CodeMagus

REPORT:

TermAppISONFT: Orkhestra Cross Test Performance Summary

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## Loading required package: lattice

##
## Attaching package: 'BSDA'

## The following object is masked from 'package:datasets':
##
##     Orange

##  : starts:  Tue Aug  3 10:01:55 2021

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##    File = Test_Performance_Summary_D20201216.csv
##    File = Test_Performance_Summary_D20210115.csv
##    File = Test_Performance_Summary_D20210510.csv
##    File = Test_Performance_Summary_D20210520.csv
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##    File = Test_Performance_Summary_D20210629.csv
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1 Introduction

There are three elements to this cross-test performance summary report. The first shows a summary of the percentage success of each function/operation/call. The second element compares the performance of the latest test(s) to the pooled performance of previous tests for each of the functions/operations/calls and outcomes. And the third element of this report compares the performance by function/operation/call by the outcome across multiple NFT result sets.

The percentage successful outcomes are presented as a summary for the latest test(s). This summary is ranked in increasing order of the percentage of good outcomes of that scenario against all attempts of that scenario in the test.

As a summary and for ranking the performance of the last tests results against previous test results, for each function/operation/call and outcome, the tests in the last test session are compared against the tests in previous sessions. This is accomplished by pooling the sample mean of the response times and pooling the sample standard deviations of response times across all prior tests, and then comparing the latest test(s) with the previous tests using `tsum.test`. The results are by ranked by the corresponding p-values in increasing order and tabulated. For each function/operation/call request, three comparison tests are made: The first determines a measure of the difference between the respective response time distributions; the second determines a measure of those response times that could be considered worse in the latest test(s) as compared to the pooled previous test; and the third determines a measure of those response times that could be considered better in the latest test(s) as compared to the pooled previous tests.

In addition to tabulating the response time means and standard deviations against function/operation/call and outcomes across the tests, box-plots are produced to visually compare the performance/outcomes over the various tests. In each case, the box-plots show up the 15 most extreme functions/operations/calls that are most different to the historic response time distributions, and then a box-plot each showing those that have response times greatest increase and decrease in their response times when compared to their respective historic counterparts.

The last section of the report compares the performance by function/operation/call by the outcome across multiple NFT result sets. The summary results have been taken from the application performance sections of the individual NFT sessions. The `Resp` value is the sample mean of the response times in seconds and the `StdDev`is the corresponding sample standard deviation. In each case only those values where the customer or business function arrival rate did not materially exceed the peak observed/production target are included in the calculation.

2 Summary of successful outcomes for latest testing

2.1 Test 1 - TermAppISONFT - TermAppISO

The following table is a summary of the outcomes of test 1 (TermAppISONFT - TermAppISO), showing the percentage of functions/operations/calls considered successful. The scenarios are shown from worst percentage good outcomes to best:

StartTime	TestNumber	Label	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2021-08-02 13:24:01	1	TermAppISONFT	TermAppISO	transaction_advice_response_1200	TRANSACTION_ADVICE_RESPONSE	14615	99.8090	0.110	0.060
2021-08-02 13:24:01	1	TermAppISONFT	TermAppISO	authorisation_request_1100	AUTHORISATION_RESPONSE	14708	100.0000	0.206	0.061

2.2 Test 2 - TermAppISONFT - TermAppISO

The following table is a summary of the outcomes of test 2 (TermAppISONFT - TermAppISO), showing the percentage of functions/operations/calls considered successful. The scenarios are shown from worst percentage good outcomes to best:

StartTime	TestNumber	Label	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2021-08-03 00:22:01	2	TermAppISONFT	TermAppISO	transaction_advice_response_1200	TRANSACTION_ADVICE_RESPONSE	13859	99.7480	0.110	0.068
2021-08-03 00:22:01	2	TermAppISONFT	TermAppISO	authorisation_request_1100	AUTHORISATION_RESPONSE	13947	100.0000	0.207	0.068

3 Comparison of latest tests to pooled previous tests

The last test date in the summary data is used to delimit the prior tests from the tests in the last test session. This section compares the tests performed on `testdate` to the tests that ran in sessions prior to this date. Comparisons are made only for the successful outcomes, and only the performance data where the rate in each of the tests included in the comparison did not exceed the target rate is included in the comparison.

3.1 Differences in response time distributions

The following show the comparisons of the good outcomes of the tests performed on 2021-08-02 as compared to the tests performed before this date. The table is ranked in increasing order of the p-values from the corresponding Welch Modified Two-Sample t-Test (two.sided), starting from the function/operation/call where the response time distribution differences are the greatest. Results are only shown for which the p-value is less than or equal to the cutoff value (α = 0.05).

