Cybershake v22p11

General Info

Continuing Cybershake 100m runs around Wellington region.

Run Folder: /nesi/nobackup/nesi00213/RunFolder/Cybershake/v22p11

Environment: /nesi/project/nesi00213/Environments/cybershake_v22p11

Gmsim Version: 20.4.1.1

Stat File: /nesi/project/nesi00213/StationInfo/non_uniform_whole_nz_with_real_stations-hh400_v20p3_land.ll

Used core hours: 750k

Initial Faults (list.txt)	Run Faults (list2.txt)
AkaOtaki 33r BooBooALL 35r BooBooEAST 33r DryHuang 31r Fisherman 34r Manaota 35r Moonshine 29r OhariuC 31r OhariuS 32r Okupe 32r Otaraia 28r PukeShep 32r WellTeast 32r WellWHV 35r Wharekauhau 33r Whitemans 28r	AkaOtaki 33r BooBooALL 35r Fisherman 34r WellTeast 32r
513 Realizations	134 Realizations

Run Details

Wrong parameters were set in the root_defaults Ds_multiplier was 1.2 and PGV_Threshold -1, but VM's were generated.

These gave the wrong nx,ny,nz and sim duration values and so the estimation was a lot higher than expected.

Estimated core hours

```
            LF                              HF                              BB                              IM_calc
            core hours  run time   cores    core hours  run time   cores    core hours  run time   cores    core hours  run time   cores
AkaOtaki    271309.391  233.887    38280    280.650     7.016      2640     117.060     2.927      1320     11005.709   275.143    1320
BooBooALL   250776.822  232.201    37800    305.994     7.650      2800     114.239     2.856      1400     12197.470   304.937    1400
BooBooEAST  191094.355  191.094    33000    218.282     5.457      2640     102.004     2.550      1320     10922.938   273.073    1320
DryHuang    151463.532  164.634    28520    159.564     3.989      2480     93.446      2.336      1240     9324.891    233.122    1240
Fisherman   247334.793  229.014    36720    295.299     7.382      2720     118.174     2.954      1360     10506.681   262.667    1360
Manaota     263533.644  235.298    39200    346.820     8.670      2800     122.918     3.073      1400     11060.748   276.519    1400
Moonshine   106677.633  133.347    23200    118.662     2.967      2320     80.793      2.020      1160     7849.792    196.245    1160
OhariuC     145169.021  164.965    27280    169.237     4.231      2480     91.282      2.282      1240     8753.761    218.844    1240
OhariuS     170264.035  177.358    30720    197.757     4.944      2560     95.711      2.393      1280     9271.357    231.784    1280
Okupe       212596.004  204.419    33280    207.986     5.200      2560     106.417     2.660      1280     9812.154    245.304    1280
Otaraia     126818.368  144.112    24640    106.601     2.665      2240     82.316      2.058      1120     8358.659    208.966    1120
PukeShep    220736.533  204.386    34560    211.587     5.290      2560     101.557     2.539      1280     10065.959   251.649    1280
WellTeast   238577.470  213.016    35840    240.104     6.003      2560     111.168     2.779      1280     10567.502   264.188    1280
WellWHV     189083.287  196.962    33600    289.703     7.243      2800     105.850     2.646      1400     10485.037   262.126    1400
Wharekauhau 212742.324  204.560    34320    234.204     5.855      2640     107.495     2.687      1320     10575.349   264.384    1320
Whitemans   152172.332  158.513    26880    116.057     2.901      2240     84.639      2.116      1120     8226.778    205.669    1120


            LF                        HF                        BB                        IM_calc
            core hours  run time      core hours  run time      core hours  run time      core hours  run time
Total       3150349.542 3087.765      3498.508    87.463        1635.068    40.877        158984.766  3974.620
(python3 maui) jri83@maui02:/nesi/nobackup/nesi00213/RunFolder/Cybershake/v22p11> less Runs/root_params.yaml
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Then a single realization test was run with VM_PARAMS to get the correct sim duration for the events. We used these values to calculate the difference and expected new estimate based on if we changed the sim duration but kept the old VM's.
The below file contains information calculated to determine the faults to run for to fit the 750k left on Maui to run by the end of November 2022.

mag_info_final.csv

The PGV value was calculated for each fault based on the current VM's generated that had the wrong settings. These were then looked at to see which ones were close enough to the expected value of 2 for cybershake runs.
From that 4 faults were very close to the value 2 for PGV and their estimates added to 715k core hours which was determined a good selection to run for 22p11.

The adjusted sim durations and old sim durations are in the file above.

There seemed to be an issue with EMOD3D where if too many runs were going at once at the same time some processes would just die and so EMOD3D would fail (Guess is IO problem) and so there were alot of reruns for EMOD3D.
AkaOtaki_REL01 however was run with the old sim duration when running EMOD3D and has issues with merge_ts with 6 rows of empty 0's at the end of the PGV entries and so therefore fails the test for completed merge_ts.

Results

Dropbox (.csv/.info for all rels and vm_params.yaml/nzvm.cfg for each fault) - This currently includes all 16 faults info
Dropbox (compressed BB.bins) - Only contains the 4 faults listed in list2.txt
Dropbox (IM Data) also on /isilon/CS_IMs/v22p11 - Only contains the 4 faults listed in list2.txt