

Distributing software applications based on runtime environment

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Packaging and distribution of experiment-specific software becomes a complicated task when the number of versions and external dependencies increases. In order to run a single application, it is often enough to create appropriate runtime environment that ensures availability of required shared objects and data files. The idea of distributing software applications based on runtime environment is employed by Distribution After Release (DAR) tool. DAR allows to automatically replicate application's runtime environment based on the reference software installation. Assuming that software is relocatable, applications can be packaged into a completely self-consistent "darball" and executed on any computing node, which is binary compatible with the reference software installation. Such light-weight distribution can be used on opportunistic GRID resources to avoid excessive efforts of complete installation of experiment-specific software. For over three years, DAR tool has been successfully used by CMS for Monte-Carlo mass production, helping physicists to get results earlier. In version 2, DAR was completely redesigned, optimized, and enriched with new features, ready to meet future challenges. The paper presents general concept of the tool and new features available in DAR 2.

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