

```
Started by user Jong
Running as SYSTEM
[EnvInject] - Loading node environment variables.
Building remotely on EC2 (ec2-NOAA Cloud) - EPIC Rocky 8 Docker UFS WM CI (sir-h926nzkj) (docker-ufs-
wm-ci centos7-docker-ufs-wm-ci centos7) in workspace /home/rocky/workspace/sandbox/Stochastic-
sandbox-v2
[WS-CLEANUP] Deleting project workspace...
[WS-CLEANUP] Deferred wipeout is used...
The recommended git tool is: NONE
No credentials specified
Cloning the remote Git repository
Cloning repository https://github.com/jkbbk2004/stochastic_physics/
 > git init /home/rocky/workspace/sandbox/Stochastic-sandbox-v2 # timeout=10
Fetching upstream changes from https://github.com/jkbbk2004/stochastic_physics/
 > git --version # timeout=10
 > git --version # 'git version 2.39.3'
 > git fetch --tags --force --progress -- https://github.com/jkbbk2004/stochastic_physics/
+refs/heads/*:refs/remotes/origin/* # timeout=10
 > git config remote.origin.url https://github.com/jkbbk2004/stochastic_physics/ # timeout=10
 > git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10
Avoid second fetch
 > git rev-parse refs/remotes/origin/feature/dockerfile^{commit} # timeout=10
Checking out Revision 8c9133966621cf7853fb4989de190447c39b78b8
(refs/remotes/origin/feature/dockerfile)
 > git config core.sparsecheckout # timeout=10
 > git checkout -f 8c9133966621cf7853fb4989de190447c39b78b8 # timeout=10
Commit message: "Update sphinx.yml"
 > git rev-list --no-walk 8c9133966621cf7853fb4989de190447c39b78b8 # timeout=10
[Stochastic-sandbox-v2] $ /usr/bin/bash /tmp/jenkins12571054741519013817.sh
cellular_automata_global.F90
cellular_automata_sgs.F90
CMakeLists.txt
CODEOWNERS
compns_stochy.F90
docs
Doxyfile
function2
function_indlsev
function_indlsod
get_stochy_pattern.F90
halo_exchange.fv3.F90
kinddef.F90
LICENSE.md
Indp_apply_perts.F90
main.doc
makefile
mersenne_twister.F90
mpi_wrapper.F90
plumes.F90
random_numbers.F90
README.md
README.standalone
spectral_transforms.F90
stochastic_physics.F90
stochy_data_mod.F90
stochy_doc.conf
stochy_internal_state_mod.F90
stochy_namelist_def.F90
stochy_patterngenerator.F90
unit_tests
update_ca.F90
Total reclaimed space: 0B
#0 building with "default" instance using docker driver
```

```

#1 [internal] load .dockerignore
#1 transferring context: 2B done
#1 DONE 0.0s

#2 [internal] load build definition from Dockerfile
#2 transferring dockerfile: 498B done
#2 DONE 0.0s

#3 [internal] load metadata for docker.io/noaaepic/ubuntu20.04-gnu9.3-hpc-stack:v1.2
#3 DONE 0.6s

#4 [1/5] FROM docker.io/noaaepic/ubuntu20.04-gnu9.3-hpc-
stack:v1.2@sha256:f84ccf2f58f2af4fe9bc2471d6a00fedcffe64dcdc621ffed83af5ca358c38a8
#4 resolve docker.io/noaaepic/ubuntu20.04-gnu9.3-hpc-
stack:v1.2@sha256:f84ccf2f58f2af4fe9bc2471d6a00fedcffe64dcdc621ffed83af5ca358c38a8 0.0s done
#4 ...

#5 [internal] load build context
#5 transferring context: 6.98MB 0.0s done
#5 DONE 0.1s

#4 [1/5] FROM docker.io/noaaepic/ubuntu20.04-gnu9.3-hpc-
stack:v1.2@sha256:f84ccf2f58f2af4fe9bc2471d6a00fedcffe64dcdc621ffed83af5ca358c38a8
#4 sha256:f84ccf2f58f2af4fe9bc2471d6a00fedcffe64dcdc621ffed83af5ca358c38a8 2.41kB / 2.41kB done
#4 sha256:1920f81f65562ffe91e05bac30c47f47183e17f041ca53241f023834438d7738 6.96kB / 6.96kB done
