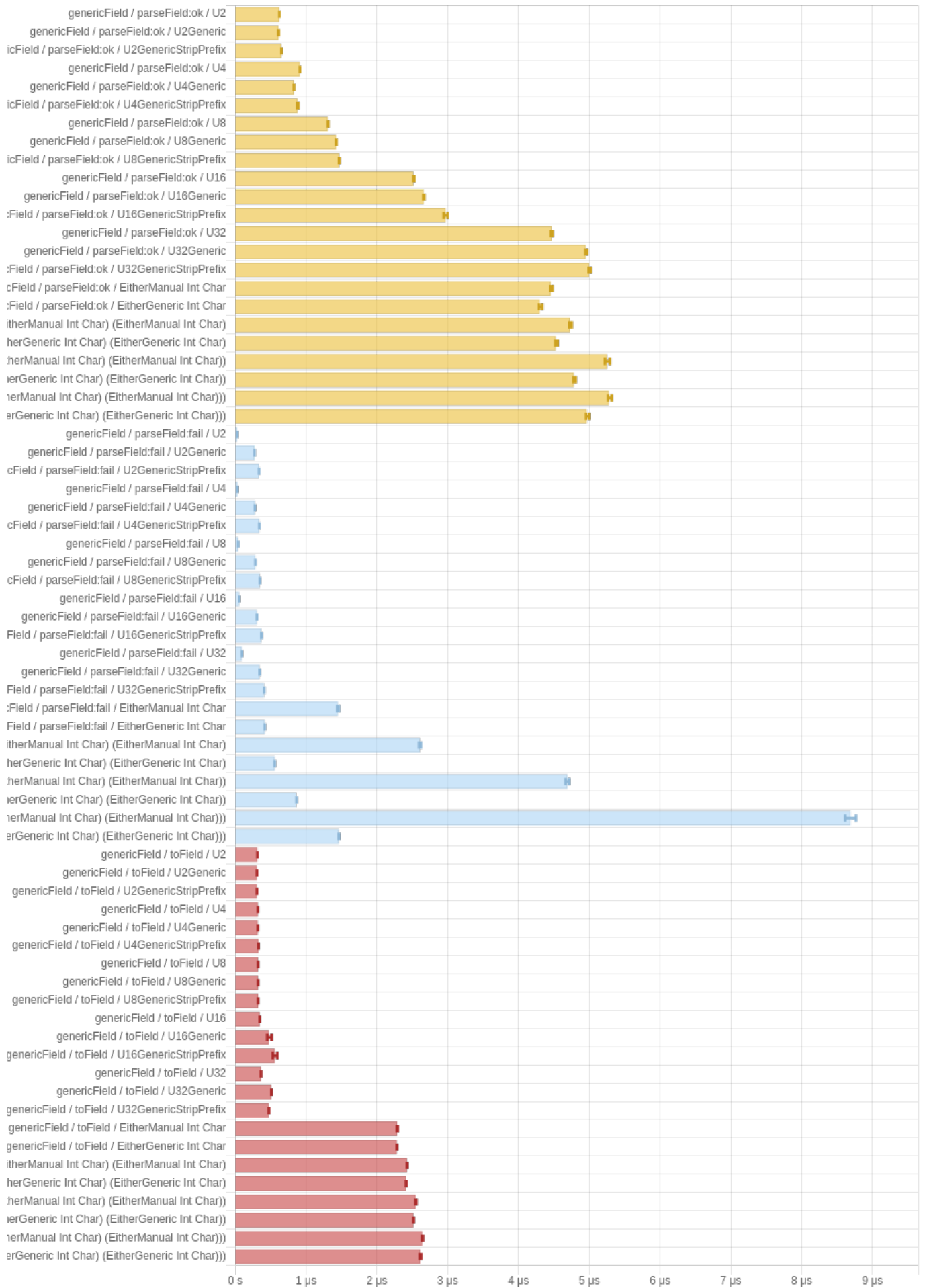
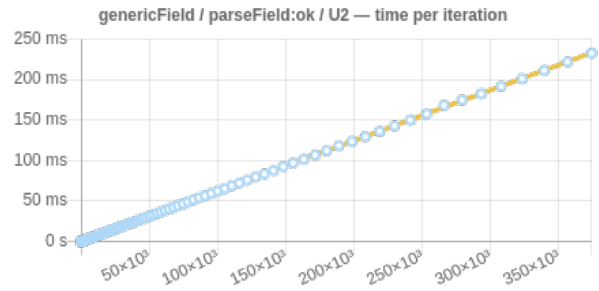
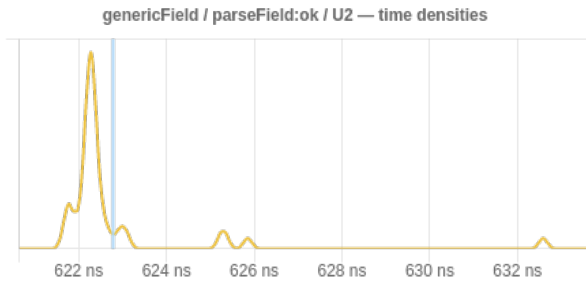


# **critierion performance measurements**

overview



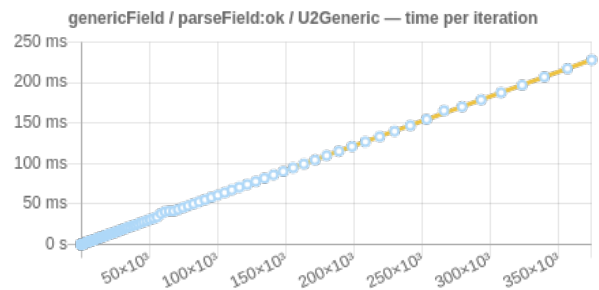
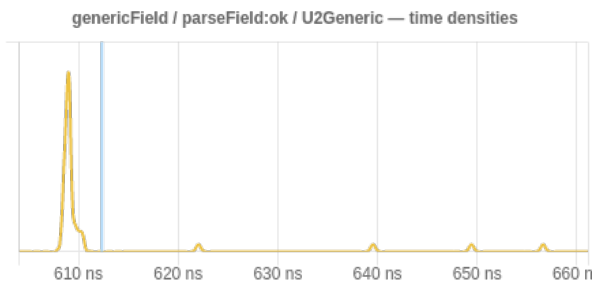
## genericField / parseField:ok / U2



	lower bound	estimate	upper bound
OLS regression	622 ns	623 ns	624 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	622 ns	623 ns	624 ns
Standard deviation	735 ps	1.77 ns	3.41 ns

Outlying measurements have no (0.450%) effect on estimated standard deviation.

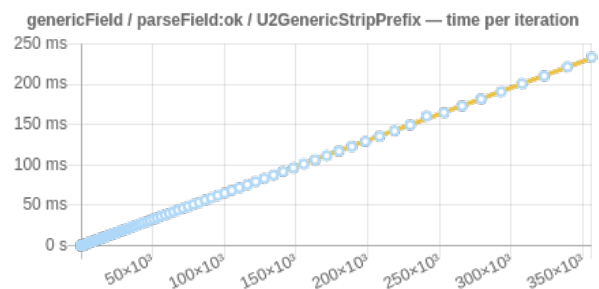
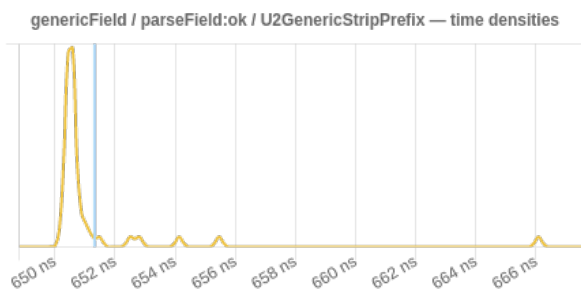
## genericField / parseField:ok / U2Generic



	lower bound	estimate	upper bound
OLS regression	609 ns	610 ns	612 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	610 ns	612 ns	617 ns
Standard deviation	5.04 ns	10.5 ns	17.0 ns

Outlying measurements have a moderate (19.0%) effect on estimated standard deviation.

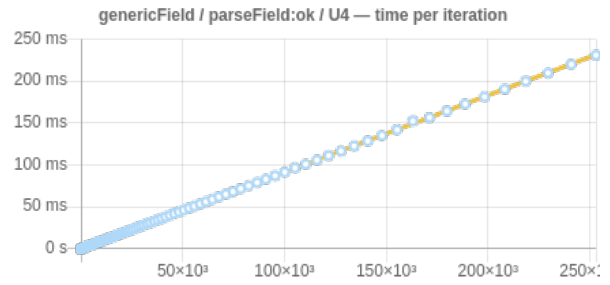
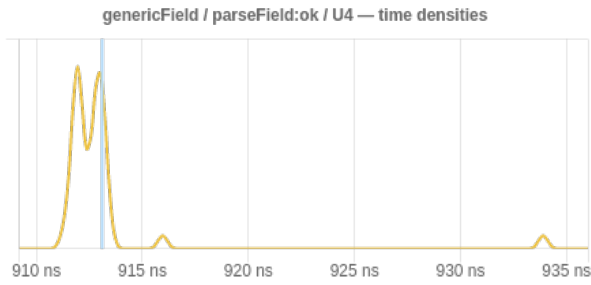
## genericField / parseField:ok / U2GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	651 ns	652 ns	654 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	651 ns	651 ns	653 ns
Standard deviation	880 ps	2.53 ns	5.74 ns

Outlying measurements have no (0.452%) effect on estimated standard deviation.

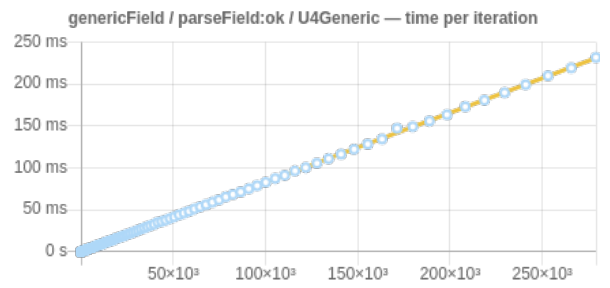
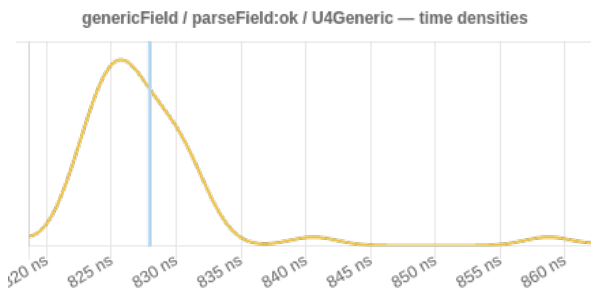
## genericField / parseField:ok / U4



	lower bound	estimate	upper bound
OLS regression	912 ns	913 ns	916 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	913 ns	913 ns	915 ns
Standard deviation	592 ps	3.36 ns	7.01 ns

Outlying measurements have no (0.467%) effect on estimated standard deviation.

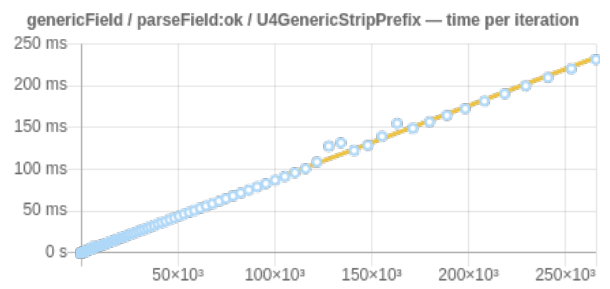
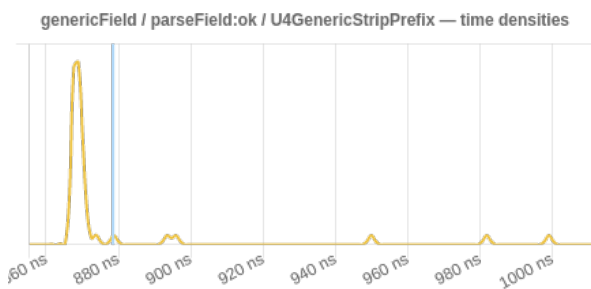
## genericField / parseField:ok / U4Generic



	lower bound	estimate	upper bound
OLS regression	826 ns	828 ns	831 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	827 ns	828 ns	831 ns
Standard deviation	2.85 ns	5.92 ns	10.9 ns

Outlying measurements have no (0.463%) effect on estimated standard deviation.

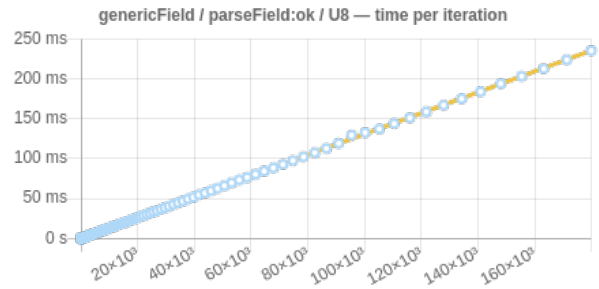
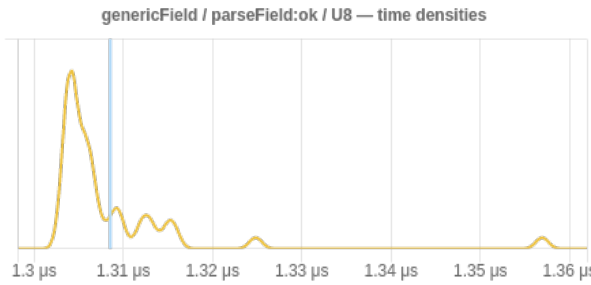
## genericField / parseField:ok / U4GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	871 ns	880 ns	892 ns
R <sup>2</sup> goodness-of-fit	0.997	0.999	1.00
Mean execution time	872 ns	879 ns	892 ns
Standard deviation	13.9 ns	28.6 ns	45.7 ns

Outlying measurements have a moderate (45.7%) effect on estimated standard deviation.

