# How set-up parallel computation with Digimat to ABAQUS ?

In this FAQ, we are explaining you

- which kind of parallel computation is supported by DIGIMAT to ABAQUS.
- how is managed the DIGIMAT license in parallel computation.
- how to start a parallel computation with DIGIMAT to ABAQUS.

## Which kind of parallel computation are supported by DIGIMAT to ABAQUS

Two kind of parallel computation can be distinguished:

- SMP is a multiprocessor computer architecture where two or more identical processors are connected to a single shared main memory.

- DMP is computer architecture where several computers with their own memory and processors are linked together by high-speed connection.

At this moment, only SMP is supported in Digimat to ABAQUS (Explicit and Standard).

## How is managed the DIGIMAT license in parallel computation

Each core is using one DIGIMAT to ABAQUS license and one license to interface DIGIMAT with the injection code. Let's consider the example presented above. To run the computation on 4 cores, we need four DIGIMAT to ABAQUS/Explicit licenses and four DIGIMAT to MPI3D licenses. If these licenses are not available, you cannot run successfully the computation.

## How to start SMP parallel computation

First of all, you must have in your abaqus_v6.env file the following keyword for Linux:

*mp_mode = MPI*

If *mp_mode* is equal to *THREADS* on Linux, DIGIMAT to ABAQUS parallel computation will not start properly.

The command to start the parallel computation is the same on Linux or Windows:

- For DIGIMAT to ABAQUS/Standard:

    *abaqus job=name_of_the_abaqus_input cpus=n user=path_to_the_digi2abaStd.obj*

- For DIGIMAT to ABAQUS/Explicit:

    *abaqus job=name_of_the_abaqus_input cpus=n parallel=domain user=path_to_the_digi2abaExp.obj*