#4 sha256:345e3491a907bb7c6f1bddd4a94284b8b6ddd77eb7d93f09432b17b20f2bbe 0B / 28.54MB 0.1s
#4 sha256:57671312ef6fdbecf340e5fed0fb0863350cd806c92b1fdd7978abdd02afc5c3 0B / 851B 0.1s
#4 sha256:5e9250ddb7d0fa6d13302c7c3e6a0aa40390e42424caed1e5289077ee4054709 0B / 187B 0.1s
#4 sha256:345e3491a907bb7c6f1bddd4a94284b8b6ddd77eb7d93f09432b17b20f2bbe 9.44MB / 28.54MB 0.3s
#4 sha256:57671312ef6fdbecf340e5fed0fb0863350cd806c92b1fdd7978abdd02afc5c3 851B / 851B 0.1s done
#4 sha256:5e9250ddb7d0fa6d13302c7c3e6a0aa40390e42424caed1e5289077ee4054709 187B / 187B 0.1s done
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 0B / 165.59MB 0.3s
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 0B / 44.66MB 0.3s
#4 sha256:345e3491a907bb7c6f1bddd4a94284b8b6ddd77eb7d93f09432b17b20f2bbe 16.78MB / 28.54MB 0.4s
#4 sha256:345e3491a907bb7c6f1bddd4a94284b8b6ddd77eb7d93f09432b17b20f2bbe 23.07MB / 28.54MB 0.5s
#4 sha256:345e3491a907bb7c6f1bddd4a94284b8b6ddd77eb7d93f09432b17b20f2bbe 28.54MB / 28.54MB 0.7s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 8.39MB / 165.59MB 0.7s
#4 sha256:345e3491a907bb7c6f1bddd4a94284b8b6ddd77eb7d93f09432b17b20f2bbe 28.54MB / 28.54MB 0.7s
done
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 8.39MB / 44.66MB 0.8s
#4 extracting sha256:345e3491a907bb7c6f1bddd4a94284b8b6ddd77eb7d93f09432b17b20f2bbe 0.1s
#4 sha256:109d28d9515722abbe5052b38a92b71b46ee3a7cecdc5ee1ebcb7b5ac742fa43 0B / 151B 0.8s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 16.78MB / 165.59MB 0.9s
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 13.63MB / 44.66MB 0.9s
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 16.78MB / 44.66MB 1.0s
#4 sha256:109d28d9515722abbe5052b38a92b71b46ee3a7cecdc5ee1ebcb7b5ac742fa43 151B / 151B 0.9s done
#4 sha256:7ceaea8da3ed3593559192949aa872d4db97f37e7a3dc08c89daa31ff1a0dce5 0B / 4.37kB 1.0s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 29.36MB / 165.59MB 1.2s
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 24.12MB / 44.66MB 1.2s
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 28.31MB / 44.66MB 1.3s
#4 sha256:7ceaea8da3ed3593559192949aa872d4db97f37e7a3dc08c89daa31ff1a0dce5 4.37kB / 4.37kB 1.3s done
#4 sha256:9fe62363807c3c9022f6538307c2698323b08ca505ac5f27596f45259956a66b 0B / 78.90kB 1.3s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 40.89MB / 165.59MB 1.4s
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 31.46MB / 44.66MB 1.4s
#4 sha256:9fe62363807c3c9022f6538307c2698323b08ca505ac5f27596f45259956a66b 78.90kB / 78.90kB 1.4s
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 36.70MB / 44.66MB 1.5s
#4 extracting sha256:345e3491a907bb7c6f1bddd4a94284b8b6ddd77eb7d93f09432b17b20f2bbe 0.8s done
#4 sha256:9fe62363807c3c9022f6538307c2698323b08ca505ac5f27596f45259956a66b 78.90kB / 78.90kB 1.4s
done
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 0B / 636.73MB 1.5s
#4 extracting sha256:57671312ef6fdbecf340e5fed0fb0863350cd806c92b1fdd7978abdd02afc5c3
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 56.62MB / 165.59MB 1.7s
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 44.66MB / 44.66MB 1.7s
#4 extracting sha256:57671312ef6fdbecf340e5fed0fb0863350cd806c92b1fdd7978abdd02afc5c3 done
#4 extracting sha256:5e9250ddb7d0fa6d13302c7c3e6a0aa40390e42424caed1e5289077ee4054709 done

