Software Audit for Acquisition Due Diligence: What to expect as a Seller?

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Agenda

• About nexB
  – What nexB does
  – Our experience

• Software Audit: M&A
  – Software Analysis Scope
  – Software Audit Process
  – Software Audit Tools
  – Software Analysis Deliverables

• Additional Information
  – Why nexB?
  – Contact us
What nexB does

• Enable component-based software development
  – Software provenance analysis services
  – Software asset management tools

• Software audit services
  – Acquisitions
  – Software product releases

• Expertise in all software IP

• Active OSS developers

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Our experience is our difference

• Recognized by the buyers and target companies as:
  – experts in software origin analysis
  – a fair and trusted intermediary
• We identifies issues along with practical remediation steps
• 350+ software audit projects completed to-date

What they’re saying.

“I will most definitely be remembering nexB, as I was very impressed by your scan and how smooth the process was.”

“Again, thank you for all the work you and your team did. It was exactly what we needed.”

“It was our pleasure to work with you and your team. nexB was really professional and had an impressive analysis.”
Software Analysis Scope

Commercial Code

Original Code

Open Source Code
Software Audit Process

Software audit: M&A

Original
Commercial
Open Source

Analyzer
Review
Approve

Bill of Materials
Software Products
Attribution Package
Code Package
Step 1: Preparation - 1 week (1/2)

- Establish NDA with your company
  - Two-way (nexB/Seller) or Three-way (nexB/Seller/Buyer)

- Understand our Software Audit Process
  - One hour or less conference call to go through the audit steps with you and your team

➡️ Many sellers can be anxious about the process, we understand:
  - General level of anxiety is inversely proportional to prior M&A experience of executives
  - We do help you understand our process to make you comfortable
Step 1: Preparation (2/2)

- Scope the audit effort
  - Comprehensive questionnaire provided by nexB
  - Size of code base – number of files and lines of source code
  - Disclosure of known third-party and open source software
  - Architecture and software development process documentation

⇒ No extra work needed!
  - The quality of the disclosures you provide is essential, however we do not ask you to create special documentation for the only purpose of the audit project
Step 2: Software Analysis – 2 weeks

• After nexB has access to the code, we schedule a telephone interview:
  – One hour or less
  – Involved your senior technical contact(s)
  – Goal is to understand your development process and open source and third party policies in greater details

➤ We limit our demands on your team because we know you are always over-tasked during acquisition due diligence.
  – During the project, we will need responses to ad-hoc technical questions within 24 hours (usually via email)
Step 2: Software Analysis (2/3)

• Analysis Activities:
  – Scan files for license and copyright texts
  – Match target code to reference code repository for origin and license detection (based on digital “fingerprints”)
  – Map deployed code to development code to validate that you are auditing the right code (i.e. the deployed/distributed code)
  – Analyze software interaction and dependencies patterns for copyleft-licensed components (with specifics on Linux)
### Step 2: Software Analysis (3/3)

#### Results:
- Software Inventory and Bill(s) of Materials
- Draft findings & recommendations

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<td><a href="http://www.nexb.org/project/$env/SW">URL</a></td>
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There are license issues with version 1.6.0, which is not used in the product (code is available from the Open Source Software License Agreement). The license is noted in the report and source code is available.

There are license issues with version 1.7.01 or higher to make sure the offending license(s) are not used in the product (code is available from the Open Source Software License Agreement). The license is noted in the report and source code is available.

Software audit: M&A

- Draft findings & recommendations

http://www.nexb.org/project/$env/SW

http://www.nexb.org/project/$env/License
Step 3: Review & Report – 1 week

- **Activities: Draft report**
  - Remediation actions – specific and actionable, that make business and technical sense
  - Recommendations for code management policies and processes
  - Review draft with engineering/product team: *we need your review of the draft report documents (24 hour turnaround) before we share it with the buyer*
  - Incorporate feedback and answers where appropriate
Software audit: M&A

Step 3: Review & Report (2/2)

Results

• Final Software Inventory / BOM spreadsheets

• Final Report - narrative with executive summary, project data and summary of the Action items and Responses
Software Audit Tools

- nexB typically uses a combination of tools for a software audit
  - Our own DejaCode™ toolkit is the primary tool
  - Other tools used as needed or as licensed by a customer (open source or commercial)
- Multiple layers of analysis
  - Direct scan for license and copyright notices
  - Component matching for open source and publicly available third-party components (freeware/proprietary)
  - Analysis of source code and pre-built libraries (binary)
  - Interaction and dependency analysis as needed
- Review and validation by software experts
- All require expert humans to interpret the results!
Software Analysis Deliverables

- Complete inventory of OSS and third-party components in Development codebase(s)
- Bill of materials for Deployed product components
- Specific Action items and recommended actions for resolution that can be factored into the deal terms
  - Including possible exposure for older product versions
  - Detailed analysis for copyleft “contamination”
- Checklist of commercial components as input to due diligence for contract review
- Analysis of how much code is original versus borrowed (OSS) or purchased (Commercial)
100% of our customers are repeat customers and references

We have a balanced approach

- Automated code analysis AND analysis by software experts
- Direct consultation with engineering, management and legal teams
- Concrete Action items with recommended nexB action resolution and seller Responses
Why nexB (2/2)

• Trusted third party
  – Mitigates confidentiality concerns of a seller company
  – Maintains proper segregation of information during acquisition negotiations
  – Enables objective analysis with appropriate consideration of feedback from all parties

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Contact us

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