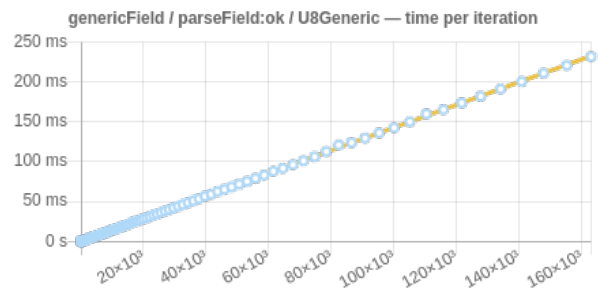
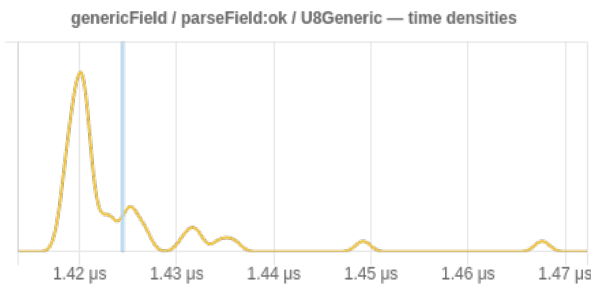
## genericField / parseField:ok / U8



	lower bound	estimate	upper bound
OLS regression	1.31 $\mu$ s	1.31 $\mu$ s	1.31 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	1.31 $\mu$ s	1.31 $\mu$ s	1.31 $\mu$ s
Standard deviation	4.31 ns	8.73 ns	18.9 ns

Outlying measurements have no (0.483%) effect on estimated standard deviation.

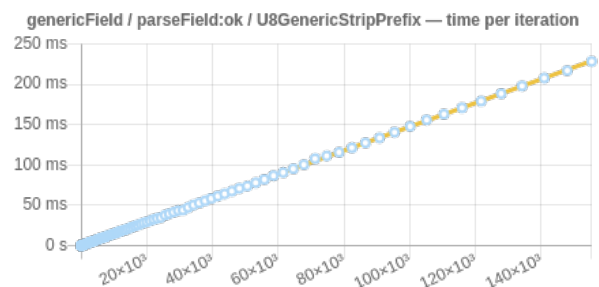
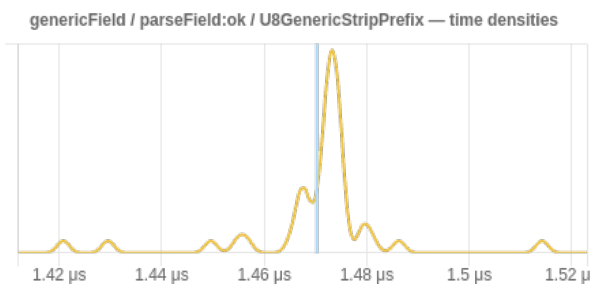
## genericField / parseField:ok / U8Generic



	lower bound	estimate	upper bound
OLS regression	1.42 $\mu$ s	1.43 $\mu$ s	1.43 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	1.42 $\mu$ s	1.42 $\mu$ s	1.43 $\mu$ s
Standard deviation	5.08 ns	9.05 ns	15.2 ns

Outlying measurements have no (0.488%) effect on estimated standard deviation.

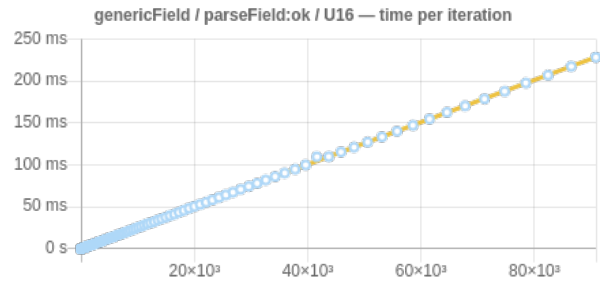
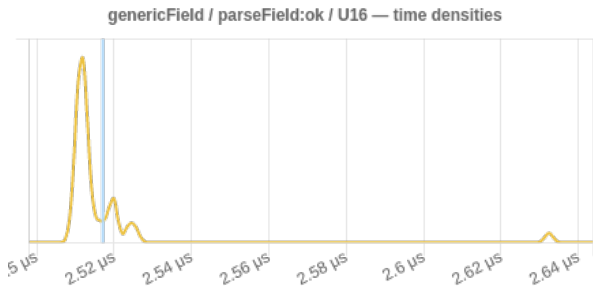
## genericField / parseField:ok / U8GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	1.47 $\mu$ s	1.47 $\mu$ s	1.48 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	1.47 $\mu$ s	1.47 $\mu$ s	1.47 $\mu$ s
Standard deviation	8.64 ns	13.6 ns	21.8 ns

Outlying measurements have a slight (6.03%) effect on estimated standard deviation.

## genericField / parseField:ok / U16

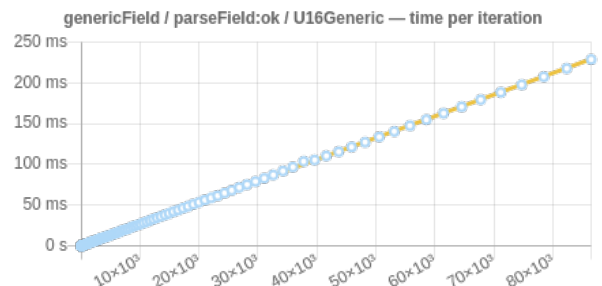
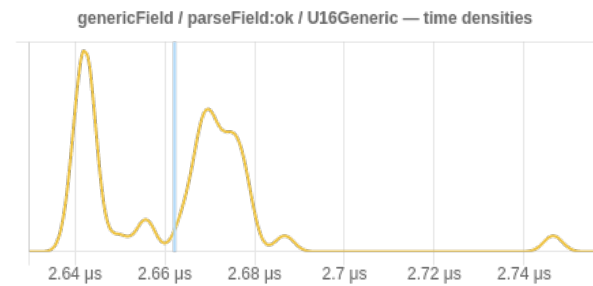


**lower bound estimate upper bound**

OLS regression	2.51 $\mu$ s	2.51 $\mu$ s	2.52 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.51 $\mu$ s	2.52 $\mu$ s	2.53 $\mu$ s
Standard deviation	3.84 ns	18.6 ns	38.6 ns

Outlying measurements have no (0.518%) effect on estimated standard deviation.

## genericField / parseField:ok / U16Generic

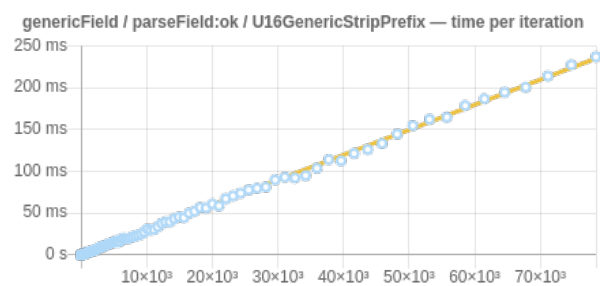
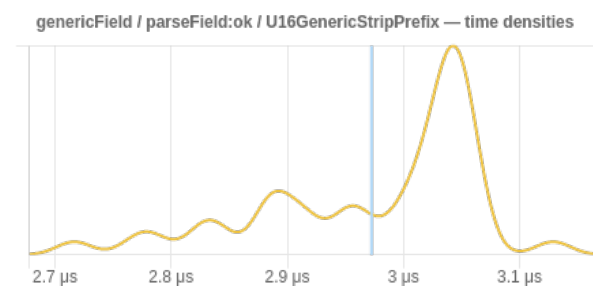


**lower bound estimate upper bound**

OLS regression	2.64 $\mu$ s	2.65 $\mu$ s	2.65 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.66 $\mu$ s	2.66 $\mu$ s	2.67 $\mu$ s
Standard deviation	14.5 ns	19.8 ns	30.8 ns

Outlying measurements have no (0.521%) effect on estimated standard deviation.

## genericField / parseField:ok / U16GenericStripPrefix

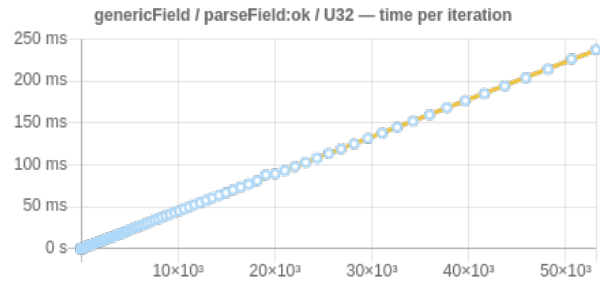
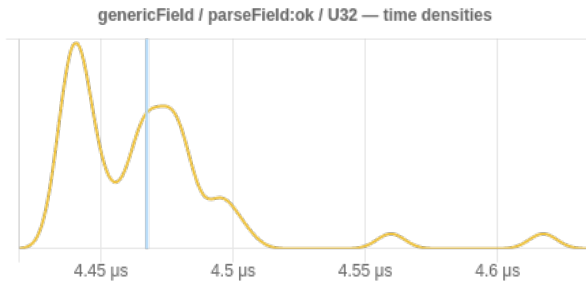


**lower bound estimate upper bound**

OLS regression	2.96 $\mu$ s	2.99 $\mu$ s	3.01 $\mu$ s
R <sup>2</sup> goodness-of-fit	0.999	0.999	1.00
Mean execution time	2.94 $\mu$ s	2.97 $\mu$ s	3.00 $\mu$ s
Standard deviation	78.1 ns	94.2 ns	119 ns

Outlying measurements have a moderate (40.9%) effect on estimated standard deviation.

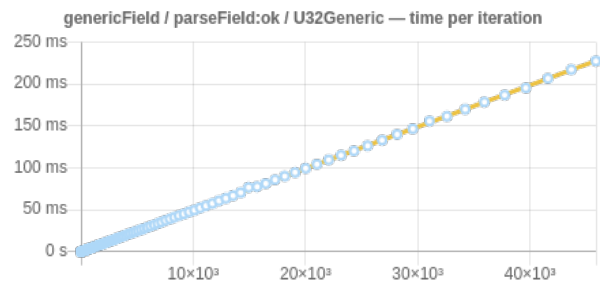
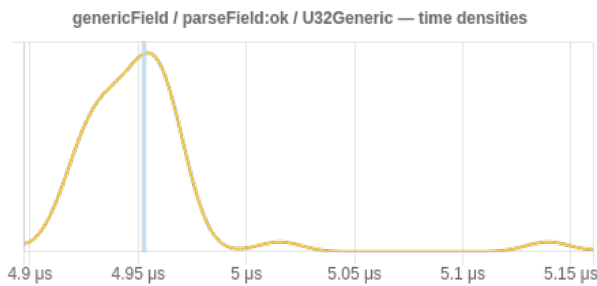
## genericField / parseField:ok / U32



	lower bound	estimate	upper bound
OLS regression	4.45 $\mu$ s	4.45 $\mu$ s	4.46 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.46 $\mu$ s	4.47 $\mu$ s	4.48 $\mu$ s
Standard deviation	21.9 ns	33.7 ns	55.5 ns

Outlying measurements have no (0.549%) effect on estimated standard deviation.

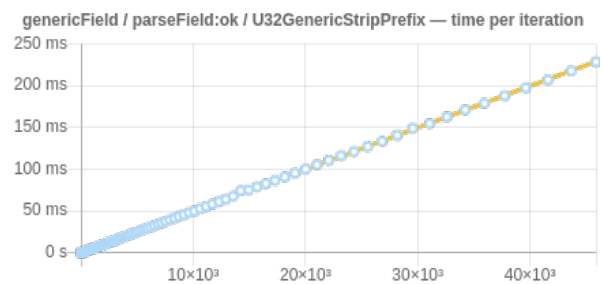
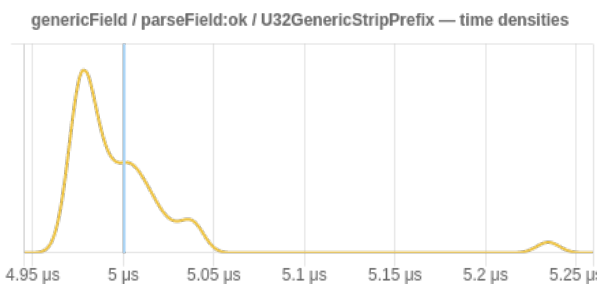
## genericField / parseField:ok / U32Generic



	lower bound	estimate	upper bound
OLS regression	4.95 $\mu$ s	4.96 $\mu$ s	4.97 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.95 $\mu$ s	4.95 $\mu$ s	4.97 $\mu$ s
Standard deviation	16.1 ns	34.6 ns	66.8 ns

Outlying measurements have no (0.559%) effect on estimated standard deviation.

## genericField / parseField:ok / U32GenericStripPrefix

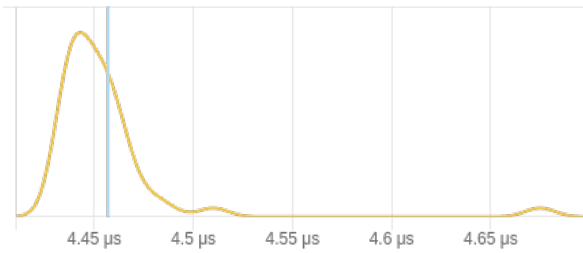


	lower bound	estimate	upper bound
OLS regression	4.98 $\mu$ s	4.99 $\mu$ s	5.00 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.99 $\mu$ s	5.00 $\mu$ s	5.02 $\mu$ s
Standard deviation	18.3 ns	41.5 ns	81.4 ns

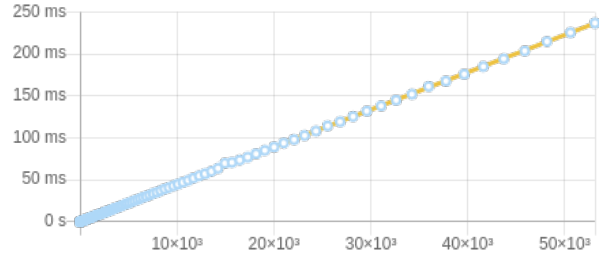
Outlying measurements have no (0.559%) effect on estimated standard deviation.