```

```

#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 76.55MB / 165.59MB 2.0s
#4 sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 44.66MB / 44.66MB 1.8s
done
#4 sha256:112c159de4df28a267685c28f57400c98e9ad47e7c5b9955493296417b4f1e7e 0B / 2.00kB 2.0s
#4 sha256:112c159de4df28a267685c28f57400c98e9ad47e7c5b9955493296417b4f1e7e 2.00kB / 2.00kB 2.1s done
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 90.18MB / 165.59MB 2.4s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 34.60MB / 636.73MB 2.7s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 105.91MB / 165.59MB 2.9s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 115.34MB / 165.59MB 3.1s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 124.78MB / 165.59MB 3.3s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 135.27MB / 165.59MB 3.5s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 67.11MB / 636.73MB 3.5s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 145.75MB / 165.59MB 3.7s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 154.14MB / 165.59MB 3.9s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 165.59MB / 165.59MB 4.1s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 101.71MB / 636.73MB 4.3s
#4 sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 165.59MB / 165.59MB 4.5s
done
#4 extracting sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 0.1s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 137.36MB / 636.73MB 5.0s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 169.87MB / 636.73MB 5.5s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 207.62MB / 636.73MB 6.2s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 248.51MB / 636.73MB 7.0s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 282.07MB / 636.73MB 7.5s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 318.77MB / 636.73MB 8.3s
#4 extracting sha256:c46471bef5ab4f42c30ab2eb24e0a4bd31af7094788de3e88b89038e94b6bc08 4.0s done
#4 extracting sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 0.1s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 351.27MB / 636.73MB 9.0s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 384.83MB / 636.73MB 9.5s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 423.62MB / 636.73MB 10.1s
#4 extracting sha256:b327d3abd2a724cb969f28fa262c12f43b5c5753f66c4dd9bd9598a49c556525 1.6s done
#4 extracting sha256:109d28d9515722abbe5052b38a92b71b46ee3a7ceecd5ee1ebcb7b5ac742fa43 done
#4 extracting sha256:7ceaea8da3ed3593559192949aa872d4db97f37e7a3dc08c89daa31ff1a0dce5 done
#4 extracting sha256:9fe62363807c3c9022f6538307c2698323b08ca505ac5f27596f45259956a66b
#4 extracting sha256:9fe62363807c3c9022f6538307c2698323b08ca505ac5f27596f45259956a66b done
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 456.13MB / 636.73MB 10.6s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 495.98MB / 636.73MB 11.3s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 529.53MB / 636.73MB 11.7s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 565.18MB / 636.73MB 12.1s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 612.37MB / 636.73MB 12.7s
#4 sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 636.73MB / 636.73MB 16.9s
done
#4 extracting sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0
#4 extracting sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 5.1s
#4 extracting sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 10.2s
#4 extracting sha256:a6d2877f8486e17376cf7c1d798589425ed35a3393085c35c43eee29875c28e0 11.3s done
#4 extracting sha256:112c159de4df28a267685c28f57400c98e9ad47e7c5b9955493296417b4f1e7e done
#4 DONE 28.7s

#6 [2/5] RUN echo $(pwd)
#6 0.289 /home/builder
#6 DONE 22.2s

#7 [3/5] COPY --chown=builder:builder . /home/builder/stochastic_physics
#7 DONE 0.5s

#8 [4/5] WORKDIR /home/builder/stochastic_physics/unit_tests
#8 DONE 0.1s

#9 [5/5] RUN echo $(pwd); echo $(ls -l)
#9 0.295 /home/builder/stochastic_physics/unit_tests
#9 0.298 total 296 -rw-----. 1 builder builder 400 Aug 14 00:09 Dockerfile -rw-----. 1 builder
builder 13700 Aug 14 00:09 atmosphere_stub.F90 -rwx-----. 1 builder builder 2882 Aug 14 00:09
build_standalone.sh -rw-----. 1 builder builder 3058 Aug 14 00:09 compare_ca_output.F90 -rw-----.
1 builder builder 5006 Aug 14 00:09 compare_output.F90 -rwx-----. 1 builder builder 174 Aug 14 00:09

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compile_compare.sh -rwx-----. 1 builder builder 180 Aug 14 00:09 compile_compare_ca.sh -rwx-----. 1
builder builder 2563 Aug 14 00:09 compile_standalone.hera.gnu -rwx-----. 1 builder builder 1893 Aug
14 00:09 compile_standalone.hera.intel -rwx-----. 1 builder builder 2473 Aug 14 00:09
compile_standalone_ca.hera.gnu -rwx-----. 1 builder builder 1905 Aug 14 00:09
compile_standalone_ca.hera.intel -rw-----. 1 builder builder 13879 Aug 14 00:09 fv_arrays_stub.F90
-rw-----. 1 builder builder 44972 Aug 14 00:09 fv_control_stub.F90 -rw-----. 1 builder builder
68366 Aug 14 00:09 fv_mp_stub_mod.F90 -rw-----. 1 builder builder 1595 Aug 14 00:09 input.nml -rw--
-----. 1 builder builder 1446 Aug 14 00:09 input.nml.ca_template -rw-----. 1 builder builder 3460
Aug 14 00:09 input.nml.lnd1 -rw-----. 1 builder builder 1437 Aug 14 00:09 input.nml.noise -rw-----
-. 1 builder builder 1566 Aug 14 00:09 input.nml.template -rw-----. 1 builder builder 5091 Aug 14
00:09 module-setup.sh -rw-----. 1 builder builder 631 Aug 14 00:09 modules.hera.intel -rw-----. 1
builder builder 727 Aug 14 00:09 modules.orion.intel -rw-----. 1 builder builder 613 Aug 14 00:09
modules.stoch -rw-----. 1 builder builder 674 Aug 14 00:09 modules.stoch.gnu -rw-----. 1 builder
builder 635 Aug 14 00:09 modules.stoch.gnu_dbg -rwx-----. 1 builder builder 1498 Aug 14 00:09
run_ca.sh -rwx-----. 1 builder builder 1058 Aug 14 00:09 run_standalone.sh -rwx-----. 1 builder
builder 1270 Aug 14 00:09 run_unit_test_container.sh -rwx-----. 1 builder builder 2616 Aug 14 00:09
run_unit_tests.sh -rwx-----. 1 builder builder 4906 Aug 14 00:09 run_unit_tests_ca.sh -rw-----. 1
builder builder 14385 Aug 14 00:09 standalone_ca.F90 -rw-----. 1 builder builder 14226 Aug 14 00:09
standalone_stochy.F90 -rw-----. 1 builder builder 1391 Aug 14 00:09 ufs_linux.gnu
#9 DONE 0.4s

