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Experiences with Software Quality Metrics in the EMI Middleware

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The EMI Quality Model has been created to define, and later review, the EMI (European Middleware Initiative) software product and process quality. A quality model is based on a set of software quality metrics and helps to set clear and measurable quality goals for software products and processes. The EMI Quality Model follows the ISO/IEC 9126 Software Engineering –Product Quality to identify a set of characteristics that need to be present in the EMI software. For each software characteristic, such as portability, maintainability, compliance, etc, a set of associated metrics and KPIs (Key Performance Indicators) are identified.

This article presents how the EMI Quality Model and the EMI Metrics have been defined in the context of the software quality assurance activities carried out in EMI. It also describes the measurement plan and presents some of the metrics reports that have been produced for the EMI releases and updates. It also covers which tools and techniques can be used by any software project to extract "code metrics" on the status of the software products and "process metrics" related to the quality of the development and support process such as reaction time to critical bugs, requirements tracking and delays in product releases.

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