

HIGH -PERFORMANCE COMPUTING SOLUTIONS

Context

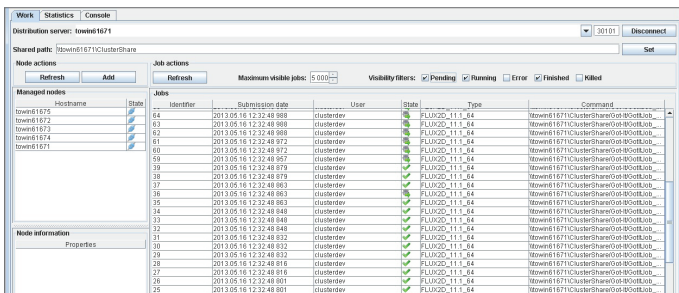
- » **Flux 2D/3D** provides electromagnetic and thermal physics simulations in 2D and 3D, producing accurate results efficiently to optimize electrical devices.
- » **GOT-It** offers the possibility to boost the capabilities of CEDRAT software and find the best configuration of design parameters to optimize devices and systems.
- » Combined together, they offer an efficient means to search the design space.

GOT-It and **Flux** (*) coupling technology introduces **High Performance Computing capabilities** through the **distribution of computations**, making use of all the computing power available and managing it.

The HPC experience is now available to the users for an increased engineering productivity and shortened design cycles.

Saving computation time with CDE

The Cedrat Distribution Engine tool benefits from a dedicated interface that allows configuring and managing the computation resources, as well as supervising the state of the submitted tasks. The calculations launched by GOT-It are listed in the waiting thread of the distribution manager. Many tasks are done simultaneously as the processors are available. As soon as a resource is available, another task is launched. Although the distribution process is fully automatic, CDE gives the possibility to see in real-time the evolution of the computing jobs and offers controls to the user to fine tune the usage of computing resources.



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CDE: Distribution manager

(*) Functionality available since: GOT-It version 2.0 and Flux version 11.1SP2. All applications in 2D, 3D and Skew are taken into account, as long as you have the corresponding Flux license.

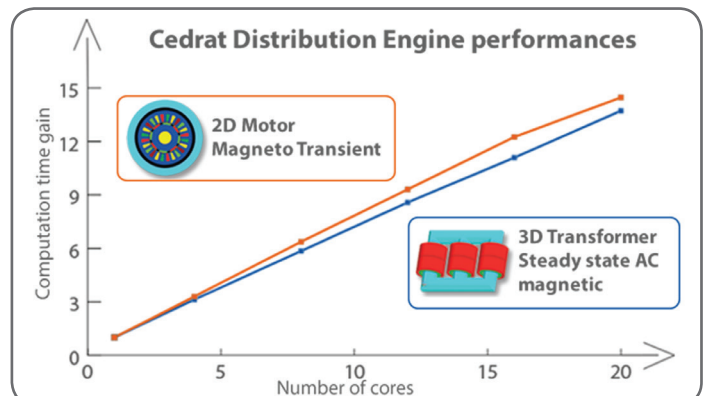
Smart Power

CEDRAT has developed its **Distribution Engine** as a tool to support and manage HPC. Associated to **GOT-It**, **CDE** allows **performing** and **distributing** simultaneously numerous **Flux** calculations over all the processors available on a single multi-core PC or using a network (cluster).

Thanks to **CDE**, several finite element evaluations needed by **GOT-It** can be run at the same time, instead of being done in a sequential way. As a consequence, the time needed to perform parametric studies, screening, design of experiment or optimization can be dramatically reduced in function of the number of processors used (see graph of performances).

Main features

- » **Dedicated interface**
- » **For any Flux 2D and 3D applications**
- » **Automatic distribution and management of the computations**
- » **Distribution on single multi-core PC or cluster**
- » **Different packages of tokens depending on your needs**
- » **Available for Windows dependent OS 64-bits**



Note: Performances evaluated using Flux 2D/3D parametric computations driven by GOT-It.