Open Source and Standards: A Marriage Made in IT Heaven

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Abstract

This session will cover the best practices necessary for identifying the need for open source, evaluating open source options and integrating solutions based on standards like SMI-S, XAM and CDMI. The presentation also will examine the risks and benefits companies face when developing and deploying products, and why open source and standards are a marriage made in IT heaven.
Agenda

- The Problem
- Reasons for Governments
- Reasons for Businesses
- Picking the Right OSS and Standards Based Solution
- Benefits of Using Standards
- Costing Models
- Sample Solutions
- Questions to ask
Problem

- Too costly for developing proprietary applications
- Complexity of deploying and integrating solutions
- Vendor lock-in
- No single pane of glass
- Reinventing the wheel
Reasons for Governments I

Security

- It has been shown statistically that security increases by the number of users and developers of open source software (OSS)

Procurement time

- Government procurement of proprietary software can take up to 3 years for approval

No vendor lock-in or lock-out

- Since OSS is in the public domain it eliminates the vendor lock-in and also provides multiple vendor support i.e. Linux
Reasons for Government II

- **Reduced cost**
  - Using OSS increases the competition for professional services which results in lower cost for support contracts.

- **Increased quality**
  - With increased usage of the OSS more reviews of the source code are conducted.

- **Collaborative environment**
  - By participating in OSS communities it allows governments to input their requirements for the software.
Commitments made by U.K. to its citizens and Free Software Developers

- Ensure that the Government adopts open standards
- Ensure that open source solutions are considered properly
- Embed an open source culture of sharing
- Ensure that there are no procedural barriers to the adoption of open source products
- Ensure that systems integrators and proprietary software suppliers demonstrate flexibility and ability to re-use their solutions and products as is inherent in open source.
“Open Source Gains While Proprietary Software Declines” by Matt Asay

- Reduce costs by 87% (while meeting or exceeding expectations)
- Improve quality by 92%
- Ease integration and customization by 86%

Reasons for Businesses II

- Quicken pace of innovation by 82%
- Improve support by 84%
- Increase standards compliance by 91%
- Decrease time to market by 82%
Picking the Right OSS and Standards

Solution I

- What are the business requirements
  - Build the Use Case
- Identify possible OSS and standard based solutions
- Do pros and cons to determine best solution
  - Community Forum
  - Type of Support
  - Vendors involved
  - ANSI and ISO standard
Picking the Right OSS and Standards

Solution II

- Develop prototype solution
  - Use Community Forum
- Testing and debugging
  - Ensure prototype meets business and end users requirements
  - Test Customer
- Rollout solution to entire organization
“It is relatively easy to sit alone and develop a proprietary solution that fits exactly what a single company wants to achieve. It's much harder to develop a standard that suits every voting member. Arguments, blockages, concessions and complications are all part of this process.

Does that mean the multi-vendor standardization process is flawed? Not at all! In fact, I would argue just the opposite. A standard that has the approval of all interested parties in that space has a far greater chance of acceptance and survival than does the rogue standard created by a single, uncooperative vendor.”

By Michi Henning, Managing Director, Triodia Technologies
Benefits for Using Standards

- Greatly reduces IP infringement fears
- Interoperability – no vendor lock-in
- Enables more choices and competition for end users when selecting products
- Decreases time to market for products
Benefits for Using Standards II

- **Increases of Ease of Use**
  - Establishes common terms for common capabilities across multiple vendors

- **Reduces costs for developing products**
  - By reducing number of development teams for each proprietary interface

- **Increases innovation**

- **Vendor Extensions to standards**
  - Provides for socialization and validation of potential new standards material
Sample Costing Models

Open Source Applications
- Free
- Open Core – subscriptions

Proprietary Applications
- Price per number of ports
- Price per number of devices
- Price per modules/capabilities
OCCI and CDMI Integration

- Open Grid Forum (OGF) and SNIA joint collaboration
- Open Cloud Computing Interface (OCCI) provides the access for managing the user accounts
- Cloud Data Management Interface (CDMI) provides the access for managing and configuring the storage resources
- Joint demonstrations coming up
Client uses JAX-RS for web services

CDMI for accessing storage resources

XAM for controlling data path

SMI-S for configuring and provisioning the backend storage
What to Ask Your Vendors I

- Ask your vendor why they are still developing to multiple proprietary interfaces when they could be saving money and time by developing to a standard interface.

- Ask why they belong to standard organizations but don’t implement or promote standard based product lines.
What to Ask Vendors II

- Are the vendors’ members of standard organizations?

- Are they actively engaged in technical working groups working on the standards?
  - Such as in the SNIA they should also be authors of the standards being developed i.e. CDMI
  - Can verify by looking at the authors listed in the specifications at http://www.snia.org/tech_activities/publicreview/
What to Ask Vendors III

- Do they actively participate in interoperability testing for the standards
  - Vendors equipment in interoperability labs is available for testing more than 75% of the time
  - Ask for uptime report of vendor’s equipment in labs i.e. SNIA SMI-Lab

- Do conformance testing and test more than minimum capabilities for passing conformance testing for compliance to standards such as SMI-S
  - Compare testing done by storage vendors for SMI-S at [http://www.snia.org/forums/smi/tech_programs/ctp/conformanceproviders](http://www.snia.org/forums/smi/tech_programs/ctp/conformanceproviders)
Require standards and OSS in RFQs and RFPs

Verify vendors are implementing standards (don’t take the vendors word for it)

Get involved in standard organizations and open source projects
  - Provide feedback to companies implementing open source/standard based products.
The number one way to change the situation and give the power back to you as the customer is to vote with your wallet.

Only buy products compliant to standards and using open source.
Q&A / Feedback

Please send any questions or comments on this presentation to SNIA: Storage/Storage Management

Many thanks to the following individuals for their contributions to this tutorial.

- SNIA Education Committee

Hope Hines
Kurt Krems
Mark Carlson