Comparison of “Signal to High Prio Thread” benchmark measurements for Armv7a (platform Sabre)

Table 1. Measurement pattern 10/100 (10 warm-up samples, 100 recorded samples)

	Min	Max	Mean	Std Dev		Min	Max	Mean	Std Dev
10/100	Late processing					Early processing			
Run #1	709	1365	926	172.72		700	1780	858	122.18
Run #2	707	1972	928	195.70		716	1788	849	118.89
Run #3	710	1365	932	174.69		723	1080	858	70.35
Run #4	709	1758	936	192.37		727	987	861	67.41
Run #5	714	1367	935	174.66		697	1821	865	122.82
Run #6	699	1763	925	187.54		703	1015	850	77.82
Run #7	723	1766	938	188.91		723	1766	841	118.03
Run #8	696	1791	937	193.89		702	1788	854	125.04
Run #9	712	1368	927	175.29		713	1807	856	121.35
Run #10	712	1368	925	173.74		699	1812	859	121.02
Run #11	721	1369	933	173.78		708	1786	872	117.88
Run #12	704	1368	929	176.84		711	996	853	74.86
Run #13	701	1368	934	176.26		699	1759	859	116.06
Run #14	720	1369	930	182.12		707	1060	859	81.24
Run #15	724	1368	924	172.74		698	1039	855	77.17
	Stats for the columns								

	Min	Max	Mean	Std Dev		Min	Max	Mean	Std Dev
Min	696	1365	924	173		697	987	841	67
Max	724	1972	938	196		727	1821	872	125
Mean	711	1515	931	181		708	1486	857	102
	The delay is added								
10/100	Late processing					Early processing			
Run #1	693	762	731	14.96		717	1789	862	118.48
Run #2	694	764	731	14.46		702	997	861	68.90
Run #3	701	761	734	15.16		708	996	833	75.18
Run #4	690	762	731	13.60		721	977	858	70.98
Run #5	684	762	734	15.40		715	977	824	71.15
Run #6	689	764	727	15.49		706	1777	870	115.83
Run #7	697	759	731	14.21		727	1790	860	118.07
Run #8	689	759	727	15.84		703	987	844	72.68
Run #9	694	758	729	15.50		725	1002	846	74.05
Run #10	692	761	727	14.04		711	986	864	67.85
Run #11	691	766	725	15.66		715	999	852	71.89
Run #12	696	769	731	14.80		710	1790	852	121.37
Run #13	693	765	730	15.85		710	1796	850	122.14
Run #14	694	759	730	15.91		721	1795	859	118.32
Run #15	697	770	730	14.72		714	1804	863	118.66
	Stats for the columns								

	Min	Max	Mean	Std Dev		Min	Max	Mean	Std Dev
Min	684	758	725	14		702	977	824	68
Max	701	770	734	16		727	1804	870	122
Mean	693	763	730	15		714	1364	853	94

Table 2. Measurement pattern 100/100

	Min	Max	Mean	Std Dev		Min	Max	Mean	Std Dev
100/100	Late processing					Early processing			
Run #1	695	1382	928	173.54		719	971	841	75.98
Run #2	701	1376	927	172.41		716	980	862	69.43
Run #3	718	1381	916	176.15		694	987	854	69.31
Run #4	703	1363	925	171.91		699	987	851	84.91
Run #5	713	1383	929	177.51		710	1001	856	72.43
Run #6	707	1365	927	171.50		697	974	842	74.66
Run #7	698	1363	930	177.70		700	995	857	74.06
Run #8	703	1379	932	175.72		709	1005	851	77.85
Run #9	723	1365	930	174.02		703	908	841	75.28
Run #10	716	1364	923	173.07		689	1001	857	74.80
Run #11	704	1366	933	174.97		699	993	852	76.59
Run #12	702	1381	930	176.43		717	984	854	71.68
Run #13	716	1387	928	177.07		716	1006	859	68.91
Run #14	709	1381	934	176.70		724	987	866	72.17

Run #15	715	1365	935	171.87		711	1015	837	77.51
	Stats for the columns								
Min	695	1363	916	172		689	908	837	69
Max	723	1387	935	178		724	1015	866	85
Mean	708	1373	928	175		707	986	852	74
	The delay is added								
100/100	Late processing					Early processing			
Run #1	698	765	732	15.13		711	969	860	69.24
Run #2	695	769	731	17.19		702	975	852	75.62
Run #3	684	763	730	14.47		711	994	847	71.36
Run #4	697	763	732	14.49		712	991	852	76.11
Run #5	685	771	732	15.17		707	985	852	74.48
Run #6	687	761	731	13.67		712	973	850	72.40
Run #7	684	762	730	16.95		715	978	852	71.24
Run #8	703	764	731	14.08		715	979	843	73.42
Run #9	684	771	734	14.66		714	993	840	75.09
Run #10	690	770	732	16.46		705	983	846	73.15
Run #11	695	763	730	15.73		702	968	846	71.88
Run #12	682	762	728	16.47		710	986	852	74.67
Run #13	688	760	730	15.20		722	1015	845	73.94
Run #14	694	765	734	15.76		711	989	865	69.55
Run #15	686	761	729	16.04		716	993	856	73.21

	Stats for the columns								
Min	682	760	728	14		702	968	840	69
Max	703	771	734	17		722	1015	865	76
Mean	690	765	731	15		711	985	851	73

Table 3. Observations (selected stats from Table 1& 2)

	Late processing					**Early processing**			
	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)
	10/100 no delay	10/100 delay	100/100 no delay	100/100 delay		10/100 no delay	10/100 delay	100/100 no delay	100/100 delay
“Min” range	696 - 724	684 - 701	695 - 723	682 - 703		697 - 727	702 - 727	689 - 724	702 - 722
Average “Min”	711	693	708	690		708	714	707	711
“Max” range	1365 - 1972	758 - 770	1363 - 1387	760 - 771		987 - 1821	977 - 1804	908 - 1015	968 - 1015
Average “Max”	1515	763	1373	765		1486	1364	986	985
“Std Dev” range	173 - 196	14 - 16	172 - 178	14 - 17		67 - 125	68 - 122	69 - 85	69-76
Average “Std Dev”	181	15	175	15		102	94	74	73

Measurements taken with sel4bench-manifest at commit adb9679d2ec3a56fbbcab27fb0639b4d4e73c3c1 (Dec 8, 2021)

Traditional seL4

February 4, 2022