```

```

#10 exporting to image
#10 exporting layers 0.1s done
#10 writing image sha256:b38aae6724e4ab79ef27f06e34f04eb1e5b1cd20329857b968a4b3eeae4bb4e0 done
#10 naming to docker.io/library/stochastic_physics_test done
#10 DONE 0.1s

```

DataVolume

Unable to find image 'ufscommunity/input-data:stochastic' locally

stochastic: Pulling from ufscommunity/input-data

df20fa9351a1: Pulling fs layer

ca5acf772a02: Pulling fs layer

df20fa9351a1: Verifying Checksum

df20fa9351a1: Download complete

df20fa9351a1: Pull complete

ca5acf772a02: Verifying Checksum

ca5acf772a02: Download complete

ca5acf772a02: Pull complete

Digest: sha256:0aa0e741ac72a44a9af1c430edee65a7e2cbcf38a325c687298c3d9a22a8c001

Status: Downloaded newer image for ufscommunity/input-data:stochastic

ef60703664dfbb41e6fa04bdac09ee60c110a66a49a7ea4bbd06057893a2fe45

| Filesystem | Size | Used | Avail | Use% | Mounted on |
|----------------|------|------|-------|------|----------------|
| devtmpfs | 93G | 0 | 93G | 0% | /dev |
| tmpfs | 93G | 0 | 93G | 0% | /dev/shm |
| tmpfs | 93G | 17M | 93G | 1% | /run |
| tmpfs | 93G | 0 | 93G | 0% | /sys/fs/cgroup |
| /dev/nvme0n1p1 | 300G | 13G | 288G | 5% | / |
| tmpfs | 19G | 0 | 19G | 0% | /run/user/990 |
| tmpfs | 19G | 0 | 19G | 0% | /run/user/1000 |

