

AxProtector CTP Strengthens Software Protections Against Piracy and Reverse Engineering

- **Wibu-Systems software protection mechanisms use novel obfuscation techniques.**
- **The new Compile Time Protection technology leverages the LLVM compiler framework to achieve efficient protection goals.**
- **AxProtector CTP ensures application security while maintaining compliance with platform-specific guidelines without the need for runtime code modification.**
- **The recent addition to CodeMeter Protection Suite supports Windows, Linux, and macOS systems.**

The new obfuscation technique makes the code structure for C/C++ applications virtually unrecognizable

Karlsruhe, Germany – **Wibu-Systems, a global leader in the software licensing and protection industry, announced the addition of a new feature of its CodeMeter Protection Suite of tools for automated software protection against piracy and reverse engineering. The new Compile Time Obfuscation (CTO) feature is available for AxProtector Windows, AxProtector Linux, and AxProtector macOS. To use this feature, a new technology, AxProtector Compile Time Protection (CTP), was introduced.**

This novel technology integrates a completely new approach to software protection by obfuscating the entire application during the compilation process. Bringing obfuscation technologies to the same security level offered by encryption-based protection tools, AxProtector CTP obfuscates name and the control flow, inserts additional blocks, and hides logical links in the code, to increase the level of protection against reverse engineering. The AxProtector CTP technology is already commercially available as an optional feature (CTO) within the AxProtector Windows, AxProtector Linux, and AxProtector macOS products; it supports Intel, ARMHF, and AARCH64 platforms; and currently, it works with C and C++ programming languages; others on request.

Finding the right defense techniques against cyber-attackers is a crucial task. It's with the versatility of LLVM that AxProtector CTP is able to support multiple operating systems, architectures, and platforms. Additionally, all features that were already available inside the AxProtector products, like flexible licensing supported by trusted cryptographic algorithms, are also available within the new CTP technology. The strong connection between licensing, encryption, and obfuscation ensures optimal protection for applications.

While encryption-based protection techniques encrypt the application after compilation and decrypt it during runtime, AxProtector CTP modifies the application already during compile time, and no modification during runtime is needed. This makes it possible to comply with platform-specific guidelines that prevent code modification during runtime (e.g., macOS hardened runtime) and offers a higher level of protection against attackers who may have gotten access to a license to execute the protected application.

The protection offered by the new AxProtector CTP requires special build environments, compatible with a modified Clang compiler and an additional plugin made by Wibu-Systems. Only minimal adjustments to the compiler are needed; they can be made by software developers with the setup guide provided by Wibu-Systems. Their purpose is simply to activate the use of plugins. For convenience, Wibu-Systems ships a prebuilt version in the installers. As the Clang compiler is supported in most common development environments like Visual Studio and Xcode, the capabilities of AxProtector CTP are immediately available, including cross-platform protection as provided by the standard AxProtector.

"In a world where cyber threats are evolving every day, relying solely on encryption is no longer the only viable solution. AxProtector CTP goes a step further by obfuscating your code at compile time, turning it into an enigma that even the most skilled hackers will find virtually impenetrable", stated Stefan Bamberg, Wibu-Systems' Director Sales and Key Account Management.



AxProtector CTP applies advanced obfuscation mechanisms to strengthen Windows, Linux, and macOS application protections against piracy and reverse engineering.

Additional Dedicated Resources

- Press release as audio file: https://www.wibu.com/fileadmin/Audiofiles/press_releases/WIBU_AxP-CTP_EN.mp3
- Press release images for download ready for print and online publications: <https://wibu.sharefile.com/d-s0c428e48929e4ff1a9a1f034b3843a6f>
- More information on CodeMeter Protection Suite: <https://www.wibu.com/products/protection-suite.html>

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Wibu-Systems is a global leader in cutting-edge cybersecurity and software license lifecycle management. We are committed to delivering unparalleled, award-winning, and internationally patented security solutions that protect the intellectual property embedded in digital assets and amplify the monetization opportunities of technical know-how. Catering to software publishers and intelligent device manufacturers, the interoperable hardware and software modules of our comprehensive suite safeguard against piracy, reverse engineering, tampering, sabotage, and cyberattacks across mainstream platforms and diverse industries.



Media graphic resources available at: <https://www.wibu.com/photo-gallery.html>.

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