3.1.1 Test 1 - TermAppISONFT - TermAppISO

The following compare the responses time differences from the test started at 2021-08-02 13:24:01 to the tests from previous test sessions.

Basename	Outcome	Count	Resp	StdDev	PrevCount	PrevMean	PrevStdDev	pvalue.d
authorisation_request_1100	AUTHORISATION_RESPONSE_1100_OK	1478	1.216	0.061	251757	1.827	4.442	0
transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	1465	0.116	0.061	250385	0.285	0.382	0

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## Loading required package: grid
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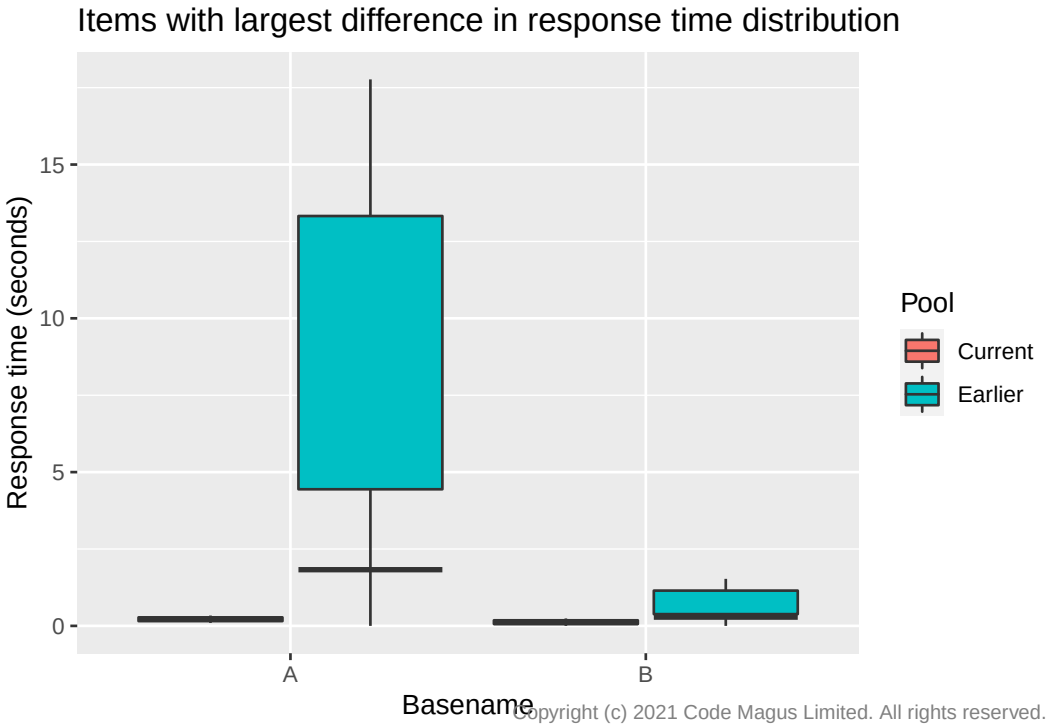
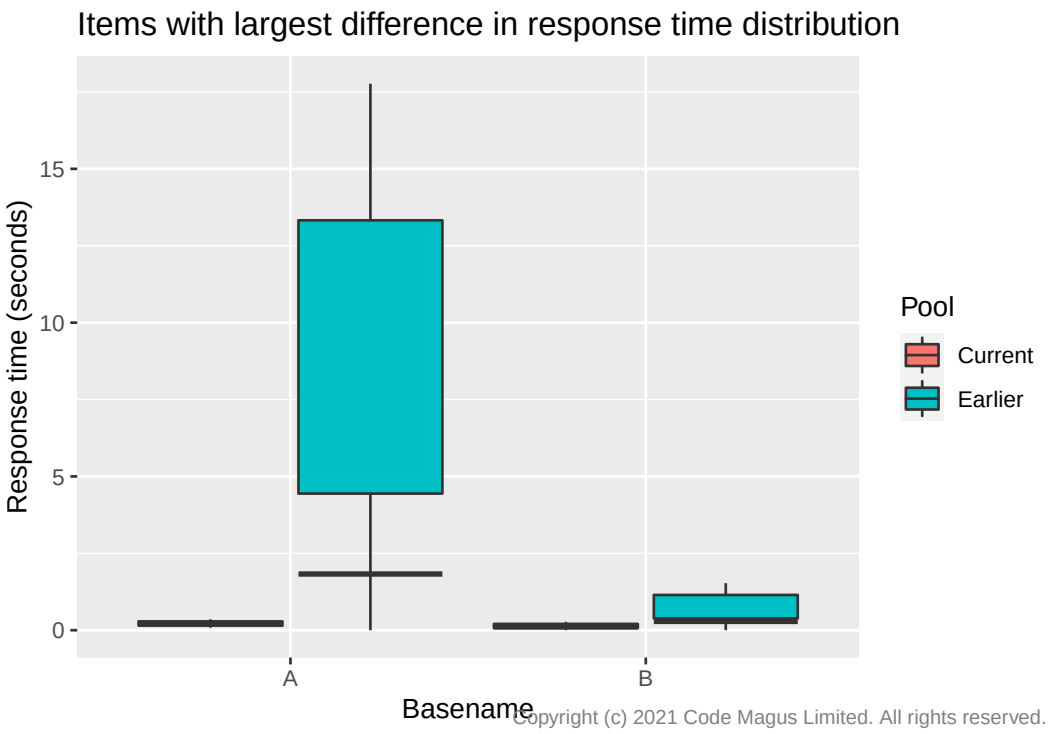


