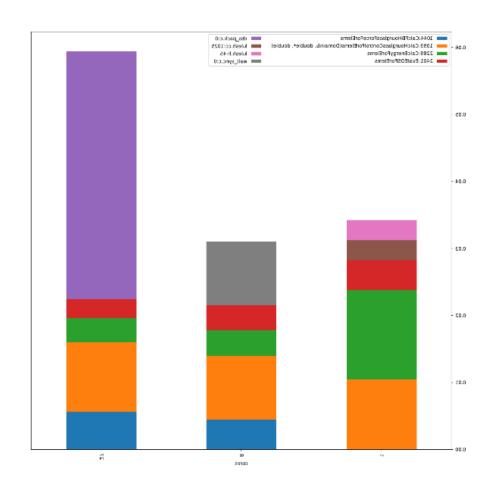
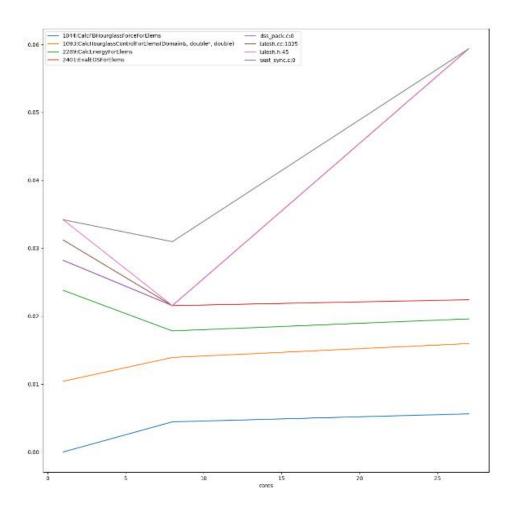
Analysis:

From the data provided, we can see that for 1 MPI process, the CalcEnergyForElems function takes the most amount of time, followed by CalcHourglassControlForElems, and EvalEOSForElems. However, for 8 and 27 MPI processes, the wait_sync and dss_pack scripts take the most amount of time respectively, followed by CalcFBHourglassForceForElems. The simulation runs faster in 8 processes, then hangs up and becomes much slower at 27, compared to the serial execution. This indicates that the performance of the code deteriorates as we increase the number of processes passed 8, and the scaling is not efficient.

Visualizations:





	time (inc)	time	nid	line	module o	ores
node						
{'name': '2289:CalcEnergyForElems', 'type': 'fu	0.029739	0.013388	302	2060	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	1
{'name': '1093:CalcHourglassControlForElems(Dom	0.026781	0.010409	172	998	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	1
{'name': '2401:EvalEOSForElems', 'type': 'funct	0.044524	0.004418	280	2222	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	1
<pre>{'file': './src/scratch/zt1/project/cmsc416/use</pre>	0.002992	0.002992	176	1025	None	1
{'file': './src/scratch/zt1/project/cmsc416/use	0.002983	0.002983	300	45	None	1
[5 rows x 9 columns]						
	time (inc)	time	nid	line	module	cores
node						
{'name': '1093:CalcHourglassControlForElems(Dom	0.035453	0.009481	760	998	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	8
{'file': 'wait_sync.c', 'line': '0', 'type': 's	0.009417	0.009417	538		None	8
{'name': '1044:CalcFBHourglassForceForElems', '	0.011660	0.004437	839	783	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	8
{'name': '2289:CalcEnergyForElems', 'type': 'fu	0.012077	0.003901	1163	2060	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	8
{'name': '2401:EvalEOSForElems', 'type': 'funct	0.021202	0.003727	1135	2222	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	8
[5 rows x 9 columns]						
	time (inc)	time	nid	line	module	cores
node						
{'file': 'dss pack.c', 'line': '0', 'type': 'st	0.036940	0.036940	1324	0	None	27
{'name': '1093:CalcHourglassControlForElems(Dom	0.037821	0.010348	2118	 998	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	27
{'name': '1044:CalcFBHourglassForceForElems', '	0.013928	0.005613	2218	 783	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	27
{'name': '2289:CalcEnergyForElems', 'type': 'fu	0.008878	0.003636	2853	 2060		
{'name': '2401:EvalEOSForElems', 'type': 'funct	0.015502	0.002817	2818	 2222	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	27
[5 rows x 9 columns]						

Task 2

Analysis:

Comparing the results of 1 core strong and weaking scaling, we can see that the functions that take the most time differ in each case. In the execution with the additional argument "-s 45", the function '2289:CalcEnergyForElems' takes the most time, followed by '1093:CalcHourglassControlForElems(Domain&)', while in the default execution, '1093:CalcHourglassControlForElems(Domain&)' takes the most time, followed by '2289:CalcEnergyForElems'. These two functions in each execution had similar runtimes, so they did not seem as affected by the scaling mode. However, in strong scaling, the 'CalculateMonotonicQGradientForElems' had a significant increase in runtime.

