

Kata Containers metrics report

Auto generated

04 September, 2018

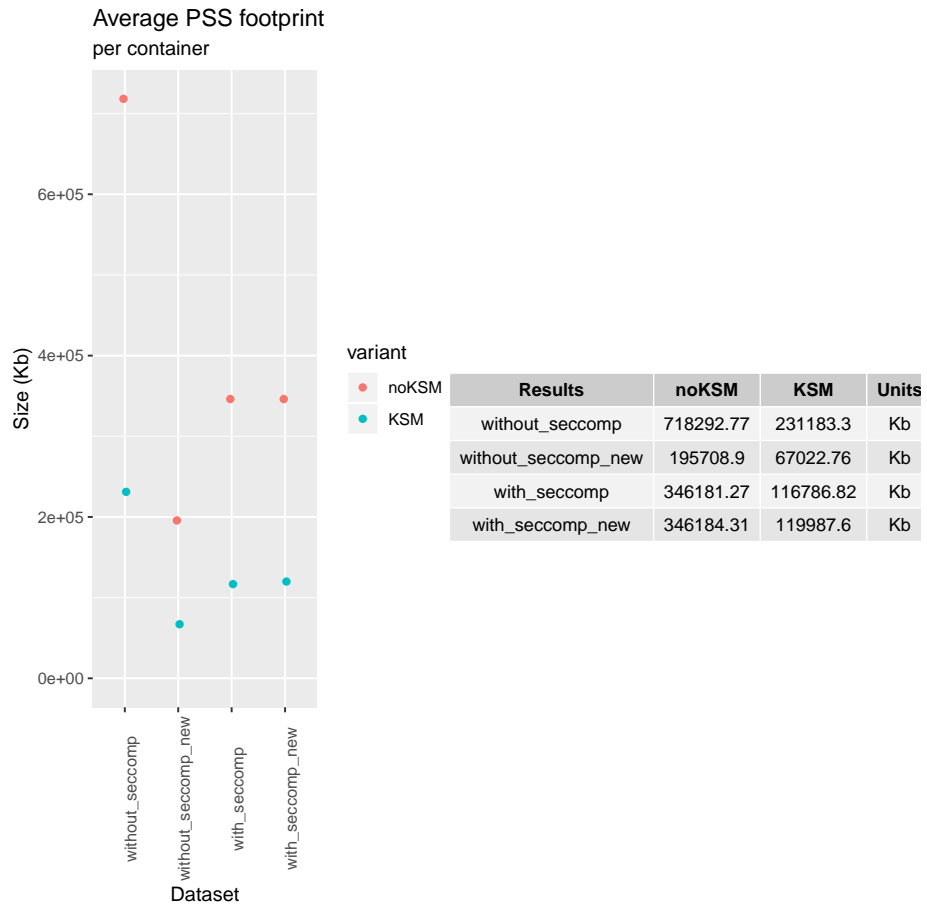
Introduction

This report compares the metrics between multiple sets of data generated from the [Kata Containers report generation scripts](#).

This report was generated using the data from the **without__seccomp/**, **without__seccomp_new/**, **with__seccomp/**, **with__seccomp_new/** results directories.

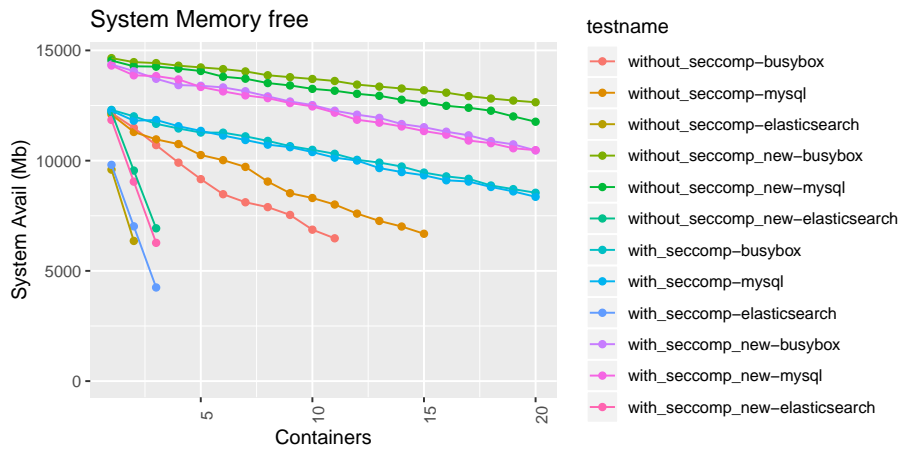
Container PSS footprint

This [test](#) measures the PSS footprint of all the container runtime components whilst running a number of parallel containers. The results are the mean footprint proportion for a single container.



Container scaling system footprint

This test measures the system memory footprint impact whilst running an increasing number of containers. For this test, **KSM** is enabled. The results show how system memory is consumed for different sized containers, and their average system memory footprint cost and density (how many containers you can fit per Gb) is calculated.