## genericField / parseField:ok / EitherManual Int Char

genericField / parseField:ok / EitherManual Int Char — time densities



genericField / parseField:ok / EitherManual Int Char — time per iteration



**lower bound estimate upper bound**

OLS regression	4.45 µs	4.45 µs	4.46 µs
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.45 µs	4.46 µs	4.48 µs
Standard deviation	13.5 ns	37.1 ns	79.2 ns

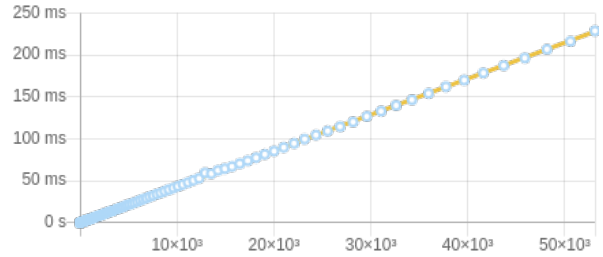
Outlying measurements have no (0.549%) effect on estimated standard deviation.

## genericField / parseField:ok / EitherGeneric Int Char

genericField / parseField:ok / EitherGeneric Int Char — time densities



genericField / parseField:ok / EitherGeneric Int Char — time per iteration



**lower bound estimate upper bound**

OLS regression	4.28 µs	4.29 µs	4.30 µs
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.29 µs	4.30 µs	4.33 µs
Standard deviation	15.9 ns	52.9 ns	105 ns

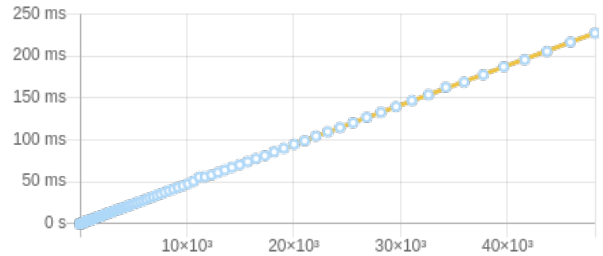
Outlying measurements have a slight (9.38%) effect on estimated standard deviation.

## genericField / parseField:ok / EitherManual (EitherManual Int Char) (EitherManual Int Char)

genericField / parseField:ok / EitherManual (EitherManual Int Char) (EitherManual Int Char) — time densities



genericField / parseField:ok / EitherManual (EitherManual Int Char) (EitherManual Int Char) — time per iteration



**lower bound estimate upper bound**

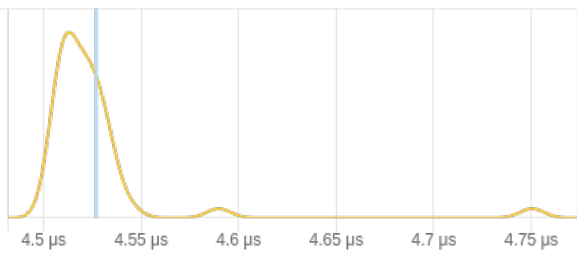
OLS regression	4.71 µs	4.72 µs	4.72 µs
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.72 µs	4.73 µs	4.75 µs
Standard deviation	16.3 ns	45.1 ns	89.5 ns

Outlying measurements have a slight (4.50%) effect on estimated standard deviation.

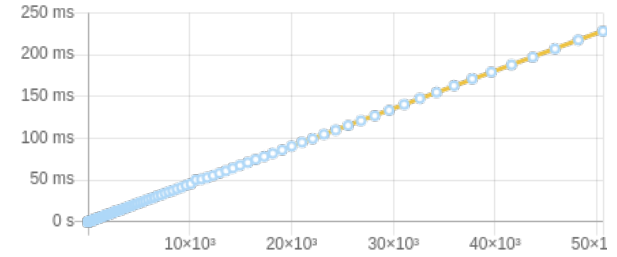


## genericField / parseField:ok / EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)

genericField / parseField:ok / EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char) — time densities



genericField / parseField:ok / EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char) — time per iteration



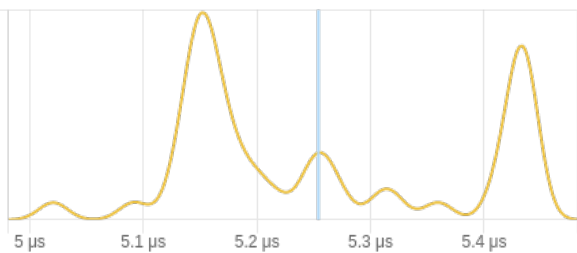
**lower bound estimate upper bound**

OLS regression	4.51 $\mu$ s	4.52 $\mu$ s	4.52 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.52 $\mu$ s	4.53 $\mu$ s	4.55 $\mu$ s
Standard deviation	10.8 ns	38.0 ns	82.4 ns

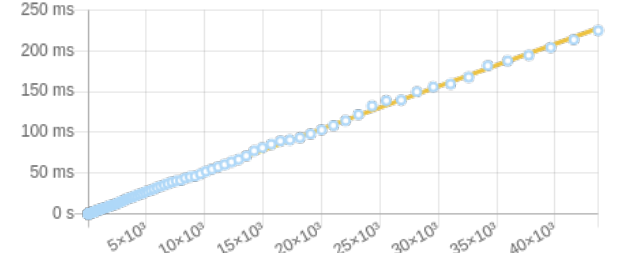
Outlying measurements have no (0.552%) effect on estimated standard deviation.

## genericField / parseField:ok / EitherManual (EitherManual Int Char) (EitherManual Int Char) (EitherManual (EitherManual Int Char) (EitherManual Int Char))

genericField / parseField:ok / EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual Int Char) (EitherManual Int Char)) — time densities



genericField / parseField:ok / EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual Int Char) (EitherManual Int Char)) — time per iteration

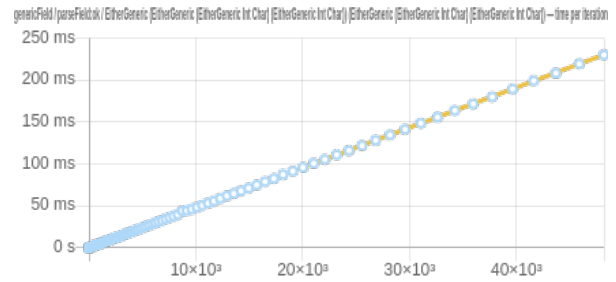
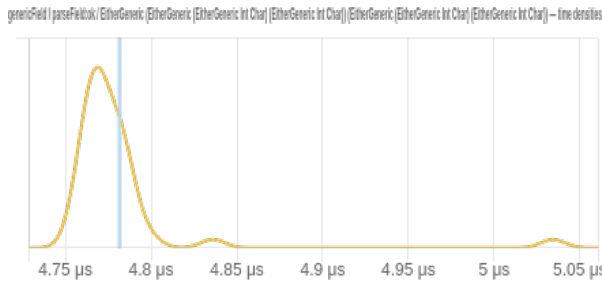


**lower bound estimate upper bound**

OLS regression	5.18 $\mu$ s	5.21 $\mu$ s	5.25 $\mu$ s
R <sup>2</sup> goodness-of-fit	0.999	1.00	1.00
Mean execution time	5.22 $\mu$ s	5.25 $\mu$ s	5.29 $\mu$ s
Standard deviation	111 ns	125 ns	142 ns

Outlying measurements have a moderate (27.0%) effect on estimated standard deviation.

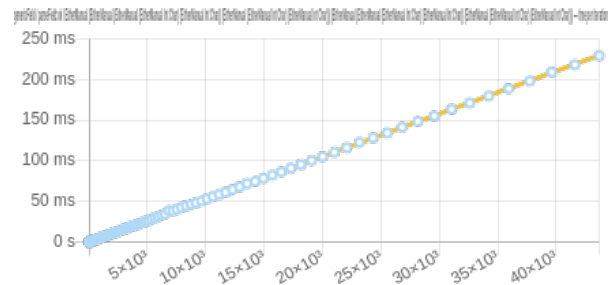
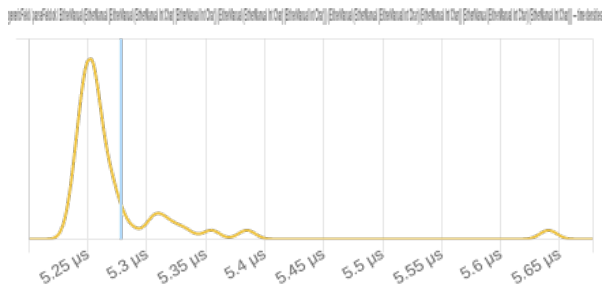
# genericField / parseField:ok / EitherGeneric (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)) (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char))



	lower bound	estimate	upper bound
OLS regression	4.77 $\mu$ s	4.77 $\mu$ s	4.78 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.77 $\mu$ s	4.78 $\mu$ s	4.81 $\mu$ s
Standard deviation	11.6 ns	42.2 ns	85.9 ns

Outlying measurements have no (0.556%) effect on estimated standard deviation.

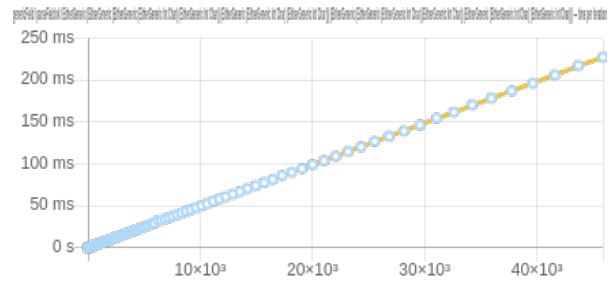
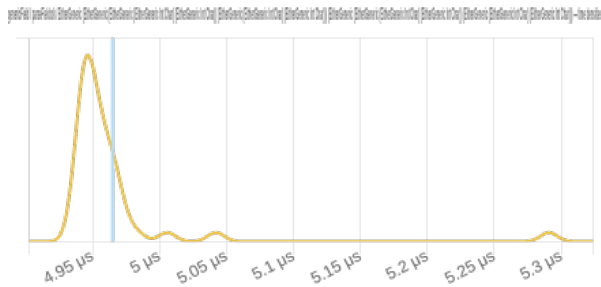
# genericField / parseField:ok / EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual Int Char) (EitherManual Int Char)))



	lower bound	estimate	upper bound
OLS regression	5.25 $\mu$ s	5.26 $\mu$ s	5.26 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	5.27 $\mu$ s	5.28 $\mu$ s	5.32 $\mu$ s
Standard deviation	29.1 ns	65.4 ns	126 ns

Outlying measurements have a slight (9.07%) effect on estimated standard deviation.

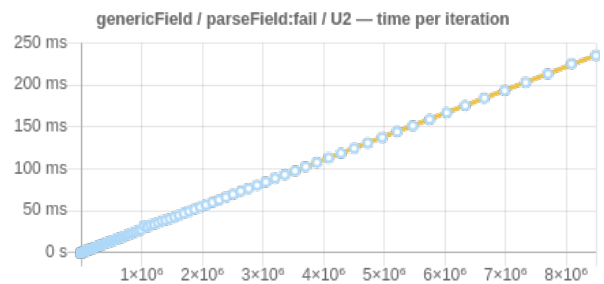
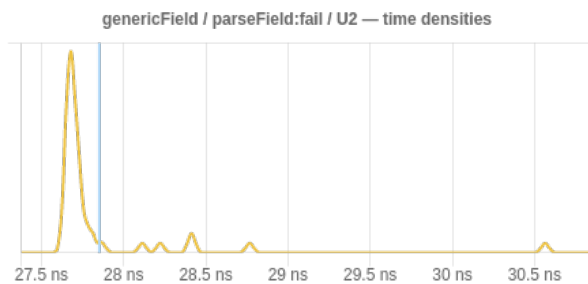
genericField / parseField:ok / EitherGeneric (EitherGeneric (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)) (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char))) (EitherGeneric (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)) (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)))



	lower bound	estimate	upper bound
OLS regression	4.95 $\mu$ s	4.96 $\mu$ s	4.96 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.96 $\mu$ s	4.97 $\mu$ s	5.01 $\mu$ s
Standard deviation	15.9 ns	54.5 ns	119 ns

Outlying measurements have a slight (7.41%) effect on estimated standard deviation.

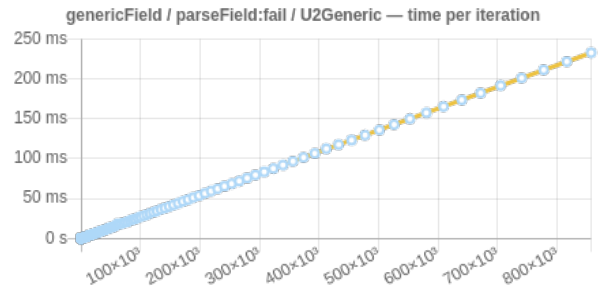
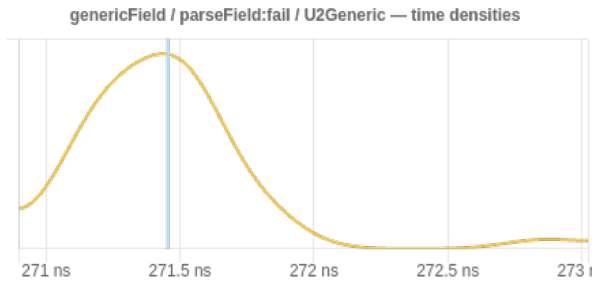
genericField / parseField:fail / U2



	lower bound	estimate	upper bound
OLS regression	27.7 ns	27.7 ns	27.7 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	27.8 ns	27.9 ns	28.1 ns
Standard deviation	195 ps	477 ps	978 ps

Outlying measurements have a moderate (23.1%) effect on estimated standard deviation.