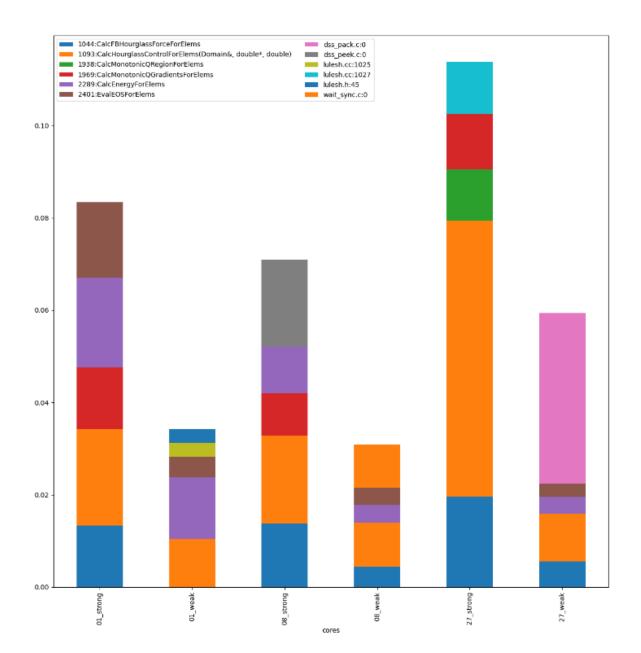
For 8 cores, weak and strong scaling, the results were somewhat similar, where '1093:CalcHourglassControlForElems(Domain&)' took the most time in both simulations. However, in strong scaling, dss_peek.c script took the second longest, while wait_sync.c took the second longest in the weak scaling case. Aside from this difference, the remaining functions seemed to be similar in proportion of execution time they take.

For 27 cores, weak and strong scaling, the results were much different than the simulation for 1 and 8 cores. The script dss_pack.c took the longest proportion of execution for weak scaling mode for 27 cores, while the CalcHourglassControlForElems function took the longest in the strong scaling mode.

Therefore, it seems that the CalcHourglassControlForElems function may be the bottleneck in the code. Between the weak and strong scaling mode for each set of comparisons, the CalcHourglassControlForElems seems to increase in proportion of total runtime of the simulation.

Visualizations:

