

Leaflet: Setup of live media

This leaflet serves as a supplementary document to leaflet “Configuration of general purpose operating systems for measuring instruments” (MB05) [1]. The requirements of this leaflet are applied *additionally* or in *modified* form. Unless it is stated otherwise, the requirements of leaflet MB05 apply.

Each of the following requirements must be met by technical measures at the operating system or software application level. The implemented protective measures must be documented by the manufacturer and must comply with the state-of-the-art. Additionally, for conformity assessment in higher risk classes (E-F), relevant configuration files and scripts of the operating system must be provided by the manufacturer.

For a more detailed distinction of the liability of requirements, see RFC 2119 [2].

Hardware properties

When a live medium¹ is inserted into a computer, the entire operating system with the legally relevant software is loaded into the Random-Access Memory (RAM) of the host computer. There are no special precautions necessary on the host computer for the operation of the live medium.

1. The live medium must be set permanently to read-only.

Boot process and loading of the legally relevant software

The reproducibility feature of the live system on another host computer replaces the trust chain from permanently installed operating systems.

1. The boot loader on the live medium must be configured so that at the end of the boot process, only the operating system with the legally relevant software is loaded into the Random-Access Memory of the host computer.

Protection during use

1. The reloading and execution of software from other data storage must be prevented.
2. After the live medium has been placed on the market, the system must no longer be administrable.

¹ CD, DVD or USB flash drive.

Testability and traceability

1. A cryptographic hash function must be applied to the live medium in its form of a storage medium.
2. The hash value must be verifiable by the user.

References

- [1] Leaflet: Configuration of general purpose operating systems for measuring instruments, Physikalisch-Technische Bundesanstalt, Working group 8.51 „Metrological Software“, March 19, 2019.
- [2] S. Bradner, Key words for use in RFCs to Indicate Requirements Levels, March 1997, URL: <https://tools.ietf.org/html/rfc2119> (last accessed on February 05, 2019).