



Black Duck® Suite

Enabling Faster, Lower Cost Innovation

With tightening budgets and competitive pressures, managing software development is becoming increasingly challenging. Development organizations are being asked to deliver more innovation and at lower cost to stay ahead of the competition. Whether they use agile or waterfall approaches, every organization that creates software must find ways to continually improve – even when faced with tightened budgets. The Black Duck Suite enables development organizations to realize the compelling economics of open source while mitigating associated risks and challenges.

Most world class development organizations are finding a competitive edge by pro-actively embracing the use of open source components in combination with internally developed code and other external software. As a rule of thumb, for every 1,000 lines of code from an open source component that is used, a development organization can save roughly \$20,000 USD. Such savings allow development managers to focus their teams on differentiating features and high value-add applications and extensions.

In this way companies spend their precious

Black Duck Suite in the AppDev Life Cycle

Key Processes in the Management of Open Source



engineering resources building business value, not reinventing the wheel, thus lowering the cost of development and increasing innovation through the strategic use of open source software.

It likely comes as no surprise that while open source software is free of purchase cost, it is not a “free lunch.” Using open source and using it at scale – hundreds of components versus just a few – presents new challenges for management, compliance and security.

Manual methods of code management and laissez faire approaches to open source are prone to errors and can result in version proliferation, unknown and unwanted license obligations, license conflicts,

| Features | Benefits |
|--|---|
| Configurable Approval Workflow | <ul style="list-style-type: none"> • Accelerates approval process • Configurable to align with, and support, robust policy implementation • Fosters interdepartmental collaboration |
| Automated Discovery and Identification | <ul style="list-style-type: none"> • New Rapid ID framework improves efficiency and speed in discovery and identification with methods to automate the identification of files. • Ensures compliance with company policies and license obligations • Validates compliance with approved Bill of Materials • Provides audit trail/traceability |
| Catalog of Components | <ul style="list-style-type: none"> • New ease-of-use features, including a newly designed request wizard that makes the component request process more streamlined and simpler for the user • Catalog of approved components saves time, eliminates unnecessary requests • Know and track where components are used in other applications 24x7 |
| Manage Security and Risk | <ul style="list-style-type: none"> • Ensure selection and use of most secure open source components • Monitor security vulnerabilities - automatic alerts are sent based on “where used” • Ensure license compliance • Confidently manage software origins and obligations |
| Comprehensive Code Search | <ul style="list-style-type: none"> • Improve productivity by finding and re-using open source components and existing code from a catalog of approved components or across multiple repositories and servers; avoid rework and redundant development • Improve code quality by quickly tracking down bugs/defects across the organization |
| SDK for Integration | <ul style="list-style-type: none"> • Integrates with existing developer tools and environments |

“The fundamental economics of software development leads you to open-source software”

– David Rivas, Nokia
VP for S60 Software

encryption export violations, and security vulnerabilities, all exposing companies to unnecessary risk.

The Black Duck Suite is an advanced enterprise-class solution to the unique management, compliance and security challenges associated with open source. It brings together the Black Duck Code Center, Code Sight, Export and Protex products into a unified framework, and also includes a robust SDK which enables integration with IBM Rational, Microsoft and other build tools and environments. The Black Duck Suite automates key processes related to open source code management over the application development (AppDev) life cycle—search & select, review & approve, catalog & index, analyze & audit, and maintain & monitor. Code Center provides a catalog of software components with searchable metadata (component information) for each. When a component is proposed for use, Code Center automates the component approval process. Code Sight provides string search of code straight from the software developer’s IDE. Protex and Export are used on the back end of the process when code needs to be validated before it is deployed.

The foundation of the Black Duck Suite is the Black Duck KnowledgeBase. Each of the Black Duck products is a modular component that fits into the KnowledgeBase and Suite framework and can be configured to meet individual needs and requirements.

“...we selected Black Duck because of its KnowledgeBase of open source software. The maintenance of that KnowledgeBase was more robust than other solutions considered...”

– Andre Terrisse, Intel’s Software Legal
Compliance Program Manager



Professional Services

Since Black Duck Software’s inception in 2002, we have been the leading innovator in automating the management, review and analysis of open source software. As a result, our Professional Services team has more experience implementing open source software management solutions than any other company in the world.

