

Capabilities (Symbian Signed)/TCB Capability

The **TCB** (Trusted Computing Base) platform security [capability](#) protects the core set of processes that enforce security on the rest of the platform.

Applications that wish to use this capability must first obtain permission from the device manufacturer

- [Device Manufacturer Capabilities](#) - see this for information about device manufacturer capabilities
- [Sensitive Applications](#) - see this article for examples of application types that may need TCB. Note that it is unlikely that any new process will be given TCB, with the exception of debug tools used during product creation.

Further information

Why?

- A trusted computing base is the foundation of any secure system.
- The **/sys** and **/resource** directories are protected, because process capabilities are encoded in the executable header.
- Certificates are checked at install time by the software installer, rather than at load time by the loader.

What?

- Tcb allows write access to **/sys** and **/resource** directories. This is the most critical capability as it allows write access to executables, which contain the capabilities that define the security attributes of a process.
- The file server checks TCB capability when a process attempts to access **/sys** or write to **/resource**
- The kernel and device drivers check TCB capability on certain APIs intended for use by the file server

Where?

- The kernel has TCB capability because code running in kernel mode can access the whole system.
- The file server has TCB capability because it is responsible for enforcing security of the file system
- The software install server has TCB capability because it needs to write to **/sys** and **/resource** when installing software.
- Device drivers need TCB because they are loaded into the kernel process and run in kernel mode.
- File server plugins (extensions and filesystems) need TCB because they are loaded into the file server process.

Also see [Symbian OS Platform Security/02. Platform Security Concepts#The Trusted Computing Base \(TCB\)](#)



© 2010 Symbian Foundation Limited. This document is licensed under the [Creative Commons Attribution-Share Alike 2.0](#) license. See

<http://creativecommons.org/licenses/by-sa/2.0/legalcode> for the full terms of the license.

Note that this content was originally hosted on the Symbian Foundation developer wiki.