tise (inc) tise nid line soule cores node ('name' 1903:CalchburglassControlForEless(Dom. 6.005139 6.038853 181 998 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 61_strong ('name' 1903:CalchburglassControlForEless', 'type': 'fun. 6.055129 6.038853 181 998 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 61_strong ('name': 2903:CalchburglassControlForEless', 'type': 'fun. 6.052727 6.013308 334 1019 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 61_strong ('name': 1904:CalchburglassControlForEless', '0.08897 6.013381 213 703 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 61_strong ('name': 1904:CalchburglassControlForEless', '0.08997 6.013381 213 703 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 61_strong force of cores node ('name': 12289:CalchburglassControlForEless(Om. 6.02572 6.01388 302 2060 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 61_seak ('name': 2289):CalchburglassControlForEless(Om. 6.02572 6.003089 172 998 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 61_seak ('name': 24041:ValiDSGordeless', 'type': 'fun. 6.02573 6.003089 172 998 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 61_seak ('file': '/src/scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 61_seak ('fine': 1904:CalchburglassControlForEless', '0.080505 2518 998 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 27_strong ('file': '/src/scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 27_strong ('file': '/src/scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 27_strong ('file': '/src/scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 27_seak ('rame': 1903:CalchburglassControlForEless(Om. 0.025020 0.015023 309 98 /scratch/zt1/project/cmsc4i6/user/ekanil/Kanil 27_seak (
		time (inc)	time	nid	. 1:	line	module	cores
Crane 1903:Calichargy assControlForc less() 00. 0.905139 0.638853 13 908 /scratch/ztt/project/cmsc416/user/ekamil/Kamil. 01_strong 1_strong 1_s	node							
	{'name': '1093:CalcHourglassControlForElems(Dom	0.095139	0.020853			998	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	01 strong
time (inc) time nid line module cores node ('name': 1289:CalchengyforElems', 'type': 'fun. 6.020739 6.013388 302 2066 /scratch/ztl/project/cmsc416/user/ekamil/Kamil. 61 seak ('name': 1289:CalchengyforElems', 'type': 'funct. 6.046724 6.080418 238 2222 /scratch/ztl/project/cmsc416/user/ekamil/Kamil. 61 seak ('file': 'srx/scratch/ztl/project/cmsc416/user/ekamil/Kamil. 62 strong ('name': '1893:Calchengyforderlems' 60 e02919 60.01959 7783 /scratch/ztl/project/cmsc416/user/ekamil/Kamil. 27 strong ('file': 'srx/scratch/ztl/project/cmsc416/user/ekamil/Kamil. 27 seak ('file': 'dss.pack.c', 'line': '0', 'type': 'sr. 6.089940 6.089940 1324 6 strong ('file': 'dss.pack.c', 'line': '0', 'type': 'file': 6.089940 6.089940 1324 6 strong ('file': 'dss.pack.c', 'line': '0', 'type': 'file': 6.089940 6.089940 1324 6 strong ('file': 'dss.pack.c', 'line': '0', 'type': 'file': 6.089940 6.089940 1324 6 strong ('file': 'dss.pack.c', 'line': '0', 'type': 'file': 6.089940 6.089940 1324 6 strong ('file': 'dss.pack.c', 'line': '0', 'type': 'file': 6.089940 6.089940 1324 6 strong ('fi	{ name : 1044:CalcrbHourglassForceForElems ,	0.040097	0.013381	213		/83	/scratch/zti/project/cmsc416/user/ekamii/kamii	01_strong
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	[5 rows x 9 columns]							
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Crame: '1093:Calcidumg]assControlForElems(Dom. 0.0826781 0.018452 0.004854 0.0								
Chame '2481:EvalEOSFortlems', 'type'; 'funct. 0.044524 0.080418 288 2222 /scratch/zti/project/cmsc416/user/ekamil/Kamil 0.1 weak Cfile': './src/scratch/zti/project/cmsc416/use. 0.082983 0.082983 308 45	{'name': '2289:CalcEnergyForElems', 'type': 'fu	0.029739	0.013388	302	. 20	2060	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	01_weak
File: './src/scratch/ztl/project/cmsc416/use. 6.002992 6.002992 176 1025 None 01_weak	{'name': '1093:CalcHourglassControlForElems(Dom	0.026781	0.010409	172		998	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	01_weak