Black Duck offers a comprehensive range of professional services including:

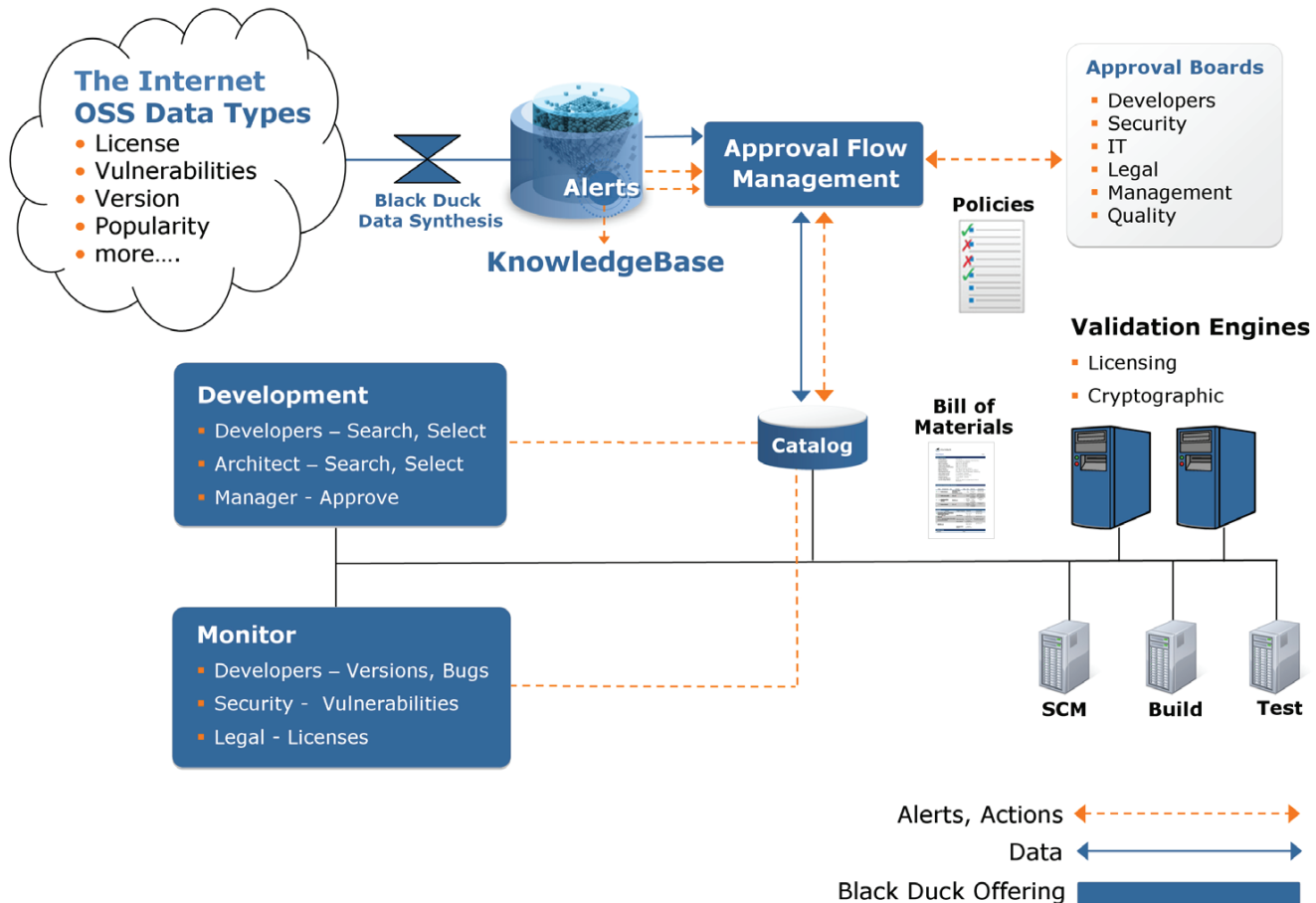
- Strategic Planning Services to help you develop strategies, policies and processes for managing open source, proprietary and third party code, and prepare for the seamless integration of Black Duck’s products into your organization.
- Project Implementation Services to ensure a smooth Black Duck solution implementation – all the way from installation to training.
- Continuous Improvement Services that include helping you evaluate your compliance management process, so you can keep up to date on best practices, training on new features and implementing new Black Duck releases and upgrades.
- Custom Development Services to deliver a fully tailored solution to fit your unique needs. This can include custom report development, application customization, KnowledgeBase optimization and SDK training.