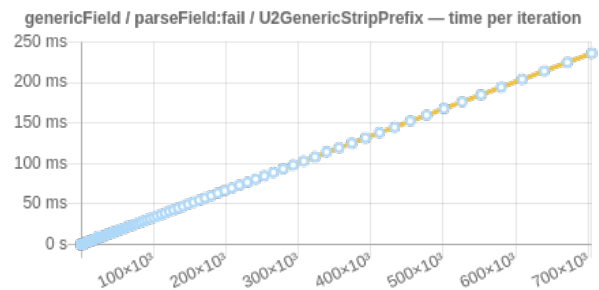
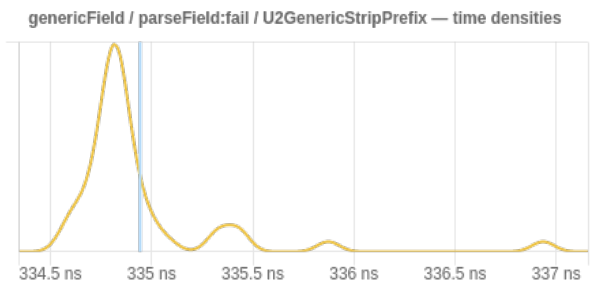
## genericField / parseField:fail / U2Generic



	lower bound	estimate	upper bound
OLS regression	271 ns	272 ns	272 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	271 ns	271 ns	272 ns
Standard deviation	195 ps	299 ps	533 ps

Outlying measurements have no (0.418%) effect on estimated standard deviation.

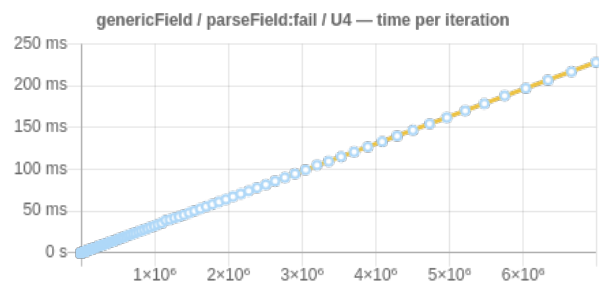
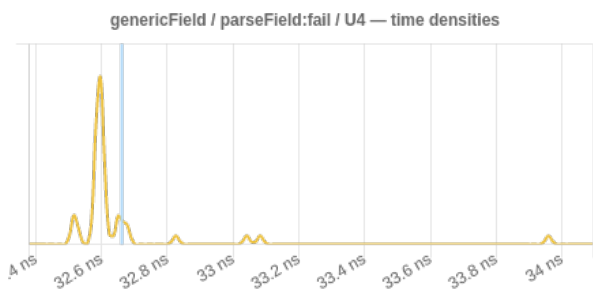
## genericField / parseField:fail / U2GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	335 ns	335 ns	335 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	335 ns	335 ns	335 ns
Standard deviation	216 ps	394 ps	706 ps

Outlying measurements have no (0.426%) effect on estimated standard deviation.

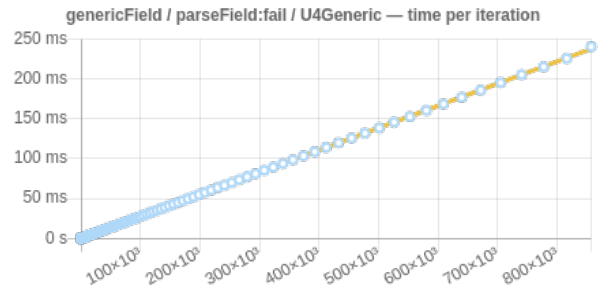
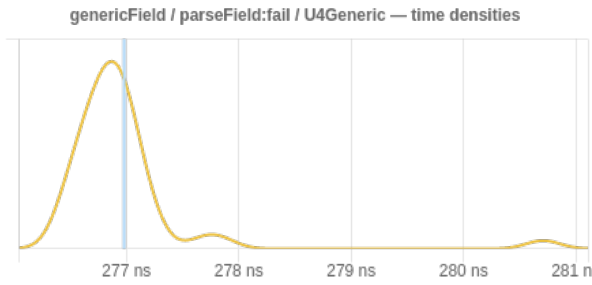
## genericField / parseField:fail / U4



	lower bound	estimate	upper bound
OLS regression	32.6 ns	32.6 ns	32.6 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	32.6 ns	32.7 ns	32.8 ns
Standard deviation	89.2 ps	232 ps	477 ps

Outlying measurements have no (0.355%) effect on estimated standard deviation.

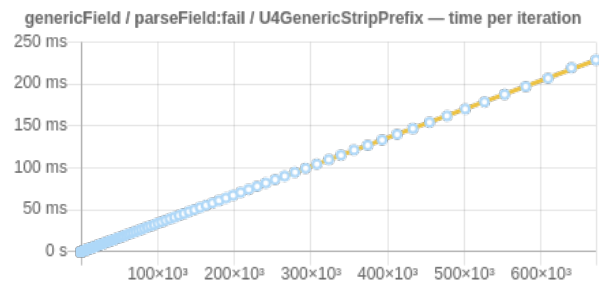
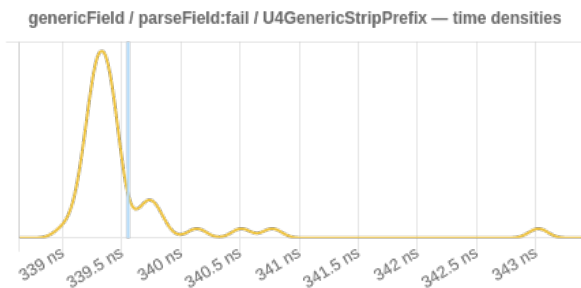
## genericField / parseField:fail / U4Generic



	lower bound	estimate	upper bound
OLS regression	277 ns	277 ns	278 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	277 ns	277 ns	277 ns
Standard deviation	252 ps	642 ps	1.27 ns

Outlying measurements have no (0.418%) effect on estimated standard deviation.

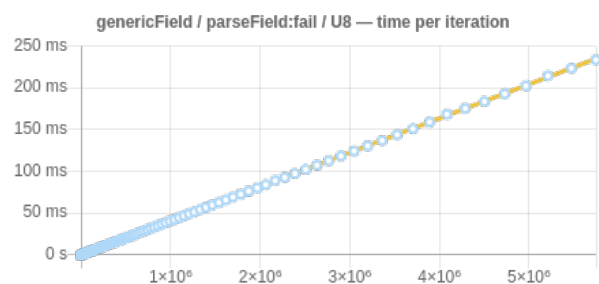
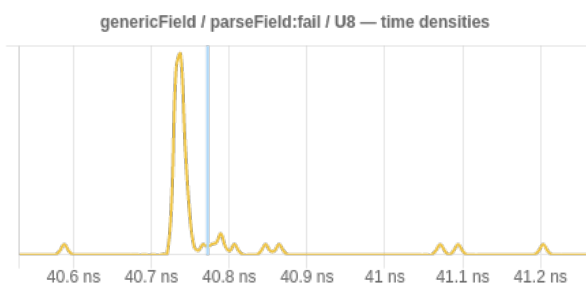
## genericField / parseField:fail / U4GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	339 ns	340 ns	341 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	339 ns	340 ns	340 ns
Standard deviation	300 ps	641 ps	1.20 ns

Outlying measurements have no (0.427%) effect on estimated standard deviation.

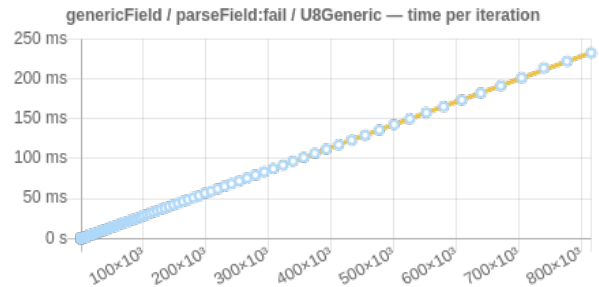
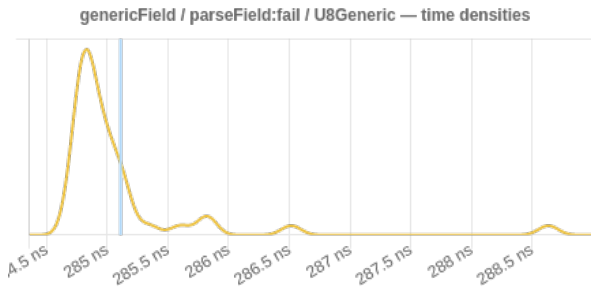
## genericField / parseField:fail / U8



	lower bound	estimate	upper bound
OLS regression	40.7 ns	40.8 ns	40.9 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	40.8 ns	40.8 ns	40.8 ns
Standard deviation	66.1 ps	105 ps	182 ps

Outlying measurements have no (0.360%) effect on estimated standard deviation.

## genericField / parseField:fail / U8Generic

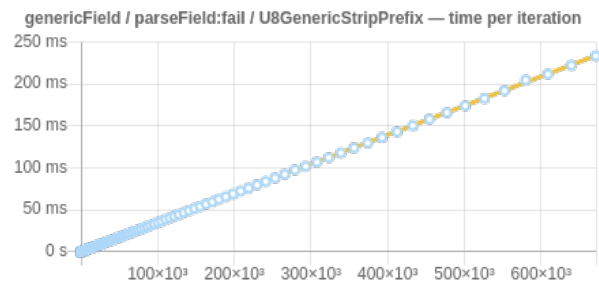
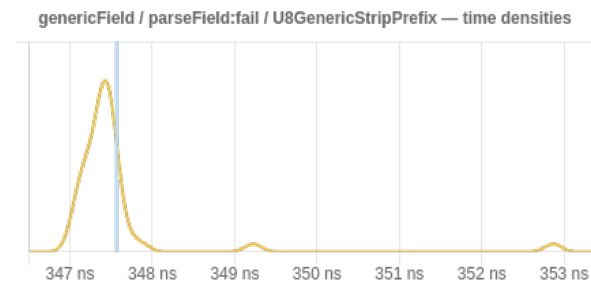


**lower bound estimate upper bound**

OLS regression	285 ns	285 ns	286 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	285 ns	285 ns	285 ns
Standard deviation	296 ps	656 ps	1.32 ns

Outlying measurements have no (0.420%) effect on estimated standard deviation.

## genericField / parseField:fail / U8GenericStripPrefix

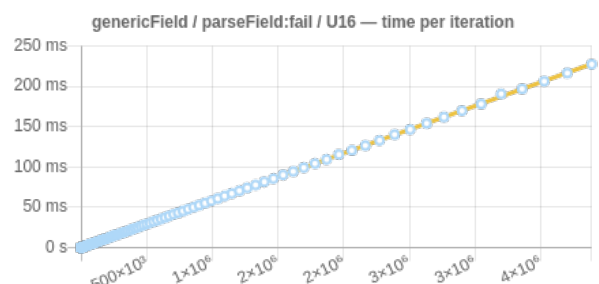
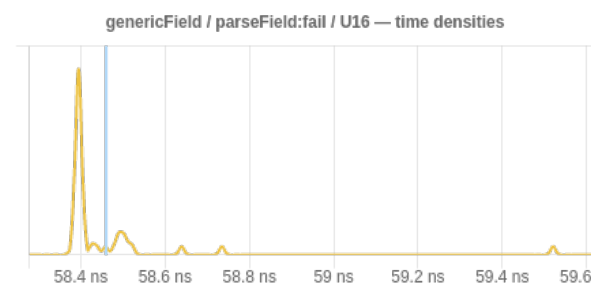


**lower bound estimate upper bound**

OLS regression	347 ns	348 ns	349 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	347 ns	348 ns	348 ns
Standard deviation	190 ps	884 ps	1.78 ns

Outlying measurements have no (0.427%) effect on estimated standard deviation.

## genericField / parseField:fail / U16

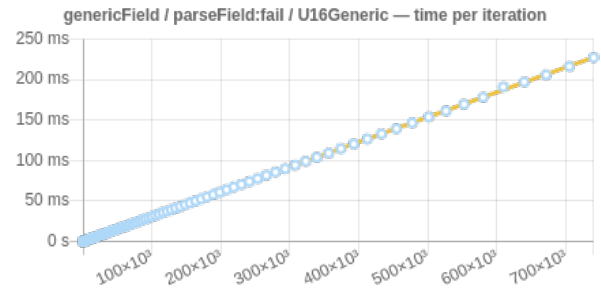
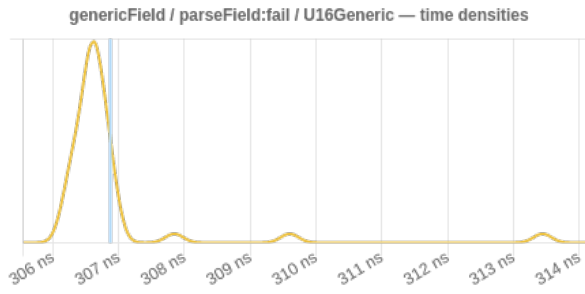


**lower bound estimate upper bound**

OLS regression	58.4 ns	58.5 ns	58.7 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	58.4 ns	58.5 ns	58.6 ns
Standard deviation	60.0 ps	181 ps	361 ps

Outlying measurements have no (0.370%) effect on estimated standard deviation.