running unit test

Setting environment variables for NEMSFv3gfs on Linux with gcc/gfortran

Setting environment variables for NEMSFv3gfs on Linux with gcc/gfortran

/home/builder/opt

ar: creating libstochastic_physics.a

a - atmosphere_stub.o

a - compns_stochy.o

a - fv_arrays_stub.o

a - fv_control_stub.o

a - fv_mp_stub_mod.o

a - get_stochy_pattern.o

a - kinddef.o

a - lndp_apply_perts.o

a - mersenne_twister.o

a - mpi_wrapper.o

a - spectral_transforms.o

a - stochastic_physics.o

```

a - stochy_data_mod.o
a - stochy_internal_state_mod.o
a - stochy_namelist_def.o
a - stochy_patterngenerator.o
Dockerfile INPUT atmosphere_stub.F90 build_standalone.sh compare_ca_output.F90 compare_output.F90
compile_compare.sh compile_compare_ca.sh compile_standalone.hera_gnu compile_standalone.hera_intel
compile_standalone_ca.hera.gnu compile_standalone_ca.hera.intel fv_arrays_stub.F90
fv_control_stub.F90 fv_mp_stub_mod.F90 input.nml input.nml.ca_template input.nml.lnd1 input.nml.noise
input.nml.template module-setup.sh modules.hera.intel modules.orion.intel modules.stoch
modules.stoch_gnu modules.stoch_gnu_dbg run_ca.sh run_standalone.sh run_unit_test_container.sh
run_unit_tests.sh run_unit_tests_ca.sh standalone_ca.F90 standalone_stochy.F90 standalone_stochy.x
ufs_linux.gnu
standalone_stochy.x

```

```

Usage: ./mpiexec [global opts] [local opts for exec1] [exec1] [exec1 args] : [local opts for exec2]
[exec2] [exec2 args] : ...

```

Global options (passed to all executables):

Global environment options:

```

-genv {name} {value}      environment variable name and value
-genvlist {env1,env2,...} environment variable list to pass
-genvnone                 do not pass any environment variables
-genvall                  pass all environment variables not managed
                          by the launcher (default)

```

Other global options:

```

-f {name}                 file containing the host names
-hosts {host list}        comma separated host list
-wdir {dirname}           working directory to use
-configfile {name}        config file containing MPMD launch options

```

Local options (passed to individual executables):

Local environment options:

```

-env {name} {value}       environment variable name and value
-envlist {env1,env2,...} environment variable list to pass
-envnone                  do not pass any environment variables
-envall                   pass all environment variables (default)

```

Other local options:

```

-n/-np {value}           number of processes
{exec_name} {args}       executable name and arguments

```

Hydra specific options (treated as global):

Launch options:

```

-launcher                 launcher to use (ssh rsh fork slurm ll lsf sge manual persist)
-launcher-exec            executable to use to launch processes
-enable-x/-disable-x     enable or disable X forwarding

```

Resource management kernel options:

```

-rmk                      resource management kernel to use (user slurm ll lsf sge pbs
cobalt)

```

Processor topology options:

```

-topolib                  processor topology library (hwloc)
-bind-to                  process binding
-map-by                   process mapping
-membind                  memory binding policy

```

Checkpoint/Restart options:

```

-ckpt-interval            checkpoint interval

```

```

-ckpoint-prefix      checkpoint file prefix
-ckpoint-num         checkpoint number to restart
-ckpointlib          checkpointing library (none)

```

Demux engine options:

```
-demux               demux engine (poll select)
```

Other Hydra options:

```

-verbose             verbose mode
-info               build information
-print-all-exitcodes  print exit codes of all processes
-iface              network interface to use
-ppn                processes per node
-profile            turn on internal profiling
-prepend-rank        prepend rank to output
-prepend-pattern     prepend pattern to output
-outfile-pattern     direct stdout to file
-errfile-pattern     direct stderr to file
-nameserver          name server information (host:port format)
-disable-auto-cleanup  don't cleanup processes on error
-disable-hostname-propagation  let MPICH auto-detect the hostname
-order-nodes         order nodes as ascending/descending cores
-localhost           local hostname for the launching node
-usize              universe size (SYSTEM, INFINITE, <value>)

```

Please see the intructions provided at

http://wiki.mpich.org/mpich/index.php/Using_the_Hydra_Process_Manager
for further details

NOTE from PE 0: MPP_DOMAINS_SET_STACK_SIZE: stack size set to 32768.

