**BoringSSL vs GnuTLS**

**Initial Remarks**

BoringSSL and GnuTLS are both open-source cryptographic libraries that provide SSL/TLS and other cryptographic functionalities. Here are the key differences between BoringSSL and GnuTLS:

1. Origin and Forking: BoringSSL is a fork of OpenSSL created by Google to address security concerns and code quality issues in OpenSSL. It focuses on code simplicity, maintainability, and performance. BoringSSL includes modifications and additions that are specific to Google's use cases. GnuTLS, on the other hand, is an independent project initiated by the Free Software Foundation (FSF) and developed by a community of contributors.
2. Codebase and Features: BoringSSL and GnuTLS have different codebases and feature sets. BoringSSL aims to provide a minimal and streamlined library with a focus on security, performance, and maintainability. It may not prioritize maintaining full compatibility with OpenSSL. GnuTLS is designed to provide a flexible, portable, and extensible TLS library. It offers a wide range of features and support for various cryptographic protocols, including SSL/TLS, DTLS, and SSH.
3. Development and Community: BoringSSL is primarily maintained by Google engineers and benefits from contributions within the Google development community. It follows its own development processes and priorities. GnuTLS is developed by a diverse community of contributors and supported by the Free Software Foundation (FSF). It has its own community of users and contributors and follows its own development processes.
4. Platform Support: Both BoringSSL and GnuTLS support multiple platforms, including Linux, BSD, macOS, and Windows. However, GnuTLS has a broader platform support, including embedded systems, and is often included in Linux distributions as the default SSL/TLS library.
5. Licensing: BoringSSL is released under the Apache License 2.0, which is a permissive license. GnuTLS is licensed under the GNU Lesser General Public License (LGPL), which is a copyleft license.
6. Industry Adoption: BoringSSL is primarily used by Google and integrated into various Google projects and services. It may have limited adoption outside of the Google ecosystem. GnuTLS is widely used in the Linux ecosystem and is included in various Linux distributions. It is also used by applications that prioritize open-source and free software.

When choosing between BoringSSL and GnuTLS, consider your specific requirements, platform support, licensing preferences, and the level of compatibility needed with existing software. If you are working on a project that aligns with Google's use cases and prioritizes simplicity and performance, BoringSSL may be a suitable choice. If you need a flexible and feature-rich TLS library with broad platform support, GnuTLS might be a better fit.

**Testcase Directories:**

1. 20220421\_170752\_boringssl-f0451ca-gnutls-3.5.0-dynamic-update-1\_tgt-0\_all
2. 20220421\_174907\_boringssl-f0451ca-gnutls-3.5.0-dynamic-update-1\_tgt-1\_all
3. 20220511\_172455\_boringssl-f0451ca-gnutls-3.5.0-dynamic-update-1-rank-1-1eb04\_tgt-0\_all
4. 20220511\_180607\_boringssl-f0451ca-gnutls-3.5.0-dynamic-update-1-rank-1-1eb04\_tgt-1\_all
5. 20220511\_184232\_boringssl-f0451ca-gnutls-3.5.0-dynamic-update-1-rank-2-72ee2\_tgt-0\_all
6. 20220511\_192230\_boringssl-f0451ca-gnutls-3.5.0-dynamic-update-1-rank-2-72ee2\_tgt-1\_all