## genericField / parseField:fail / U16Generic

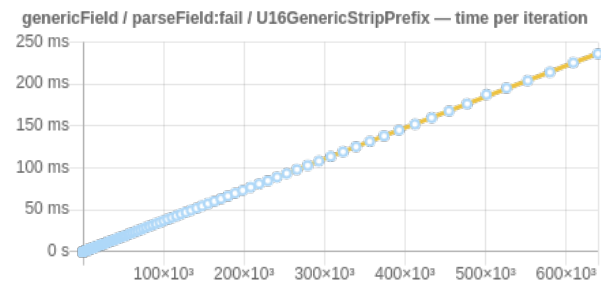
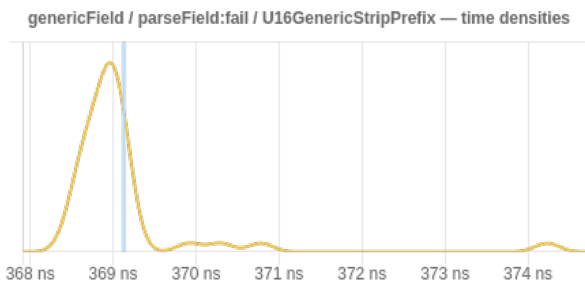


**lower bound estimate upper bound**

OLS regression	307 ns	307 ns	308 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	307 ns	307 ns	307 ns
Standard deviation	349 ps	1.16 ns	2.26 ns

Outlying measurements have no (0.424%) effect on estimated standard deviation.

## genericField / parseField:fail / U16GenericStripPrefix

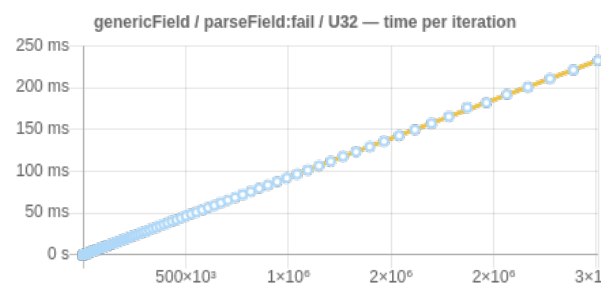
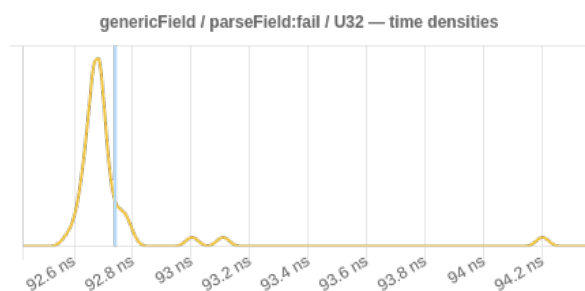


**lower bound estimate upper bound**

OLS regression	369 ns	370 ns	370 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	369 ns	369 ns	370 ns
Standard deviation	358 ps	897 ps	1.86 ns

Outlying measurements have no (0.429%) effect on estimated standard deviation.

## genericField / parseField:fail / U32

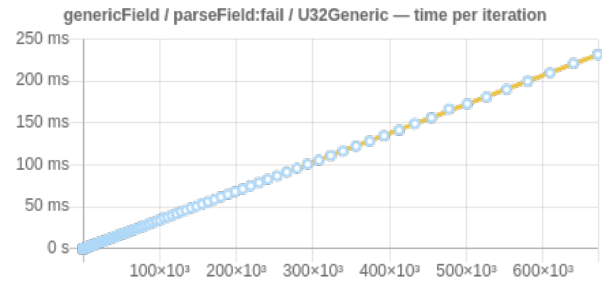
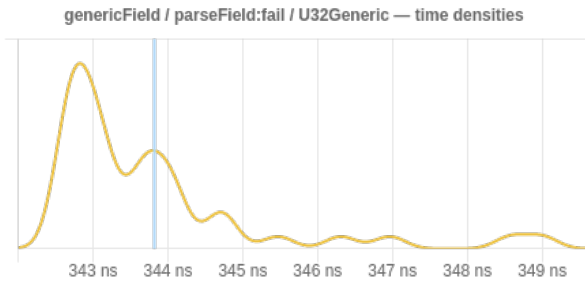


**lower bound estimate upper bound**

OLS regression	92.7 ns	92.8 ns	93.0 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	92.7 ns	92.7 ns	92.9 ns
Standard deviation	74.0 ps	247 ps	538 ps

Outlying measurements have no (0.383%) effect on estimated standard deviation.

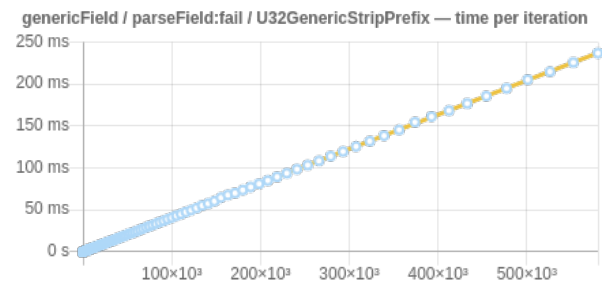
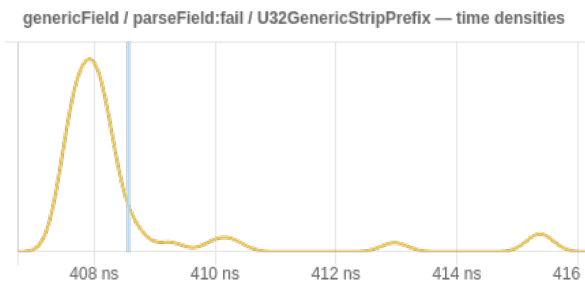
## genericField / parseField:fail / U32Generic



	lower bound	estimate	upper bound
OLS regression	344 ns	344 ns	345 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	343 ns	344 ns	344 ns
Standard deviation	966 ps	1.49 ns	2.16 ns

Outlying measurements have no (0.427%) effect on estimated standard deviation.

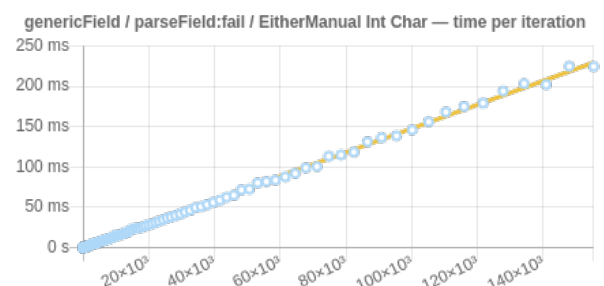
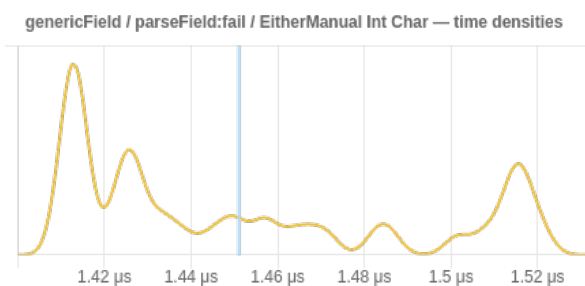
## genericField / parseField:fail / U32GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	408 ns	409 ns	409 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	408 ns	409 ns	409 ns
Standard deviation	1.10 ns	1.78 ns	2.76 ns

Outlying measurements have no (0.433%) effect on estimated standard deviation.

## genericField / parseField:fail / EitherManual Int Char



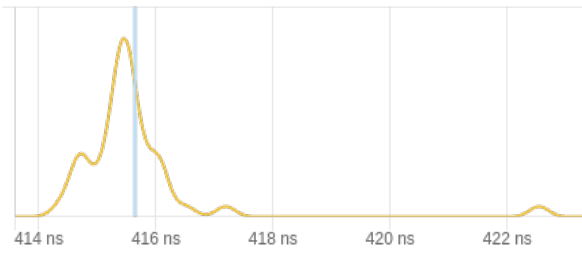
	lower bound	estimate	upper bound
OLS regression	1.46 μs	1.48 μs	1.49 μs
R <sup>2</sup> goodness-of-fit	0.999	0.999	0.999
Mean execution time	1.44 μs	1.45 μs	1.46 μs
Standard deviation	33.1 ns	38.8 ns	43.9 ns

Outlying measurements have a moderate (34.6%) effect on estimated standard deviation.

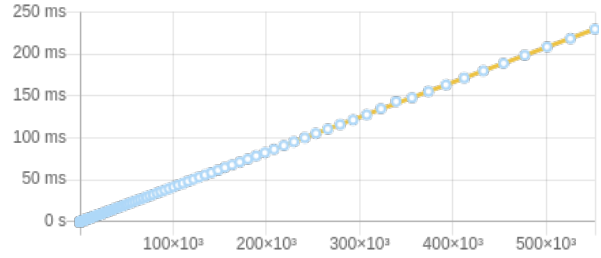


## genericField / parseField:fail / EitherGeneric Int Char

genericField / parseField:fail / EitherGeneric Int Char — time densities



genericField / parseField:fail / EitherGeneric Int Char — time per iteration



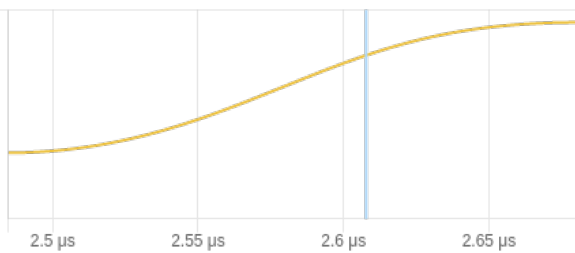
**lower bound estimate upper bound**

OLS regression	415 ns	416 ns	416 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	415 ns	416 ns	416 ns
Standard deviation	491 ps	1.21 ns	2.39 ns

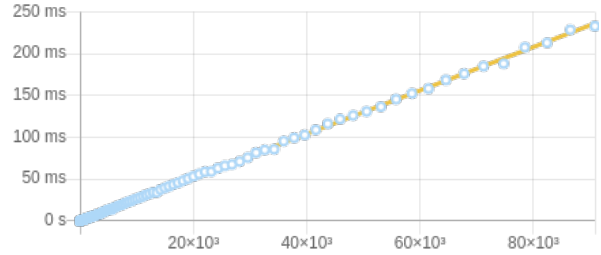
Outlying measurements have no (0.435%) effect on estimated standard deviation.

## genericField / parseField:fail / EitherManual (EitherManual Int Char) (EitherManual Int Char)

genericField / parseField:fail / EitherManual (EitherManual Int Char) (EitherManual Int Char) — time densities



genericField / parseField:fail / EitherManual (EitherManual Int Char) (EitherManual Int Char) — time per iteration



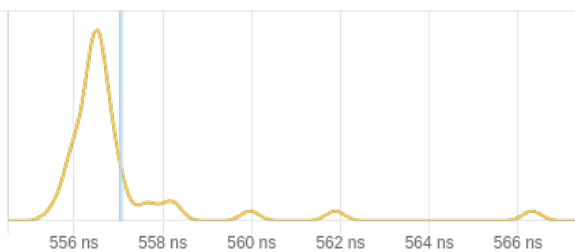
**lower bound estimate upper bound**

OLS regression	2.58 µs	2.60 µs	2.62 µs
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.59 µs	2.61 µs	2.62 µs
Standard deviation	39.8 ns	47.4 ns	57.7 ns

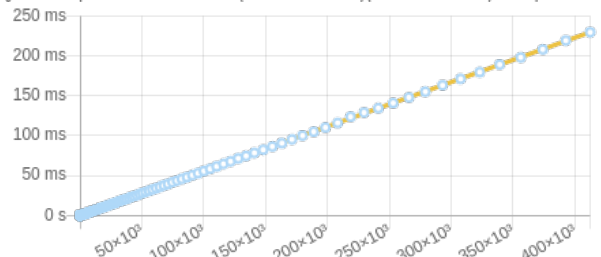
Outlying measurements have a moderate (18.8%) effect on estimated standard deviation.

## genericField / parseField:fail / EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)

genericField / parseField:fail / EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char) — time densities



genericField / parseField:fail / EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char) — time per iteration

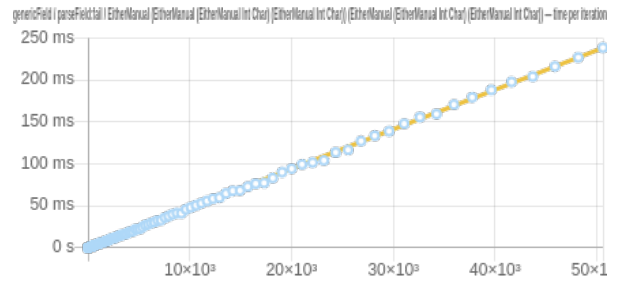
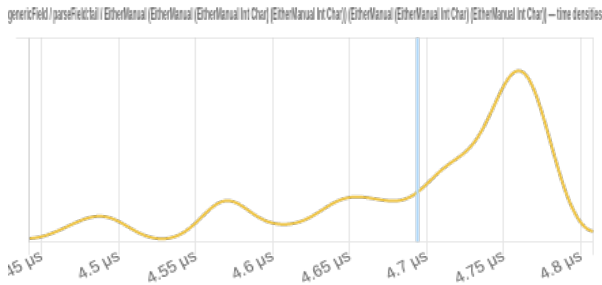


**lower bound estimate upper bound**

OLS regression	557 ns	557 ns	558 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	557 ns	557 ns	558 ns
Standard deviation	886 ps	1.82 ns	3.66 ns

Outlying measurements have no (0.446%) effect on estimated standard deviation.