Key	Basename
A	authorisation_request_1100
B	transaction_advice_response_1230

3.1.2 Test 2 - TermAppISONFT - TermAppISO

The following compare the responses time differences from the test started at 2021-08-03 00:22:01 to the tests from previous test sessions.

Basename	Outcome	Count	Resp	StdDev	PrevCount	PrevMean	PrevStdDev	pvalue.d
authorisation_request_1100	AUTHORISATION_RESPONSE_1100_OK	1394	1.217	0.068	251757	1.827	4.442	0
transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	1389	0.116	0.068	250385	0.285	0.382	0



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Key	Basename
A	authorisation_request_1100
B	transaction_advice_response_1230

3.2 Increases in the response times

There were no significant response time increases when comparing the test(s) in the last test session to tests from earlier test sessions for any of the items.

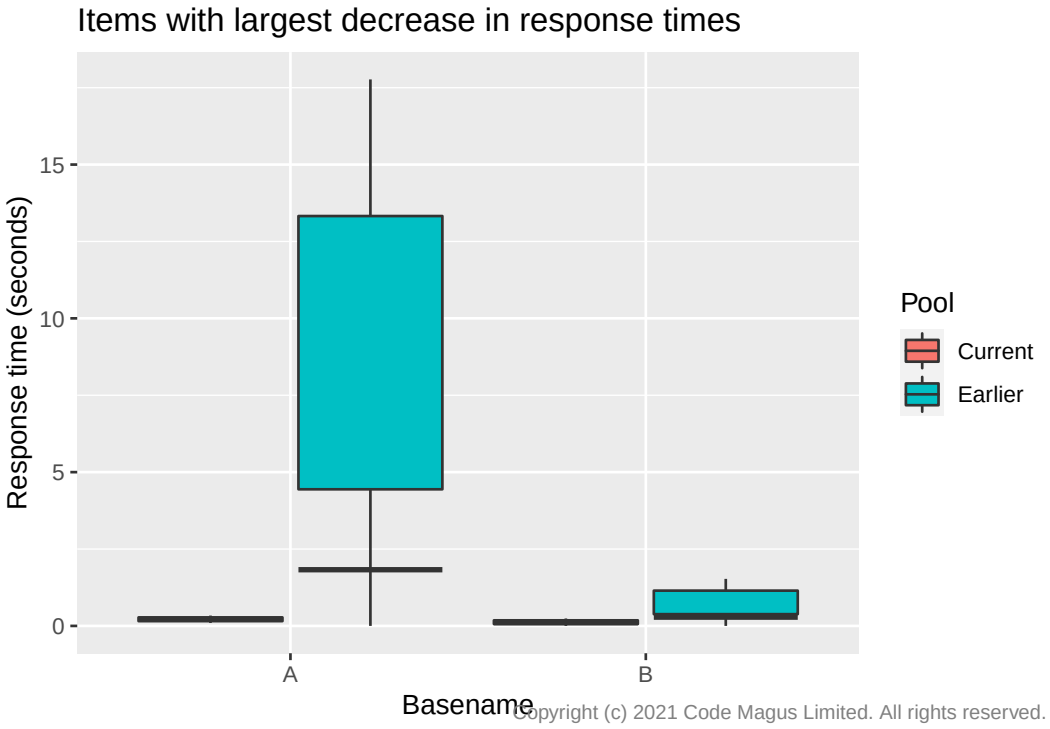
3.3 Decreases in the response times

The following show the comparisons of the good outcomes of the tests performed on 2021-08-02 as compared to the tests performed before this date. The table is ranked in increasing order of the p-values from the corresponding Welch Modified Two-Sample t-Test (less), starting from the function/operation/call where the response time decreases are the greatest. Results are only shown for which the p-value is less than or equal to the cutoff value ($\alpha = 0.05$).

