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BSM: Bundled Software Manager toolkit and the application for CEPC

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Circular Electron Positron Collider (CEPC) is designed as a future Higgs Factory. Like other high energy physics experiment, the offline software consists of many packages. BSM (Bundled Software Manager) is thus created in order to simplify the deployment and usage of software which has many packages and dependencies.

BSM utilizes git as the software repository. Different software versions are distinguished by git tags. The details of software are defined in the git repository including installation instructions, environment, dependencies, etc. Commands are supported for various shells, including bash, csh, zsh, tcsh and more could be extended. Json output and python API are also available for advanced development. The installation of each package could be configured separately and extended with customized handler. BSM manages the environment variables and the version cleaning and switching are easy. It also has fine environment control on a single package. Users can also define their own packages easily and these packages will be managed by BSM with simple configuration.

CEPCSoft has already set up the deployment procedure with BSM. And BSM is also designed with flexibility to create different applications other than CEPCSoft. It is suitable for the projects including a lot of packages and it is safe for different BSM applications to coexist with each other under proper configuration.

Consider for promotion

No

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