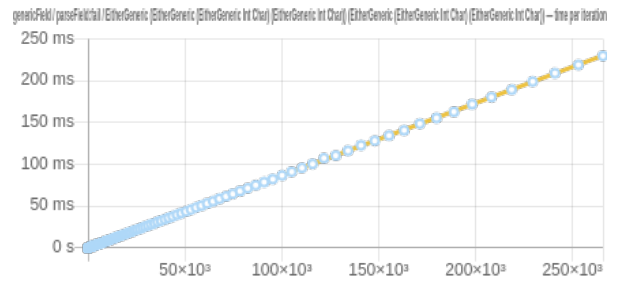
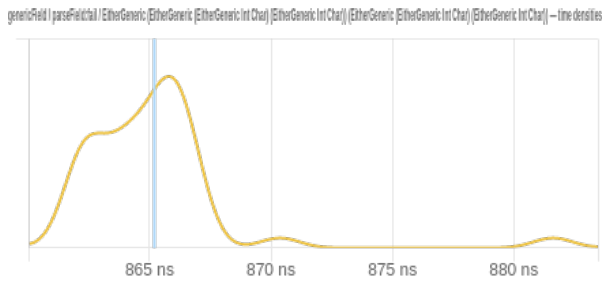
# genericField / parseField:fail / EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual Int Char) (EitherManual Int Char))



	lower bound	estimate	upper bound
OLS regression	4.69 $\mu$ s	4.71 $\mu$ s	4.73 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	4.66 $\mu$ s	4.69 $\mu$ s	4.72 $\mu$ s
Standard deviation	67.4 ns	85.0 ns	105 ns

Outlying measurements have a moderate (17.9%) effect on estimated standard deviation.

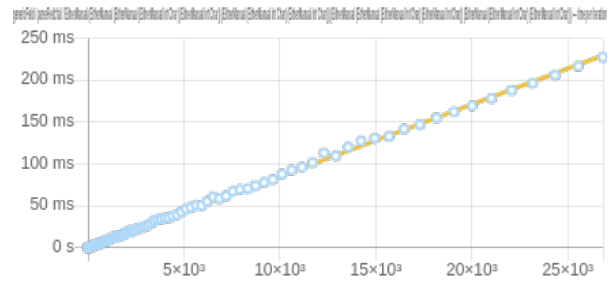
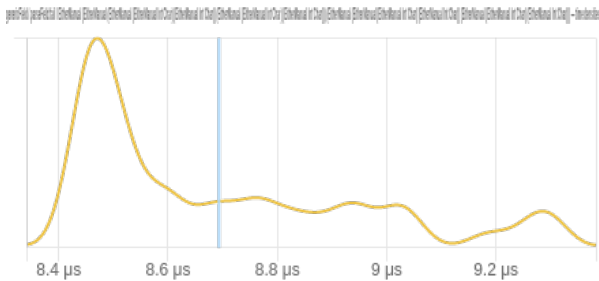
# genericField / parseField:fail / EitherGeneric (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)) (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char))



	lower bound	estimate	upper bound
OLS regression	865 ns	866 ns	867 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	865 ns	865 ns	867 ns
Standard deviation	1.66 ns	3.14 ns	6.09 ns

Outlying measurements have no (0.465%) effect on estimated standard deviation.

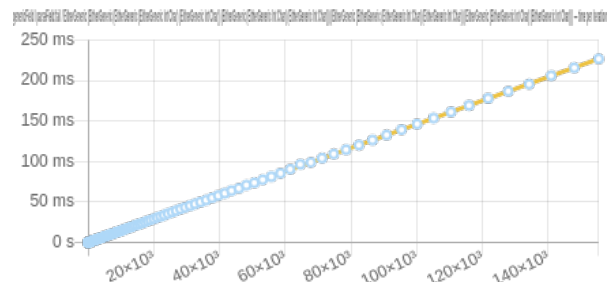
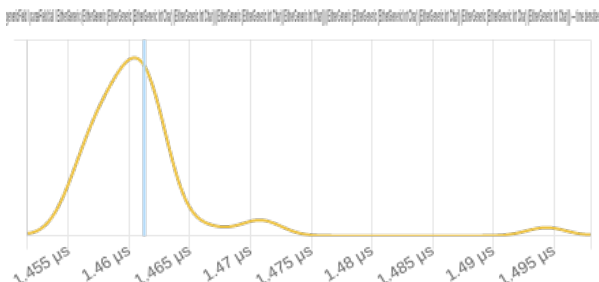
genericField / parseField:fail / EitherManual (EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual Int Char) (EitherManual Int Char))) (EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual Int Char) (EitherManual Int Char)))



	lower bound	estimate	upper bound
OLS regression	8.50 µs	8.54 µs	8.62 µs
R <sup>2</sup> goodness-of-fit	0.999	0.999	1.00
Mean execution time	8.62 µs	8.69 µs	8.77 µs
Standard deviation	211 ns	261 ns	312 ns

Outlying measurements have a moderate (35.7%) effect on estimated standard deviation.

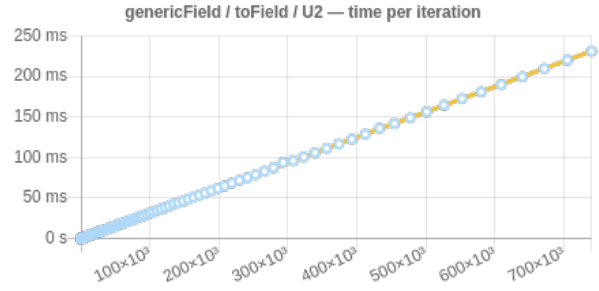
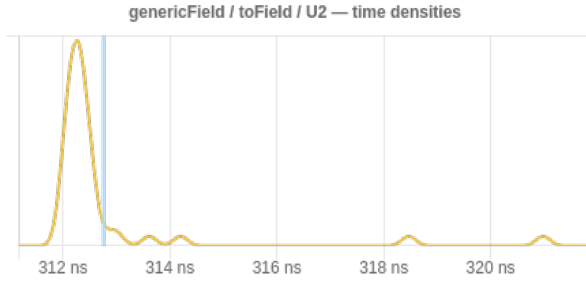
genericField / parseField:fail / EitherGeneric (EitherGeneric (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)) (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char))) (EitherGeneric (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)) (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)))



	lower bound	estimate	upper bound
OLS regression	1.46 µs	1.46 µs	1.46 µs
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	1.46 µs	1.46 µs	1.46 µs
Standard deviation	2.92 ns	6.15 ns	12.4 ns

Outlying measurements have no (0.490%) effect on estimated standard deviation.

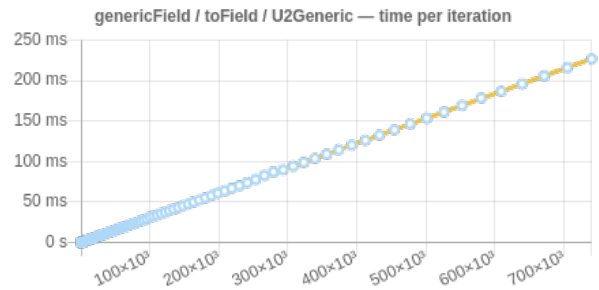
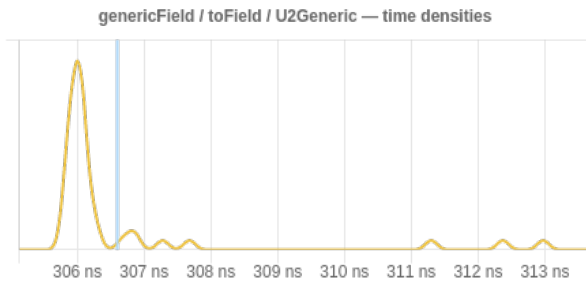
## genericField / toField / U2



	lower bound	estimate	upper bound
OLS regression	312 ns	312 ns	313 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	312 ns	313 ns	314 ns
Standard deviation	473 ps	1.65 ns	3.01 ns

Outlying measurements have no (0.424%) effect on estimated standard deviation.

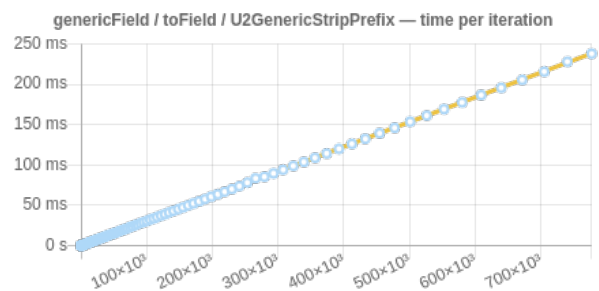
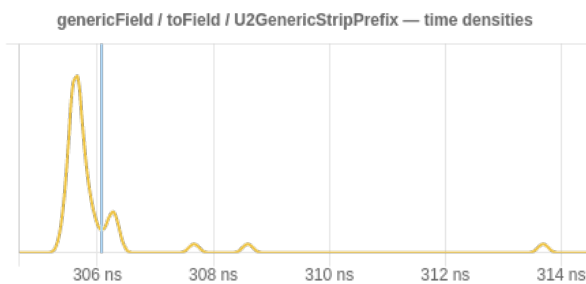
## genericField / toField / U2Generic



	lower bound	estimate	upper bound
OLS regression	306 ns	306 ns	307 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	306 ns	307 ns	307 ns
Standard deviation	871 ps	1.63 ns	2.45 ns

Outlying measurements have no (0.424%) effect on estimated standard deviation.

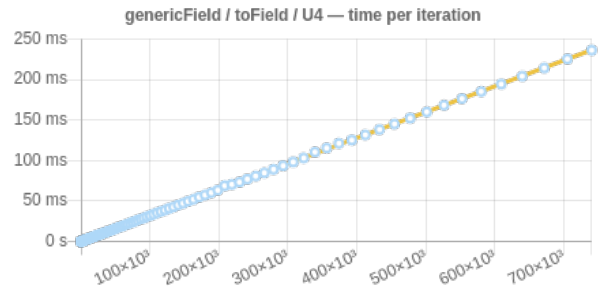
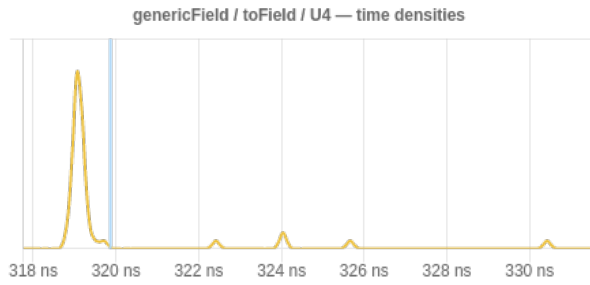
## genericField / toField / U2GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	306 ns	306 ns	307 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	306 ns	306 ns	307 ns
Standard deviation	478 ps	1.31 ns	2.59 ns

Outlying measurements have no (0.422%) effect on estimated standard deviation.

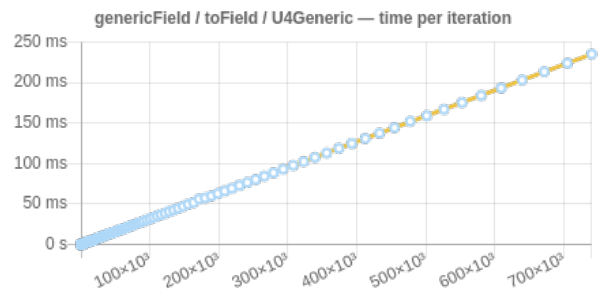
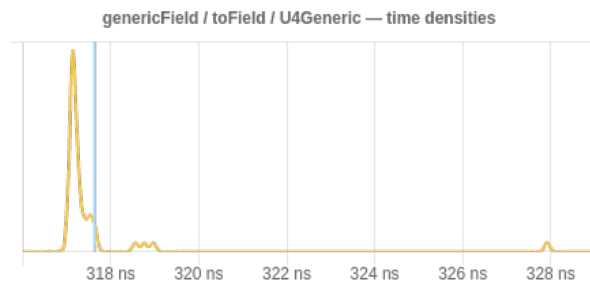
## genericField / toField / U4



	lower bound	estimate	upper bound
OLS regression	319 ns	320 ns	320 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	319 ns	320 ns	321 ns
Standard deviation	1.23 ns	2.21 ns	3.67 ns

Outlying measurements have no (0.424%) effect on estimated standard deviation.

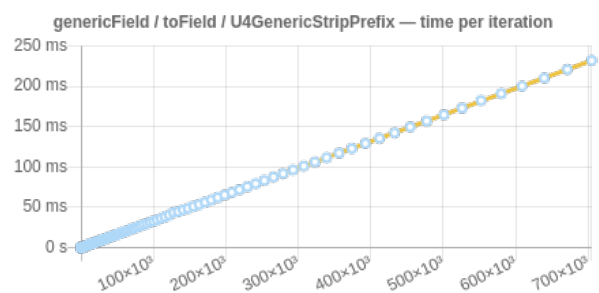
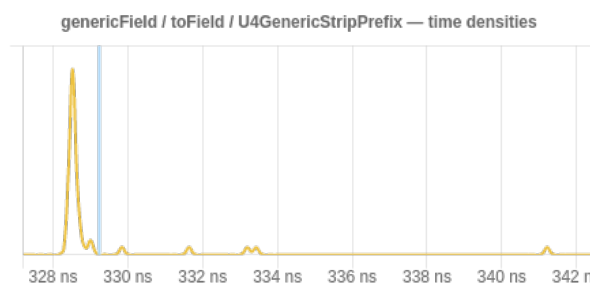
## genericField / toField / U4Generic



	lower bound	estimate	upper bound
OLS regression	317 ns	317 ns	318 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	317 ns	318 ns	319 ns
Standard deviation	364 ps	1.65 ns	3.71 ns

Outlying measurements have no (0.424%) effect on estimated standard deviation.