3.3.1 Test 1 - TermAppISONFT - TermAppISO

The following compare the responses time decreases from the test started at 2021-08-02 13:24:01 to the tests from previous test sessions.

Basename	Outcome	Count	Resp	StdDev	PrevCount	PrevMean	PrevStdDev	pvalue.l
authorisation_request_1100	AUTHORISATION_RESPONSE_1100_OK	1478	1.216	0.061	251757	1.827	4.442	0
transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	1465	0.316	0.061	250385	0.285	0.382	0

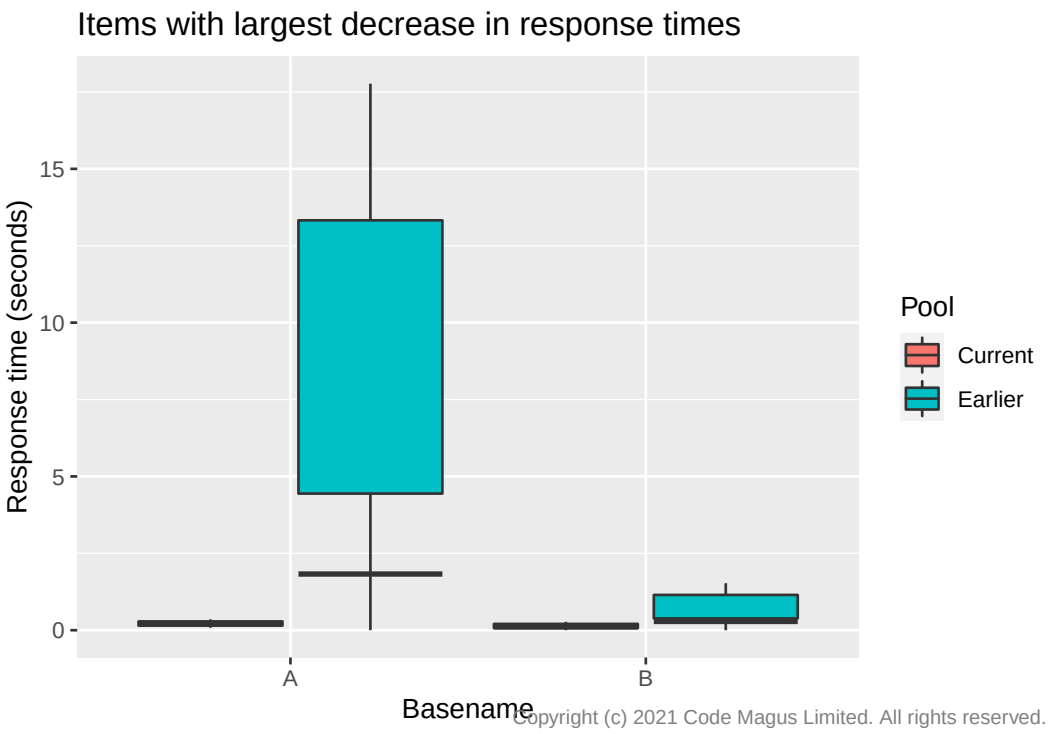


Key	Basename
A	authorisation_request_1100
B	transaction_advice_response_1230

3.3.2 Test 2 - TermAppISONFT - TermAppISO

The following compare the responses time decreases from the test started at 2021-08-03 00:22:01 to the tests from previous test sessions.

Basename	Outcome	Count	Resp	StdDev	PrevCount	PrevMean	PrevStdDev	pvalue.l
authorisation_request_1100	AUTHORISATION_RESPONSE_1100_OK	1394	1.217	0.068	251757	1.827	4.442	0
transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	1359	0.316	0.068	250385	0.285	0.382	0



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Key	Basename
A	authorisation_request_1100
B	transaction_advice_response_1230

