```
passed
adios2_adios *adios = adios2_init_config(config_fixe, cartcomm, 1); // if using ADIOS2 MPI, need
to include debugger.
adios2_io *io = adios2_declare_io(adios, IO_ENGINE); //IO handler declaration
adios2_variable *var_iodata = adios2_define_variable(io, "iodata", adios2_type_double, NDIM,
shape, start, count, adios2 constant dims true);
adios2 engine *engine = adios2 open(io, FILENAME, adios2 mode write);
adios2 step status status;
adios2_begin_step(engine, adios2_step_mode_update, 10.0, &status);
adios2_put(engine, var_iodata, iodata, adios2_mode_deferred);
adios2 end step(engine);
adios2 close(engine);
adios2_finalize(adios);
```

IO engine variable

```
// if using ADIOS2 MPI, need to include debugger.
adios2_adios *adios = adios2_init_config(config_file, cartcomm, 1);
                                                                  IO engine string
// IO handler declaration
                                                                  variable passed
adios2 io *io = adios2 declare io(adios, IO ENGINE);
/*
* constant dims true variables constant, false variables can change after definition. For every rank this should
be true.
* shape is global dimension
* start is local offset
* count is local dimension
*/
adios2 variable *var iodata = adios2 define variable(io, "iodata", adios2 type double, NDIM,
shape, start, count, adios2_constant_dims_true);
adios2_engine *engine = adios2_open(io, FILENAME, adios2_mode_write);
adios2 step status status;
adios2_begin_step(engine, adios2_step_mode_update, 10.0, &status);
adios2_put(engine, var_iodata, iodata, adios2_mode_deferred);
adios2 end step(engine);
adios2_close(engine);
adios2 finalize(adios);
```