**MbedTLS vs GnuTLS**

**Initial Remarks**

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

1. Codebase and Features: mbedTLS is designed specifically for embedded systems and IoT devices. It aims to be a lightweight and efficient library with a small footprint and low memory usage. mbedTLS provides essential SSL/TLS functionality, cryptography algorithms, and protocols such as DTLS and IPsec. It also includes support for X.509 certificates, PKI, and cryptographic hardware acceleration. GnuTLS, on the other hand, is designed to provide a flexible and extensible TLS library. It offers a wide range of features, supports various cryptographic protocols, and provides advanced TLS features such as SNI (Server Name Indication) and OCSP (Online Certificate Status Protocol).
2. Platform Support: Both mbedTLS and GnuTLS support multiple platforms, including Linux, BSD, macOS, and Windows. However, mbedTLS places a strong emphasis on embedded systems and IoT devices. It provides platform-specific optimizations and features tailored for these resource-constrained environments. GnuTLS, on the other hand, has broader platform support and is often included as the default SSL/TLS library in various Linux distributions.
3. Development and Community: mbedTLS is developed by a dedicated team at ARM/NXP and has its own community of users and contributors. It receives regular updates and improvements to meet the needs of embedded systems and IoT devices. GnuTLS is developed by a diverse community of contributors and is supported by the Free Software Foundation (FSF). It has a broader community of users and contributors.
4. Licensing: mbedTLS is dual-licensed, offering both an Apache License 2.0 and a GPLv2 license. GnuTLS is licensed under the GNU Lesser General Public License (LGPL), which is a copyleft license.
5. Industry Adoption: mbedTLS has gained significant adoption in the embedded systems and IoT community. It is widely used in these domains and integrated into various products and projects. GnuTLS, on the other hand, is widely used in the Linux ecosystem and is included as the default SSL/TLS library in various Linux distributions. It is also used in other applications that prioritize open-source and free software.

When choosing between mbedTLS and GnuTLS, consider your specific requirements, platform support, licensing preferences, and the resource constraints of your target environment. If you are working on an embedded system or IoT project with limited resources and prioritize a lightweight and efficient library, mbedTLS may be a suitable choice. If you need a flexible TLS library with broad platform support and advanced features, GnuTLS might be a better fit.

**Testcase Directories:**

1. 20220421\_171056\_mbedtls-2.2.1-gnutls-3.5.0-dynamic\_tgt-0\_all
2. 20220421\_171917\_mbedtls-2.2.1-gnutls-3.5.0-dynamic\_tgt-1\_all
3. 20220511\_172801\_mbedtls-2.2.1-gnutls-3.5.0-dynamic-update-1-rank-1-4797f\_tgt-0\_all
4. 20220511\_173856\_mbedtls-2.2.1-gnutls-3.5.0-dynamic-update-1-rank-1-4797f\_tgt-1\_all
5. 20220511\_175657\_mbedtls-2.2.1-gnutls-3.5.0-dynamic-update-1-rank-2-1abd4\_tgt-0\_all
6. 20220511\_180637\_mbedtls-2.2.1-gnutls-3.5.0-dynamic-update-1-rank-2-1abd4\_tgt-1\_all