O'REILLY

OSCON™
Open Source Convention

Applying Open Source Methodology to IT Examinations

Dru Lavigne,
Chair, BSD Certification Group

O'REILLY

OSCON™ Open Source Convention

Outline

- Who we are
- Why should we bother?
- How IT certifications work
- Why change the status quo?
- Design considerations
- Additional Resources

O'REILLY

OSCON™ Open Source Convention

Who we are

- Registered non-profit incorporated in N.J.
- Core group of 21 members including devs from the 4 main BSD projects, trainers, sysadmins, writers, and advocates
- Advisory board of 5 senior members from the BSD community
- Hundreds of volunteer translators for 20 languages
- Over a thousand subscribers to public mailing lists

O'REILLY

OSCON™ Open Source Convention

Why should we bother?

- Isn't Open Source about the code?
- Doesn't the code speak for itself?
- Aren't certifications about making a fast buck?
- Who needs a piece of paper anyways?

Why should we bother?

- Successful code has a userbase. Providing an avenue for end users, support staff, and administrators to gain and prove their skills is a good thing
- The alternative is a primarily self-taught userbase with knowledge gaps and the perception that no qualified support channels exist

How IT certifications work

- They are actually getting better....
- Less marketing focus
- More psychometrics and SMEs

How IT certifications work

- But still leave much to be desired....
- Post-secondary dilemma (context v.s. experience)
- Boot camp mentality (become a sysadmin in 40 hours for only $4000)

Why change the status quo?

Cost

- To the organization creating the exam
- High entry barrier
- Annual fees could be better spent elsewhere

O'REILLY

OSCON™ Open Source Convention

Time to do the math:

- Annual fee: $75,000
- Publication fees: $ 4,000
- Psychometric fees: $20,000
- SMEs: volunteer
- Organizational costs: donated
- How much per exam if you deliver 1000 exams that year? 500 exams? 100 exams?

Why change the status quo?

Cost

- To the testing center
- No incentive to offer exam
- No incentive for proctor honesty
- Expensive hardware requirements
- Technical skill to apply testing software and patches

Item	Minimum Requirement	Notes
Processor	Pentium III, 1 Ghz	Prefer Pentium 4, 2 GHz
Operating System	Windows XP Professional or Windows 2000 Professional	Must have latest service pack applied
RAM	512 MB	
Hard drive	4 GB free space	Prefer 10 GB free space
LAN connection	100 Mbps	wireless not supported
Printer	laser quality 600 dpi with postscript support	
Browser	Internet Explorer 6.0 SP2	

Why change the status quo?

Cost

- To the exam candidate
- Exams range from $50 to $750 USD
- Average exam price is $150 USD

Why change the status quo?

Availability

- Not bad if you live in North America or Europe
- And speak English
- Where are the Open Source users?

Why change the status quo?

Availability

Our own surveys show largest percentage in:

- Brazil, Poland, Germany, India, and China

- Other testing organizations indicate similar geographic patterns

Country	Annual GDP per capita in USD	Per Month
Brazil	5,717	476
Poland	8,890	740
Germany	35,204	2,933
India	797	66
China	2,001	166

Source: http://en.wikipedia.org/wiki/List_of_countries_by_GDP_%28nominal%29_per_capita

Why change the status quo?

Software

- Closed source, can't audit security
- Only works on proprietary, licensed systems
- No Open Source alternatives currently exist
- No choice; limited functionality
- Not available everywhere
- Limited language support (English or Japanese)

Design considerations

At the testing center:

- Minimal hardware requirements
- Zero dependence on software requiring separate licensing
- Zero skill from proctors to start testing program and download correct examination
- Security and auditing processes

Design considerations

For the testing software:

- Multi-language support
- Lockdown of software to prevent proctor or test taker cheating
- Built-in auditing mechanisms
- Extendable for different question types and hands on scenarios

Design considerations

Overall goals:

- Use Open Source components
- Release the “glue” under an Open Source license
- Don't reinvent the wheel
- Build a community

Design considerations

Overall goals:

- Resulting test delivery engine should be secure and easy to use
- Should be available in any geographic region
- Take advantage of existing proctor mechanisms (e.g. Accredited post-secondary)

Additional Resources

Publications at http://www.bsdcertification.org

- Test Delivery Survey Report
- BSD Usage Survey
- Psychometrics Explained

O'REILLY

OSCON™ Open Source Convention

Additional Resources

"Why IT Certifications Suck" series at

http://blogs.ittoolbox.com/unix/bsd/archives

dru@osbr.ca