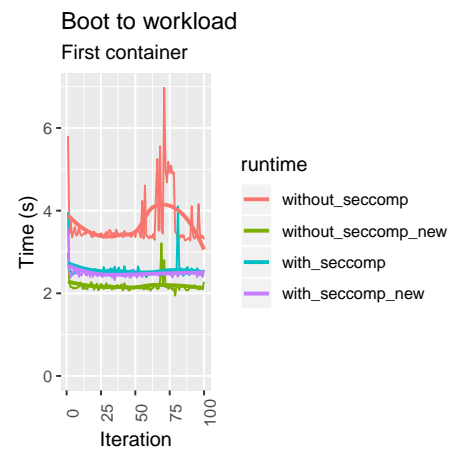
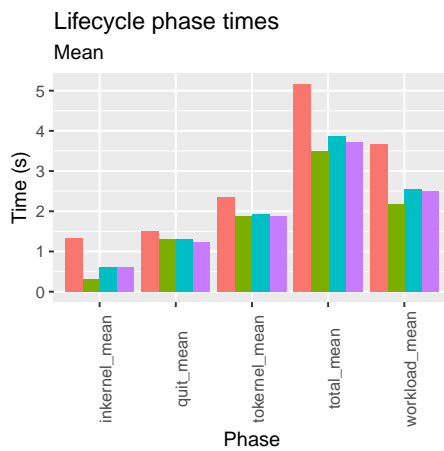


Test	n	Tot_Kb	avg_Kb	n_per_Gb
without_seccomp-busybox	11	6623608	602146.2	1.7
without_seccomp-mysql	15	6368728	424581.9	2.5
without_seccomp-elasticsearch	2	6593972	3296986	0.3
without_seccomp_new-busybox	20	2234768	111738.4	9.4
without_seccomp_new-mysql	20	3101740	155087	6.8
without_seccomp_new-elasticsearch	3	8051440	2683813.3	0.4
with_seccomp-busybox	20	4147668	207383.4	5.1
with_seccomp-mysql	20	4364960	218248	4.8
with_seccomp-elasticsearch	3	8524952	2841650.7	0.4
with_seccomp_new-busybox	20	4329204	216460.2	4.8
with_seccomp_new-mysql	20	4313696	215684.8	4.9
with_seccomp_new-elasticsearch	3	8572032	2857344	0.4

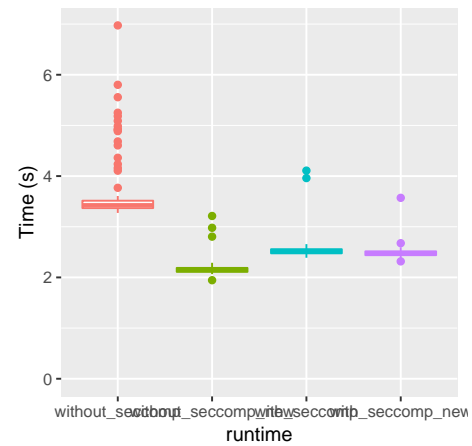
Container Docker boot lifecycle times

This [test](#) uses the `date` command on the host and in the container, as well as data from the container kernel `dmesg`, to ascertain how long different phases of the create/boot/run/delete Docker container lifecycle take for the first launched container.

To decode the stats table, the prefixes are 'to(2)' and 'in'. The suffixes are 'kernel', 'workload' and 'quit'. 'tot' is the total time for a complete container start-to-finished cycle.



Results	2k	ik	2w	2q	tot
without_seccomp	2.34	1.32	3.67	1.5	5.17
without_seccomp_new	1.87	0.31	2.18	1.32	3.49
with_seccomp	1.94	0.61	2.55	1.31	3.86
with_seccomp_new	1.87	0.61	2.49	1.22	3.71
Units	s	s	s	s	s



Test setup details

This table describes the test system details, as derived from the information contained in the test results files.

	without_seccomp_new	with_seccomp	
	1.2.0	1.2.0	
8719f17604fded	39ad9702de5b186322b7a5e47d51d302c8b1ae1e	ba88362107fad58a0f2a4cb8ca672bc6b70e3720	t
fd5d6edbc45ee477	1.2.0-6f209b7f3c586c5f17b52df8bd5d6edbc45ee477	1.2.0-6f209b7f3c586c5f17b52df8bd5d6edbc45ee477	1.2.
320c78f5147f52e70	1.2.0-0a37760c0224167143cb3cc920c78f5147f52e70	1.2.0-0a37760c0224167143cb3cc920c78f5147f52e70	1.2.
	2.11.0	2.11.0	
r	4.14.49.container	4.14.49.container	
	amd64	amd64	
	Ubuntu	Ubuntu	
	16.04	16.04	
PU @ 4.00GHz	Intel(R) Core(TM) i7-6700K CPU @ 4.00GHz	Intel(R) Core(TM) i7-6700K CPU @ 4.00GHz	
ic	4.15.0-33-generic	4.15.0-33-generic	

Figure 1: System configuration details