&MPP_IO_NML

```

HEADER_BUFFER_VAL=16384 ,
GLOBAL_FIELD_ON_ROOT_PE=T,
IO_CLOCKS_ON=F,
SHUFFLE=0 ,
DEFLATE_LEVEL=-1 ,
CF_COMPLIANCE=F,
/

```

NOTE from PE 0: MPP_IO_SET_STACK_SIZE: stack size set to 131072.

NOTE from PE 0: MPP_DOMAINS_SET_STACK_SIZE: stack size set to 40000000.

Cubic: cubed-sphere domain decomposition

```

whalo = 3, ehalo = 3, shalo = 3, nhalo = 3
X-AXIS = 96

```

Cubic: cubed-sphere domain decomposition

```

whalo = 3, ehalo = 3, shalo = 3, nhalo = 3
X-AXIS = 96
Y-AXIS = 96

```

Cubic: cubed-sphere domain decomposition

Cubic: cubed-sphere domain decomposition

```

whalo = 3, ehalo = 3, shalo = 3, nhalo = 3
X-AXIS = 96
Y-AXIS = 96
Y-AXIS = 96

```

Cubic: cubed-sphere domain decomposition

```

whalo = 3, ehalo = 3, shalo = 3, nhalo = 3
X-AXIS = 96
Y-AXIS = 96

```

```

whalo = 3, ehalo = 3, shalo = 3, nhalo = 3
X-AXIS = 96
Y-AXIS = 96

```

Cubic: cubed-sphere domain decomposition

```

whalo = 3, ehalo = 3, shalo = 3, nhalo = 3
X-AXIS = 96
Y-AXIS = 96

```

Cubic: cubed-sphere domain decomposition

```

Cubic: cubed-sphere domain decomposition
whalo =   1, ehalo =   1, shalo =   1, nhalo =   1
  X-AXIS =  96
  Y-AXIS =  96
Cubic: cubed-sphere domain decomposition
whalo =   1, ehalo =   1, shalo =   1, nhalo =   1
  X-AXIS =  96
  Y-AXIS =  96
Cubic: cubed-sphere domain decomposition
whalo =   1, ehalo =   1, shalo =   1, nhalo =   1
  X-AXIS =  96
  Y-AXIS =  96
whalo =   1, ehalo =   1, shalo =   1, nhalo =   1
  X-AXIS =  96
Cubic: cubed-sphere domain decomposition
whalo =   1, ehalo =   1, shalo =   1, nhalo =   1
  X-AXIS =  96
  Y-AXIS =  96
  Y-AXIS =  96
Cubic: cubed-sphere domain decomposition
whalo =   1, ehalo =   1, shalo =   1, nhalo =   1
  X-AXIS =  96
  Y-AXIS =  96

```

WARNING from PE 0: The function named string has been moved from fms_io_mod to fms_mod. Please update your call.

WARNING from PE 0: The function named string has been moved from fms_io_mod to fms_mod. Please update your call.

```

nx,ny=      96      96
calling init_stochastic_physics      3
nx,ny=      96      96
calling init_stochastic_physics      3
  in comps_stochy
spp_lscale= -999.000000000000000    -999.000000000000000    -999.000000000000000
-999.000000000000000    -999.000000000000000    -999.000000000000000
spp_tau=    -999.000000000000000    -999.000000000000000    -999.000000000000000
-999.000000000000000    -999.000000000000000    -999.000000000000000
spp_stddev_cutoff=   0.000000000000000    0.000000000000000    0.000000000000000
0.000000000000000    0.000000000000000    0.000000000000000
ntrunc not supplied, calculating
ntrunc calculated from l_min  25000.00000000000    160
NOTE ntrunc adjusted for even nllats    162
gaussian grid not set, defining here    984    488
land perturbations will be applied to selected paramaters, using newer scheme designed for DA ens
spread
land perturbation will be applied to vgf
land perturbation will be applied to smc
SPP physics perturbations will be applied to selected parameters    0
stochastic physics
do_sppt : T
do_shum : T
do_skeb : T
  lndp_type :          2
  lndp_model_type :    1
  n_var_lndp :          2
do_spp  : F
  n_var_spp :          0
nx,ny=      96      96
calling init_stochastic_physics      3
nx,ny=      96      96
calling init_stochastic_physics      3
nx,ny=      96      96