We also offer training programs to help our customers get the maximum benefit from their Black Duck solutions by providing clear, logical and interactive training.

Black Duck KnowledgeBase

Billions of lines of valuable open source software are available on the Internet for developers to use. Black Duck’s portfolio of products leverages the industry’s most comprehensive database of open source software, the Black Duck KnowledgeBase. The Black Duck KnowledgeBase also powers Koders.com, a leading code search website freely available to the public.

The Black Duck Suite



Black Duck adds new code and new projects to the KnowledgeBase on an on-going basis. KnowledgeBase updates can incorporate hundreds or thousands of new project updates. This enables Black Duck customers to maintain currency with the dynamic open source community. KnowledgeBase updates are tested for accuracy before they are released to our customers.

KnowledgeBase Stats

- Tens of billions of lines of code
- 475,000+ OSS projects
- From ~5,060 sites
- Released under 2,000+ unique licenses
- 40,000+ security vulnerabilities
- 450+ encryption libraries and algorithms

Developers can quickly **Search** the KnowledgeBase for appropriate components for use within their project.

Each component entry is populated with a rich set of information which aids the developer in **Selecting** the best available component that meets their functional needs but also matches their organization's component usage policy (such as licensing, security and other policies). This eliminates the need for developers to spend hours or days tracking down components to use.

The Black Duck Suite

Approval Workflow

The approval workflow enables a customized review and approval process, dependent on an organization's structure and policies. With the use of the new wizard, developers submit components and approval criteria to approval boards, which may approve, reject, approve with restrictions, or request more information. Information pertaining to the approval process is captured in the catalog for subsequent auditing.

Validation Engines

The license validation engine scans source code and

binary files to discover unknown and unapproved software, automatically comparing the scanned code base to the known universe of open source code in the KnowledgeBase. We do this by maintaining Code Prints in the KnowledgeBase which can be fuzzy / exact matched to the code under analysis. Comparing actual components found with the approved component list occurs in the analyze and audit stage. The encryption validation engine analyzes source code and finds encryption algorithms, enabling organizations to adhere to policies and encryption export regulations.

Catalog & Index

The catalog is the local database of component usage within an enterprise. It reflects components that have gone through a Review & Approval process and have been approved, rejected, or are in-process. It also tracks where components are being used. When developers **Search** for and **Select** components, the catalog may be searched in parallel with the KnowledgeBase in order to encourage the usage of components that are already in use in the organization and decrease component (and version) proliferation. Catalog components can come from the KnowledgeBase or be created locally to represent other software that might be incorporated in an application.

The catalog enables the Maintenance & Monitoring of components already in use. When a KnowledgeBase update arrives, it is mapped against the list of components and this information is used to generate alerts based on component usage. For example, if 3 out of 500 applications in the organization are using a particular version of Apache Tomcat, and that particular version of Tomcat is discovered to have a security vulnerability, email alerts can be generated for the internal owners for the 3 relevant applications.

The Bill of Materials, the list of components in an application or product, is used for analysis & audit. The approved Bill of Materials is the aggregation of all of the components for an application that have gone through the approval process. The actual Bill of Materials is the aggregation of all of the components for an application that have been found through Analyze & Audit. A compliant application will have approved and actual Bills of Material that are the same. Mismatches indicate either

unapproved code in an application's code base, or missing components.

Code Search and Component Search

Using a standard browser, developers can search the catalog for components based on metadata (name, description, version, license, and more). Developers can also use string search for code (contained within version control and file systems) directly from within their development environments using the Black Duck IDE Plug-ins for Visual Studio and Eclipse.

About Black Duck Software

Black Duck Software is the leading provider of products and services for automating the management, governance and secure use of free and open source software, at enterprise scale, in a multi-source development process. Black Duck® enables companies to shorten time-to-solution and reduce development costs while mitigating the management, compliance and security challenges associated with free and open source software. Black Duck Software powers Koders.com, the industry's leading code search engine for open source, Ohloh.net, the largest community for and free public directory of open source, and The Olliance Group, the leading open source business and strategy consulting firm. Among the 400 largest software companies in the world, according to Softwremag.com, the company is headquartered near Boston and has offices in San Mateo, California, London, Paris, Frankfurt, Hong Kong, Tokyo and Beijing. For more information, visit www.blackducksoftware.com.

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