Tows x 9 columns	{'name': '2401:EvalEOSForElems', 'type': 'funct	0.044524	0.004418	280	. 2	2222	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	01_weak
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		time (inc)	cmie			TTHE	modute	cores
Chame 1044:CalcFBHourglassForceFortlems		0.400757	0.050505			000	/	27
Craner 1969:CalckhonotonicQGradientsForeLlems 0.8027019								
Company Comp								
['name': '1938:CalcMonotonicQRegionForElems', '								
S rows x 9 columns time (inc)								
time (inc)	{'name': '1938:CalcMonotonicQRegionForElems', '	0.022962	0.011233	3595 .	1	1771	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	27_strong
time (inc)								
node {'file': 'dss_pack.c', 'line': '0', 'type': 'st								
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('name': '2401:EvalEOSForElems', 'type': 'funct 0.021202 0.003727 1135 2222 /scratch/zt1/project/cmsc416/user/ekamil/Kamil 08_weak	node {'file': 'dss_pack.c', 'line': '0', 'type': 'st {'name': '1993:CalcHourglassControlForElems(Dom {'name': '1289:CalcEnergyForElems', 'type': 'fu {'name': '2289:CalcEnergyForElems', 'type': 'fu [5 rows x 9 columns] node {'name': '1093:CalcHourglassControlForElems(Dom ('file': 'dss_peek.c', 'line': '0', 'type': 'st ('name': '1289:CalcEnergyForElems', 'type': 'fu ('name': '1969:CalcMonotonicQGradientsForElems' [5 rows x 9 columns] node {'name': '1969:CalcHourglassControlForElems(Dom ('file': '4893:CalcHourglassControlForElems' ('name': '1969:CalcMonotonicQGradientsForElems' ('name': '1969:CalcHourglassControlForElems(Dom ('file': 'wait_sync.c', 'line': '0', 'type': 's	0.036940 0.037821 0.013928 0.008878 0.015502 time (inc) 0.085155 0.018941 0.036235 0.020450 0.021426 time (inc)	0.036940 0.010348 0.005613 0.003636 0.002817 time 0.019083 0.0130758 0.0109131 time 0.009431 0.009417	nid . 957 . 957 . 1324 . 2118 . 2218 . 2853 . 957 . 719 . 1030 . 1569 . 1466 . nid . 760 . 538 .	2	998 783 2060 2222 line 998 0 783 2060 1619	None /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 None /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 None	27 weak 27 weak 27 weak 27 weak 27 weak 27 weak 28 strong 88 strong 88 strong 88 strong 68 strong 68 strong 68 strong 68 strong 68 strong
	node {ffile': 'dss_pack.c', 'line': '0', 'type': 'st {'name': '1093:CalcHourglassControlForElems(Dom {'name': '1289:CalcEnergyForElems', 'type': 'fu {'name': '2289:CalcEnergyForElems', 'type': 'fu [5 rows x 9 columns] node {'name': '1093:CalcHourglassControlForElems(Dom {'file': 'dss_peek.c', 'line': '0', 'type': 'st {'name': '1044:CalcFBHourglassForceForElems', {'name': '1993:CalcHourglassForceForElems', {'name': '1993:CalcHourglassForceForElems', {'name': '1993:CalcHourglassFortlems', 'type': 'fu {'name': '1044:CalcFBHourglassFortlems' 5 rows x 9 columns] node {'name': '1093:CalcHourglassControlForElems(Dom {'file': 'wait_sync.c', 'line': '0', 'type': 's {'name': '1044:CalcFBHourglassForceForElems',	0.036940 0.037821 0.013928 0.008878 0.015502 time (inc) 0.085155 0.018941 0.036235 0.029450 0.021426 time (inc) 0.035453 0.099417 0.011660	0.036940 0.010348 0.005613 0.003636 0.002817 time 0.019083 0.018941 0.013758 0.010063 0.009131 time 0.009481 0.009481 0.009437	nid . 957 . 719 . 1324 . 2118 . 2218 . 2853 . 2818 . nid . 1569 . 1466 . nid . 760 . 538 . 839 .	2	0 998 783 2060 2222 line 998 0 783 2060 1619 line 998 0 783	None /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 None /scratch/zt1/project/cmsc416/user/ekami1/Kami1	27 weak 27 weak 27 weak 27 weak 27 weak 27 meak 28 strong 88 strong