```

```

calling init_stochastic_physics          3
nx,ny=          96          96
calling init_stochastic_physics          3
calling init          984          488          162
nsppt =          3
nshum =          1
nskeb =          1
  nlndp  =          1
  nspp  =          0
Initialize random pattern for SPPT
calling init          984          488          162
using seed          3          3
using seed 200000003          200000003
using seed 300000003          300000003
calling init          984          488          162
Initialize random pattern for SHUM
using seed          1          1
Initialize random pattern for SKEB
calling init          984          488          162
using seed          2          2
calling init          984          488          162
calling init          984          488          162
using kenorm 1.0000000000000000          0.0000000000000000
Initialize random pattern for SFC-PERTS
using seed          4          4
Initialize random pattern for LNDP PERTS
lndp pattern initialized,          1          1 -6.4231323464959703E-002  7.9338342283662933E-
002
lndp pattern initialized,          1          2 -5.3995000725870393E-002  6.0595287014299608E-
002

```

Program received signal SIGSEGV: Segmentation fault - invalid memory reference.

Backtrace for this error:

Program received signal SIGSEGV: Segmentation fault - invalid memory reference.

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Backtrace for this error:

Program received signal SIGSEGV: Segmentation fault - invalid memory reference.

Backtrace for this error:

Program received signal SIGSEGV: Segmentation fault - invalid memory reference.

Backtrace for this error:

```

#0 0x7f805bc21d01 in ???
#1 0x7f805bc20ed5 in ???
#2 0x7f805b85d20f in ???
#0 0x7fdd780e1d01 in ???
#1 0x7fdd780e0ed5 in ???
#2 0x7fdd77d1d20f in ???
#3 0x55f6c840e63f in __stochastic_physics_MOD_init_stochastic_physics
  at /home/builder/stochastic_physics/stochastic_physics.F90:123
#3 0x5581f00a863f in __stochastic_physics_MOD_init_stochastic_physics
  at /home/builder/stochastic_physics/stochastic_physics.F90:123
#4 0x5581f0006367 in standalone_stochy

```



```

    at unit_tests/standalone_stochy.F90:182
#5 0x5581f000cbe0 in main
    at unit_tests/standalone_stochy.F90:3
#4 0x55f6c836c367 in standalone_stochy
    at unit_tests/standalone_stochy.F90:182
#5 0x55f6c8372be0 in main
    at unit_tests/standalone_stochy.F90:3
#0 0x7fcf6f8ded01 in ???
#1 0x7fcf6f8dded5 in ???
#2 0x7fcf6f51a20f in ???
#3 0x5611344f363f in __stochastic_physics_MOD_init_stochastic_physics
    at /home/builder/stochastic_physics/stochastic_physics.F90:123
#4 0x561134451367 in standalone_stochy
    at unit_tests/standalone_stochy.F90:182
#5 0x561134457be0 in main
    at unit_tests/standalone_stochy.F90:3

```

```

=====
= BAD TERMINATION OF ONE OF YOUR APPLICATION PROCESSES
= PID 524 RUNNING AT b9937e7c2bf3
= EXIT CODE: 139
= CLEANING UP REMAINING PROCESSES
= YOU CAN IGNORE THE BELOW CLEANUP MESSAGES
=====

```

YOUR APPLICATION TERMINATED WITH THE EXIT STRING: Segmentation fault (signal 11)
This typically refers to a problem with your application.
Please see the FAQ page for debugging suggestions

| Filesystem | Size | Used | Avail | Use% | Mounted on |
|----------------|------|------|-------|------|----------------|
| devtmpfs | 93G | 0 | 93G | 0% | /dev |
| tmpfs | 93G | 0 | 93G | 0% | /dev/shm |
| tmpfs | 93G | 17M | 93G | 1% | /run |
| tmpfs | 93G | 0 | 93G | 0% | /sys/fs/cgroup |
| /dev/nvme0n1p1 | 300G | 13G | 288G | 5% | / |
| tmpfs | 19G | 0 | 19G | 0% | /run/user/990 |
| tmpfs | 19G | 0 | 19G | 0% | /run/user/1000 |

Deleted build cache objects:
bruz524t6g9icy8mpu308py8c
6ngdjykkgirb4yvdnjck7p41q
voqm338oplplkq4elx77wyhv8

Total reclaimed space: 6.966MB
Finished: SUCCESS