Orchestration Runtime Notes

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Abstract

1 Orchestration Namespace

The Grid and Tile classes, as well as related classes and functions, live inside the Orchestration namespace.

2 Real Type

For the sake of flexibility in type-matching, the Orchestration System maintains its own floating point type: orchestration::Real. This is a typedef for either double or float, depending on the macro defined at compilation, REAL_IS_DOUBLE or REAL_IS_FLOAT.

3 Vectors

3.1 IntVect

The IntVect class represents NDIM-tuples of integers. Most frequently, they represent vectors in the index-space of the domain. Users are responsible of tracking whether they represent cell-based or node-based indices. They have basic math operators defined, such as component-wise addition, scalar multiplication, etc.

3.2 RealVect

The RealVect class represents NDIM-tuples of Reals. They typically represent points of the domain in physical space. They also have basic math operators defined.