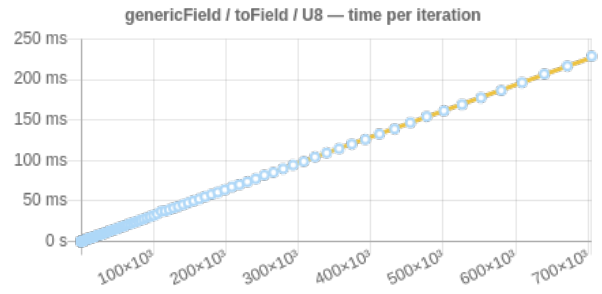
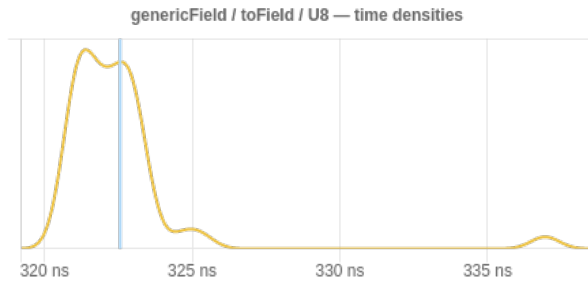
## genericField / toField / U4GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	329 ns	329 ns	329 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	329 ns	329 ns	330 ns
Standard deviation	898 ps	2.19 ns	4.15 ns

Outlying measurements have no (0.426%) effect on estimated standard deviation.

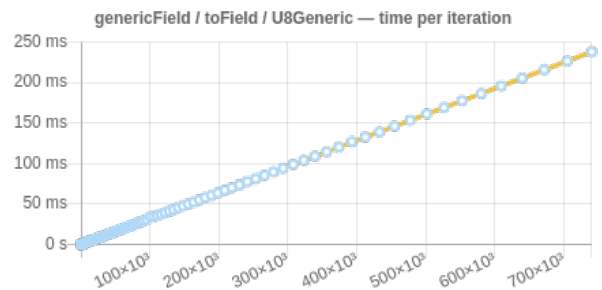
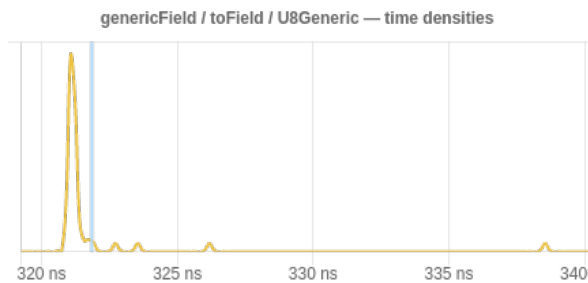
## genericField / toField / U8



	lower bound	estimate	upper bound
OLS regression	322 ns	322 ns	323 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	322 ns	323 ns	324 ns
Standard deviation	942 ps	2.47 ns	4.97 ns

Outlying measurements have no (0.426%) effect on estimated standard deviation.

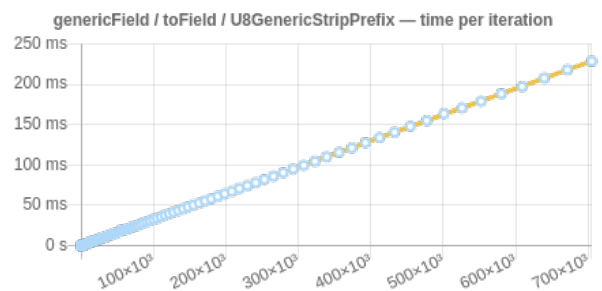
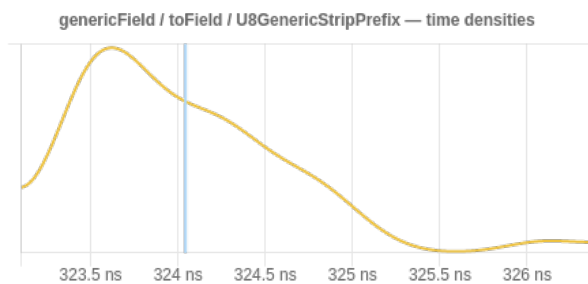
## genericField / toField / U8Generic



	lower bound	estimate	upper bound
OLS regression	321 ns	321 ns	321 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	321 ns	322 ns	324 ns
Standard deviation	561 ps	2.73 ns	6.00 ns

Outlying measurements have a slight (6.01%) effect on estimated standard deviation.

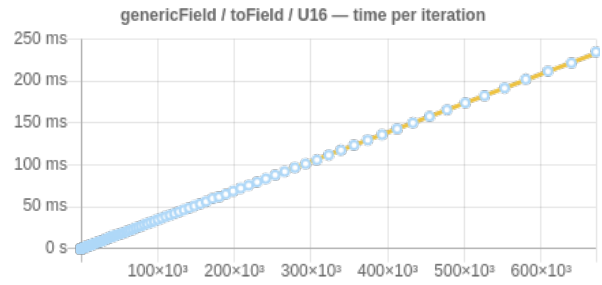
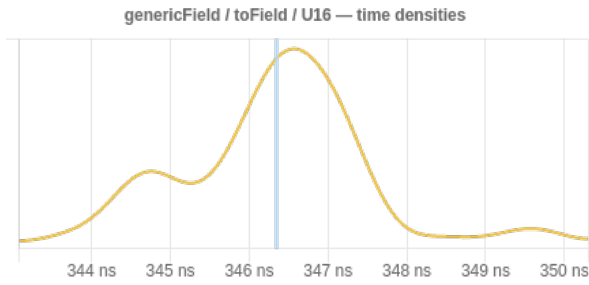
## genericField / toField / U8GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	324 ns	324 ns	325 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	324 ns	324 ns	324 ns
Standard deviation	440 ps	569 ps	867 ps

Outlying measurements have no (0.426%) effect on estimated standard deviation.

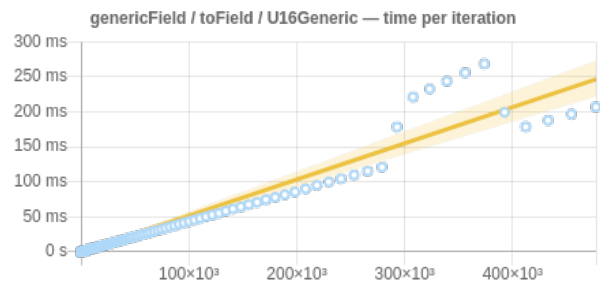
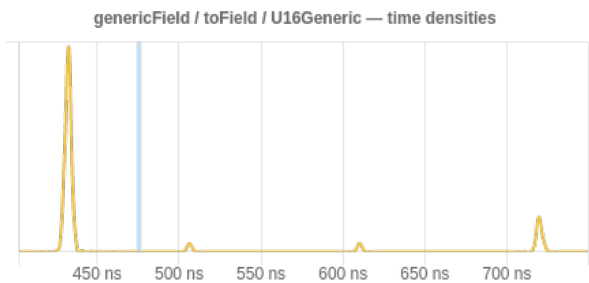
## genericField / toField / U16



	lower bound	estimate	upper bound
OLS regression	346 ns	347 ns	348 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	346 ns	346 ns	347 ns
Standard deviation	957 ps	1.22 ns	1.58 ns

Outlying measurements have no (0.427%) effect on estimated standard deviation.

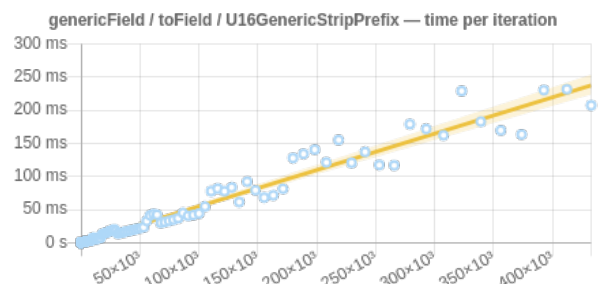
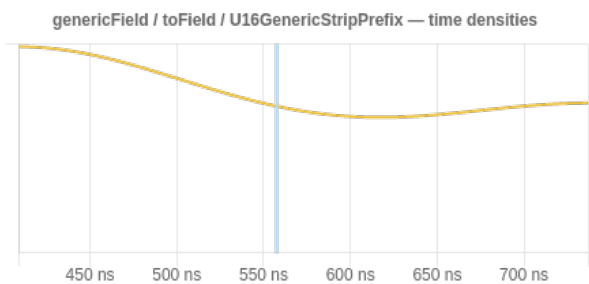
## genericField / toField / U16Generic



	lower bound	estimate	upper bound
OLS regression	465 ns	517 ns	573 ns
R <sup>2</sup> goodness-of-fit	0.929	0.938	0.969
Mean execution time	452 ns	475 ns	514 ns
Standard deviation	67.9 ns	98.0 ns	128 ns

Outlying measurements have a severe (97.6%) effect on estimated standard deviation.

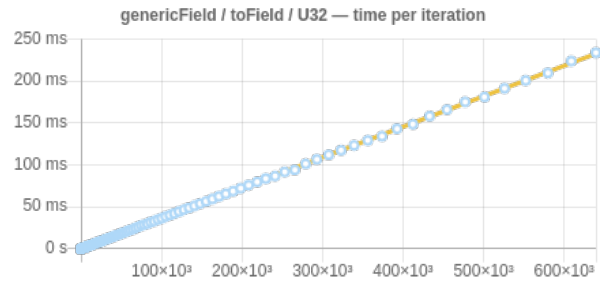
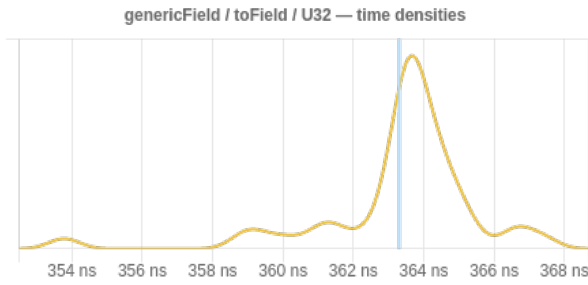
## genericField / toField / U16GenericStripPrefix



	lower bound	estimate	upper bound
OLS regression	517 ns	548 ns	586 ns
R <sup>2</sup> goodness-of-fit	0.957	0.969	0.980
Mean execution time	528 ns	558 ns	593 ns
Standard deviation	92.9 ns	104 ns	115 ns

Outlying measurements have a severe (96.7%) effect on estimated standard deviation.

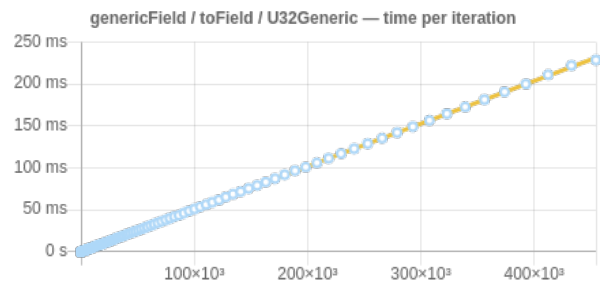
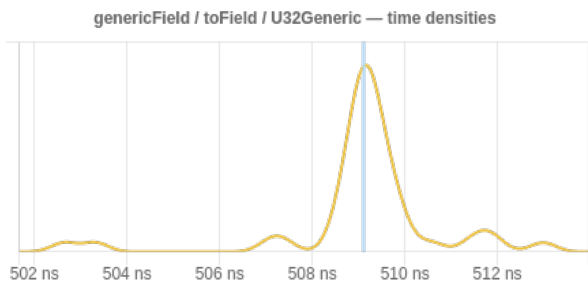
## genericField / toField / U32



	lower bound	estimate	upper bound
OLS regression	362 ns	364 ns	365 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	362 ns	363 ns	364 ns
Standard deviation	1.52 ns	2.25 ns	3.68 ns

Outlying measurements have no (0.429%) effect on estimated standard deviation.

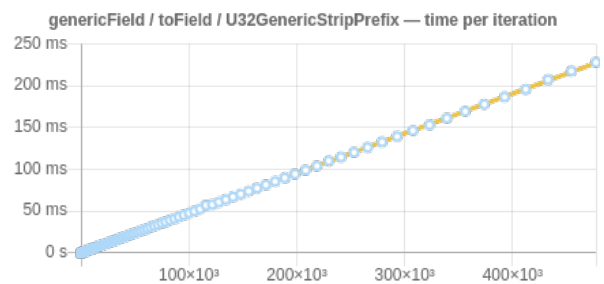
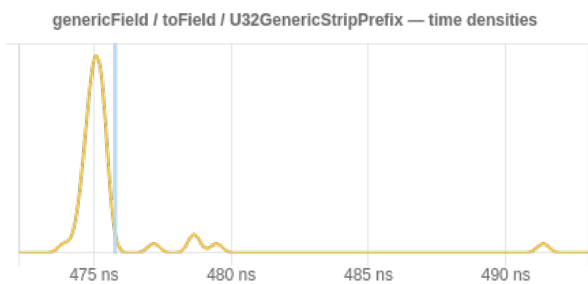
## genericField / toField / U32Generic



	lower bound	estimate	upper bound
OLS regression	507 ns	509 ns	511 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	508 ns	509 ns	510 ns
Standard deviation	1.12 ns	1.72 ns	2.74 ns

Outlying measurements have no (0.442%) effect on estimated standard deviation.

## genericField / toField / U32GenericStripPrefix

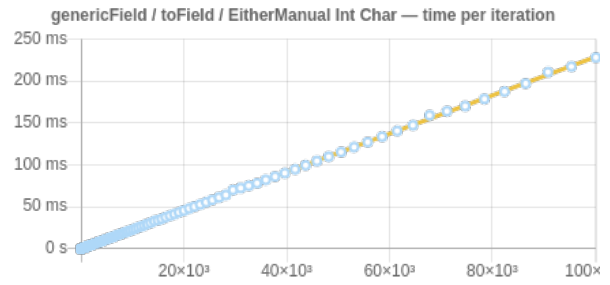
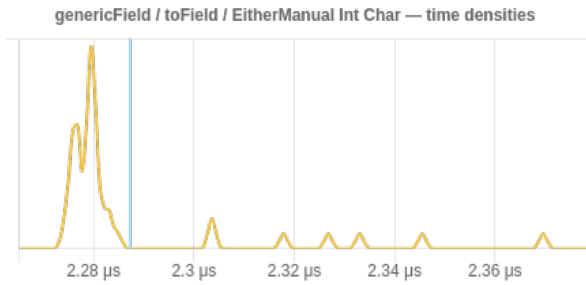


	lower bound	estimate	upper bound
OLS regression	475 ns	476 ns	477 ns
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	475 ns	476 ns	478 ns
Standard deviation	979 ps	2.68 ns	5.71 ns

Outlying measurements have no (0.441%) effect on estimated standard deviation.



