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Aspects of Dependable Linux Systems

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In regulated industries, Linux is widely used due to its strong software capabilities in areas such as dependability, reliability, and robustness. These industries follow best practices in terms of processes for requirements, design, verification, and change management. These processes are defined in standards that are typically not accessible to the open source kernel community.

However, since these standards represent best practices, they can be incorporated into structured development environments like the Linux kernel even without the knowledge of such standards. The kernel development process is trusted in critical infrastructure systems as it already covers many process elements directly or indirectly.

The purpose of this session is to initiate a discussion on what is currently available and what may be missing in order to enhance the dependability and robustness of Linux kernel-based systems. How can the artifacts be connected? Where are the appropriate places to maintain them? And who is the best responsible for each element of the development lifecycle?

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