[5 rows x 9 columns]	node {'file': 'dss_pack.c', 'line': '0', 'type': 'st {'name': '1093:CalcHourglassControlForElems(Dom {'name': '1244:CalcFBHourglassForceForElems', ' {'name': '22401:EvalEOSForElems', 'type': 'funct [5 rows x 9 columns] node {'name': '1093:CalcHourglassControlForElems(Dom {'file': 'dss_peek.c', 'line': '0', 'type': 'st {'name': '1244:CalcFBHourglassForceForElems', ' {'name': '1269:CalcEnergyForElems', 'type': 'fu 'name': '1969:CalcMonotonicQGradientsForElems' 5 rows x 9 columns] node {'name': '1093:CalcHourglassControlForElems(Dom {'file': wait_sync.c', 'line': '0', 'type': 's 'name': '1244:CalcFBHourglassForceForElems', ' {'name': '1289:CalcEnergyForElems', 'type': 's 'name': '2289:CalcEnergyForElems', 'type': 'fu	0.036940 0.037821 0.013928 0.008878 0.015502 time (inc) 0.085155 0.018941 0.036235 0.029450 0.021426 time (inc) 0.035453 0.099417 0.011660	0.036940 0.010348 0.005613 0.003636 0.002817 time 0.019083 0.018941 0.013758 0.010063 0.009131 time 0.009481 0.009481 0.009437	nid . 957 . 719 . 1324 . 2118 . 2218 . 2853 . 2818 . nid . 1569 . 1466 . nid . 760 . 538 . 839 .	2	998 783 2060 2222 line 998 0 783 2060 1619 line 998 0 783 2060 783	None /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 None /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1	27_weak 27_weak 27_weak 27_weak 27_weak 27_weak cores 08_strong 08_strong 08_strong 08_strong 08_strong 08_strong 08_strong 08_strong
5 rows x 9 columns]	node {'file': 'dss_pack.c', 'line': '0', 'type': 'st {'name': '1093:CalcHourglassControlForElems(Dom {'name': '1244:CalcFBHourglassForceForElems', ' {'name': '22401:EvalEOSForElems', 'type': 'funct [5 rows x 9 columns] node {'name': '1093:CalcHourglassControlForElems(Dom {'file': 'dss_peek.c', 'line': '0', 'type': 'st {'name': '1244:CalcFBHourglassForceForElems', ' {'name': '12693:CalcHourglassForceForElems', ' {'name': '1969:CalcMonotonicQGradientsForElems' 5 rows x 9 columns] node {'name': '1093:CalcHourglassControlForElems(Dom {'file': wait_sync.c', 'line': '0', 'type': 's {'name': '1244:CalcFBHourglassForceForElems', ' {'name': '1289:CalcHourglassControlForElems(Dom {'file': wait_sync.c', 'line': '0', 'type': 's {'name': '2289:CalcEnergyForElems', 'type': 'fu	0.036940 0.037821 0.013928 0.008878 0.015502 time (inc) 0.085155 0.018941 0.036235 0.029450 0.021426 time (inc) 0.035453 0.099417 0.01660 0.012077	0.036940 0.010348 0.005613 0.003636 0.002817 time 0.019083 0.018941 0.013758 0.010063 0.009417 time 0.009441 0.0094417 0.0094417 0.0094901	nid . 957 719 1030 1166 . 760 538 839 1163 .	2	998 783 2060 2222 line 998 0 783 2060 1619 line 998 0 783 2060 783	None /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 None /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1	27_weak 27_weak 27_weak 27_weak 27_weak 27_weak cores 08_strong 08_strong 08_strong 08_strong 08_strong 08_strong 08_strong 08_strong
	node {'file': 'dss_pack.c', 'line': '0', 'type': 'st {'name': '1993:CalcHourglassControlForElems(Dom {'name': '1289:CalcEnergyForElems', 'type': 'fu {'name': '2289:CalcEnergyForElems', 'type': 'funct [5 rows x 9 columns] node {'name': '1093:CalcHourglassControlForElems(Dom 'file': 'dss_peek.c', 'line': '0', 'type': 'st 'name': '1044:CalcFBHourglassForceForElems', 'name': '1289:CalcEnergyForElems', 'type': 'fu 'name': '1969:CalcMonotonicQGradientsForElems' 5 rows x 9 columns] node {'name': '1093:CalcHourglassControlForElems(Dom 'file': 'wait_sync.c', 'line': '0', 'type': 's 'name': '1093:CalcHourglassControlForElems(Dom 'file': 'wait_sync.c', 'line': '0', 'type': 's 'name': '1044:CalcFBHourglassForceForElems', 'name': '2289:CalcEnergyForElems', 'type': 'fu	0.036940 0.037821 0.013928 0.008878 0.015502 time (inc) 0.085155 0.018941 0.036235 0.029450 0.021426 time (inc) 0.035453 0.099417 0.01660 0.012077	0.036940 0.010348 0.005613 0.003636 0.002817 time 0.019083 0.018941 0.013758 0.010063 0.009417 time 0.009441 0.0094417 0.0094417 0.0094901	nid . 957 719 1030 1166 . 760 538 839 1163 .	2	998 783 2060 2222 line 998 0 783 2060 1619 line 998 0 783 2060 783	None /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 None /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 module /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1 /scratch/zt1/project/cmsc416/user/ekami1/Kami1	27_weak 27_weak 27_weak 27_weak 27_weak 27_weak 27_weak cores 08_strong 08_strong 08_strong 08_strong 08_strong 08_strong 08_weak 08_weak 08_weak 08_weak