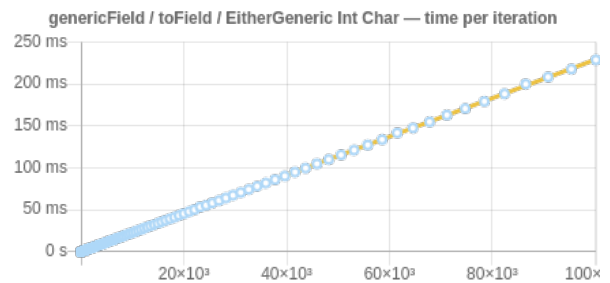
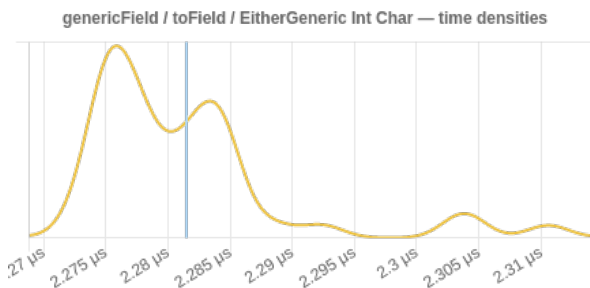
## genericField / toField / EitherManual Int Char



	lower bound	estimate	upper bound
OLS regression	2.28 $\mu$ s	2.29 $\mu$ s	2.30 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.28 $\mu$ s	2.29 $\mu$ s	2.30 $\mu$ s
Standard deviation	13.3 ns	20.8 ns	32.4 ns

Outlying measurements have a slight (3.01%) effect on estimated standard deviation.

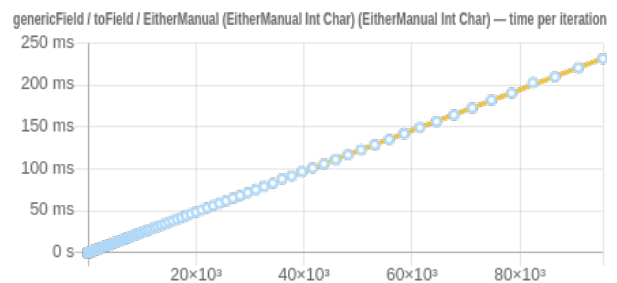
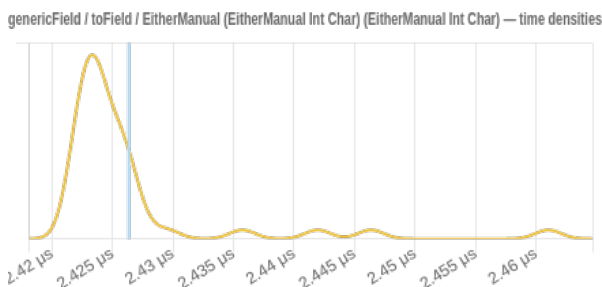
## genericField / toField / EitherGeneric Int Char



	lower bound	estimate	upper bound
OLS regression	2.28 $\mu$ s	2.29 $\mu$ s	2.29 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.28 $\mu$ s	2.28 $\mu$ s	2.28 $\mu$ s
Standard deviation	5.55 ns	8.19 ns	11.7 ns

Outlying measurements have no (0.513%) effect on estimated standard deviation.

## genericField / toField / EitherManual (EitherManual Int Char) (EitherManual Int Char)

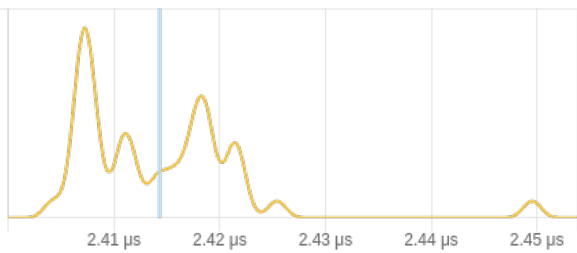


	lower bound	estimate	upper bound
OLS regression	2.42 $\mu$ s	2.43 $\mu$ s	2.43 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.42 $\mu$ s	2.43 $\mu$ s	2.43 $\mu$ s
Standard deviation	3.91 ns	7.33 ns	13.6 ns

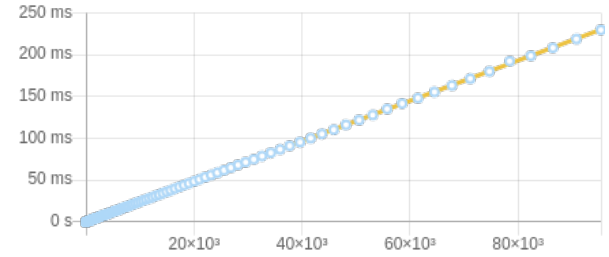
Outlying measurements have no (0.515%) effect on estimated standard deviation.

## genericField / toField / EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)

genericField / toField / EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char) — time densities



genericField / toField / EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char) — time per iteration



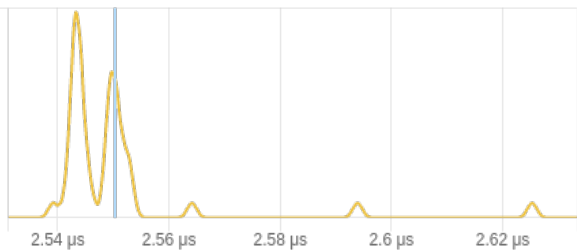
**lower bound estimate upper bound**

OLS regression	2.41 µs	2.41 µs	2.42 µs
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.41 µs	2.41 µs	2.42 µs
Standard deviation	5.53 ns	7.94 ns	12.8 ns

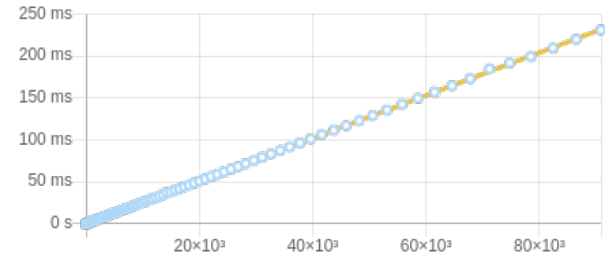
Outlying measurements have no (0.515%) effect on estimated standard deviation.

## genericField / toField / EitherManual (EitherManual Int Char) (EitherManual Int Char) (EitherManual (EitherManual Int Char) (EitherManual Int Char))

genericField / toField / EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char) (EitherManual Int Char)) — time densities



genericField / toField / EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char) (EitherManual Int Char)) — time per iteration

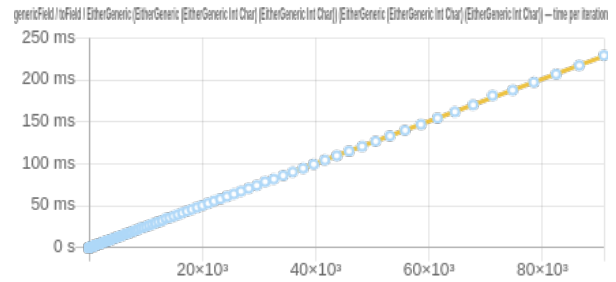
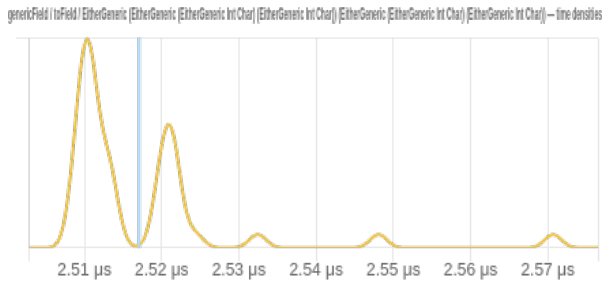


**lower bound estimate upper bound**

OLS regression	2.55 µs	2.55 µs	2.56 µs
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.55 µs	2.55 µs	2.56 µs
Standard deviation	5.41 ns	14.5 ns	26.7 ns

Outlying measurements have no (0.518%) effect on estimated standard deviation.

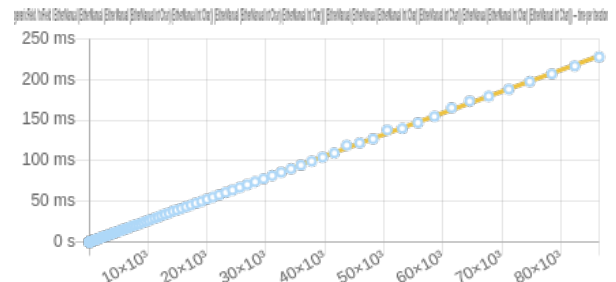
genericField / toField / EitherGeneric (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)) (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char))



	lower bound	estimate	upper bound
OLS regression	2.51 $\mu$ s	2.52 $\mu$ s	2.52 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.51 $\mu$ s	2.52 $\mu$ s	2.52 $\mu$ s
Standard deviation	6.75 ns	11.4 ns	19.7 ns

Outlying measurements have no (0.518%) effect on estimated standard deviation.

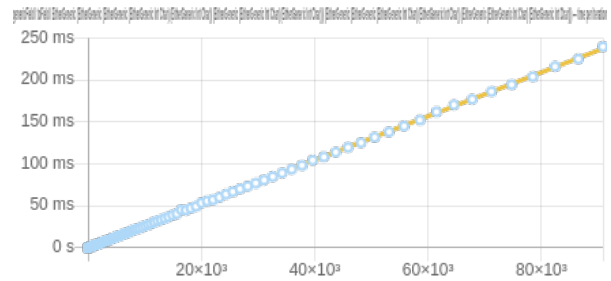
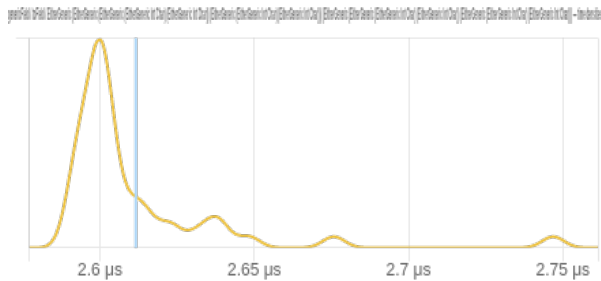
genericField / toField / EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual (EitherManual Int Char) (EitherManual Int Char)) (EitherManual (EitherManual Int Char) (EitherManual Int Char)))



	lower bound	estimate	upper bound
OLS regression	2.64 $\mu$ s	2.65 $\mu$ s	2.66 $\mu$ s
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.64 $\mu$ s	2.64 $\mu$ s	2.65 $\mu$ s
Standard deviation	14.9 ns	23.2 ns	35.5 ns

Outlying measurements have no (0.521%) effect on estimated standard deviation.

# genericField / toField / EitherGeneric (EitherGeneric (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)) (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char))) (EitherGeneric (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)) (EitherGeneric (EitherGeneric Int Char) (EitherGeneric Int Char)))



	lower bound	estimate	upper bound
OLS regression	2.61 μs	2.61 μs	2.62 μs
R <sup>2</sup> goodness-of-fit	1.00	1.00	1.00
Mean execution time	2.61 μs	2.61 μs	2.62 μs
Standard deviation	15.8 ns	27.3 ns	50.9 ns

Outlying measurements have a slight (7.36%) effect on estimated standard deviation.

## understanding this report

In this report, each function benchmarked by criterion is assigned a section of its own.

- The chart on the left is a [kernel density estimate](#) (also known as a KDE) of time measurements. This graphs the probability of any given time measurement occurring. A spike indicates that a measurement of a particular time occurred; its height indicates how often that measurement was repeated.
- The chart on the right is the raw data from which the kernel density estimate is built. The x-axis indicates the number of loop iterations, while the y-axis shows measured execution time for the given number of loop iterations. The line behind the values is the linear regression estimate of execution time for a given number of iterations. Ideally, all measurements will be on (or very near) this line. The transparent area behind it shows the confidence interval for the execution time estimate.

Under the charts is a small table. The first two rows are the results of a linear regression run on the measurements displayed in the right-hand chart.

- *OLS regression* indicates the time estimated for a single loop iteration using an ordinary least-squares regression model. This number is more accurate than the *mean* estimate below it, as it more effectively eliminates measurement overhead and other constant factors.
- *R<sup>2</sup>; goodness-of-fit* is a measure of how accurately the linear regression model fits the observed measurements. If the measurements are not too noisy, R<sup>2</sup>; should lie between 0.99 and 1, indicating an excellent fit. If the number is below 0.99, something is confounding the accuracy of the linear model.
- *Mean execution time* and *standard deviation* are statistics calculated from execution time divided by number of iterations.

We use a statistical technique called the [bootstrap](#) to provide confidence intervals on our estimates. The bootstrap-derived upper and lower bounds on estimates let you see how accurate we believe those estimates to be.

A noisy benchmarking environment can cause some or many measurements to fall far from the mean. These outlying measurements can have a significant inflationary effect on the estimate of the standard deviation. We calculate and display an estimate of the extent to which the standard deviation has been inflated by outliers.

## colophon

This report was created using the [criterion](#) benchmark execution and performance analysis tool.

Criterion is developed and maintained by [Bryan O'Sullivan](#).