com survey, IT managers in companies > $5M revenue: 39% OSS costs 25%-50% less, 27% costs 50%-75% less

- Robert Frances Group (RFG): Linux on x86 had a significantly lower TCO than Windows (40% less) or Solaris (54% less) as an application server (August 2005)

- Forrester Research: average TCO savings with OSS database management systems (DBMSs) is 50% (November 2006)

- European Commission study: "in almost all the cases, a transition toward open source reports of savings on the long term", per "Economic impact of OSS on innovation and the competitiveness of the ICT sector in the EU" (November 20, 2006)

- Georgia Public Library Service's Evergreen program reports saving that library system over $3 million a year

Source: http://www.dwheleer.com/oss_fs_why.html#tco

- OSS is (practically always) commercial
  - Non-government use + licensed to the public → commercial

- OSS isn't always cheaper, but it's often a bargain

- You must consider OSS options
  - Legally required to do so, because it's commercial
  - Consider *all* cost drivers…
  - Over its *entire* lifecycle