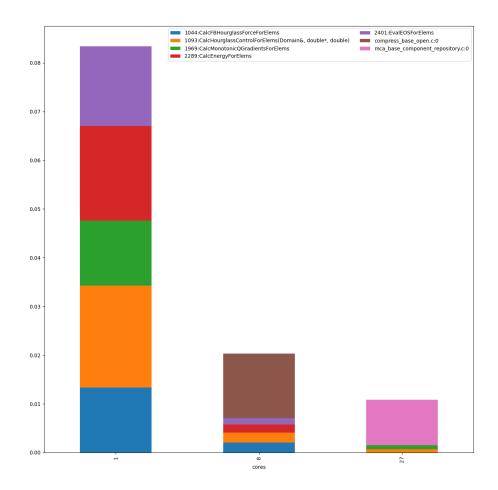


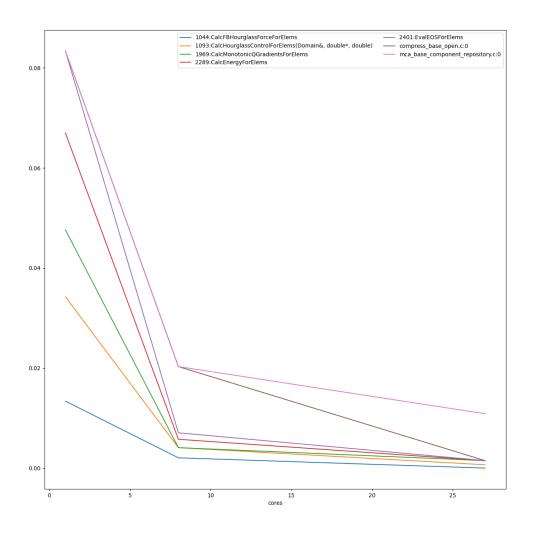
Analysis:

With a fixed problem size, the functions that did not scale well as more processors were added are compress_base_open.c in the simulation with 8 cores, along with mca_base_component_repository.c in the simulation with 27 cores.

Compared to task 1, where the problem size was not fixed, the functions that did not scale well were completely different. It seems with fixed problem size, the functions dss_pack.c and wait_sync were not present in the analysis, so they seem to not take a significant proportion of runtime in fixed problem sizes among multiple cores.

Visualizations:





		time (inc)	time	nid	line	module co	res
node							
{'name':	'1093:CalcHourglassControlForElems(Dom	0.095139	0.020853	181	998	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	1
{'name':	'2289:CalcEnergyForElems', 'type': 'fu	0.055122	0.019366	379	2060	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	1
{'name':	'2401:EvalEOSForElems', 'type': 'funct	0.087919	0.016399	365	2222	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	1
{'name':	'1969:CalcMonotonicQGradientsForElems'	0.028272	0.013398	334	1619	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	1
{'name':	'1044:CalcFBHourglassForceForElems', '	0.040097	0.013381	213	783	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	1
[5 rows	x 9 columns]						
		time (inc)	time	nid	line	module co	res
node							
{'file':	'compress_base_open.c', 'line': '0', '	0.013235	0.013235	589	0	None	8
{'name':	'1044:CalcFBHourglassForceForElems', '	0.005772	0.002050	725	783	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	8
{'name':	'1093:CalcHourglassControlForElems(Dom	0.010766	0.002033	704	998	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	8
{'name':	'2289:CalcEnergyForElems', 'type': 'fu	0.003341	0.001671	976	2060	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	8
{'name':	'2401:EvalEOSForElems', 'type': 'funct	0.006310	0.001298	956	2222	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	8
[5 rows	x 9 columns]						
_		time (inc)	time	nid	line	module o	ores
node							
{'file':	'mca_base_component_repository.c', 'li	0.021255	0.021255	901	0	None	27
{'file':	'mca_base_component_repository.c', 'li	0.005505	0.005505	1453	0	None	27
{'file':	'mca_base_component_repository.c', 'li	0.001363	0.001363	955	0	None	27
{'name':	'1969:CalcMonotonicQGradientsForElems'	0.001770	0.000830	2051	1619	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	27
{'name':	'1093:CalcHourglassControlForElems(Dom	0.002874	0.000663	1732	998	/scratch/zt1/project/cmsc416/user/ekamil/Kamil	27