4 Comparison across all tests individually

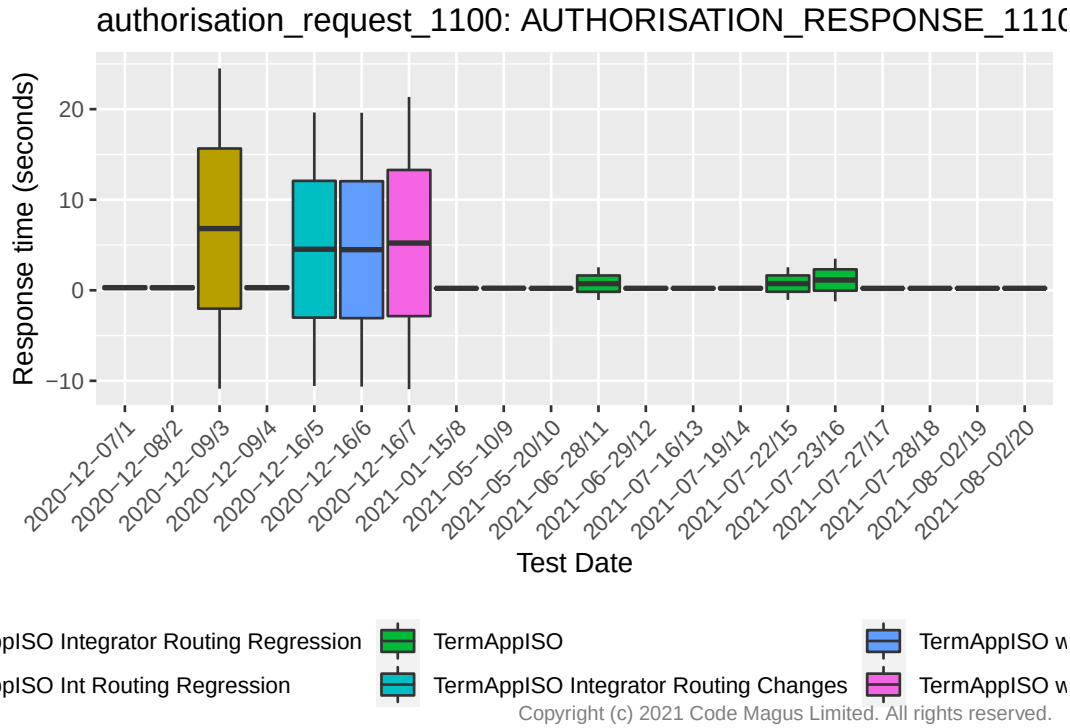
This section compares the performance between the NFT tests to date for each of the functions/operations/calls included in the corresponding test.

In the box-plots that follow, in each case, the centre is the sample mean response time value in seconds for that particular function/operation/call qualified by the outcome of that function/operation/call. The lower edge of the box is the corresponding sample mean response time value less the sample standard deviation, and the upper edge of the box is the corresponding sample mean response time value plus the standard deviation. The minimum and maximum values are calculated by taking two times the standard deviation in a similar manner.

4.1 Performance of authorisation_request_1100 with outcome: AUTHORISATION_RESPONSE_1110_OK

The following table shows the performance descriptive statistics for authorisation_request_1100 when the outcomes are AUTHORISATION_RESPONSE_1110_OK.

TestDate	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2020-12-07	TermAppISO Integrator Routing Regression	authorisation_request	AUTHORISATION_RESPONSE	5763	100.000	0.087	0.123
2020-12-08	TermAppISO Integrator Routing Regression	authorisation_request	AUTHORISATION_RESPONSE	5873	100.000	0.081	0.124
2020-12-09	TermAppISO Int Routing Regression	authorisation_request	AUTHORISATION_RESPONSE	5635	98.121	6.813	8.841
2020-12-09	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5435	100.000	0.083	0.122
2020-12-16	TermAppISO Integrator Routing Changes	authorisation_request	AUTHORISATION_RESPONSE	5400	92.954	4.631	7.550
2020-12-16	TermAppISO with 40 provider threads	authorisation_request	AUTHORISATION_RESPONSE	5359	92.974	4.483	7.560
2020-12-16	TermAppISO with 80 provider threads	authorisation_request	AUTHORISATION_RESPONSE	5369	92.943	5.014	8.069
2021-01-15	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5427	100.000	0.063	0.049
2021-05-10	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	3173	100.000	0.029	0.074
2021-05-20	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	3095	100.000	0.063	0.028
2021-06-28	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5940	98.075	0.742	0.903
2021-06-29	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5951	100.000	0.065	0.079
2021-07-16	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5836	100.000	0.063	0.062
2021-07-19	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5642	100.000	0.067	0.100
2021-07-22	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5913	98.694	0.739	0.901
2021-07-23	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5207	86.971	1.083	1.177
2021-07-27	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5631	100.000	0.060	0.030
2021-07-28	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5761	100.000	0.062	0.035
2021-08-02	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5708	100.000	0.065	0.061
2021-08-02	TermAppISO	authorisation_request	AUTHORISATION_RESPONSE	5947	100.000	0.067	0.068



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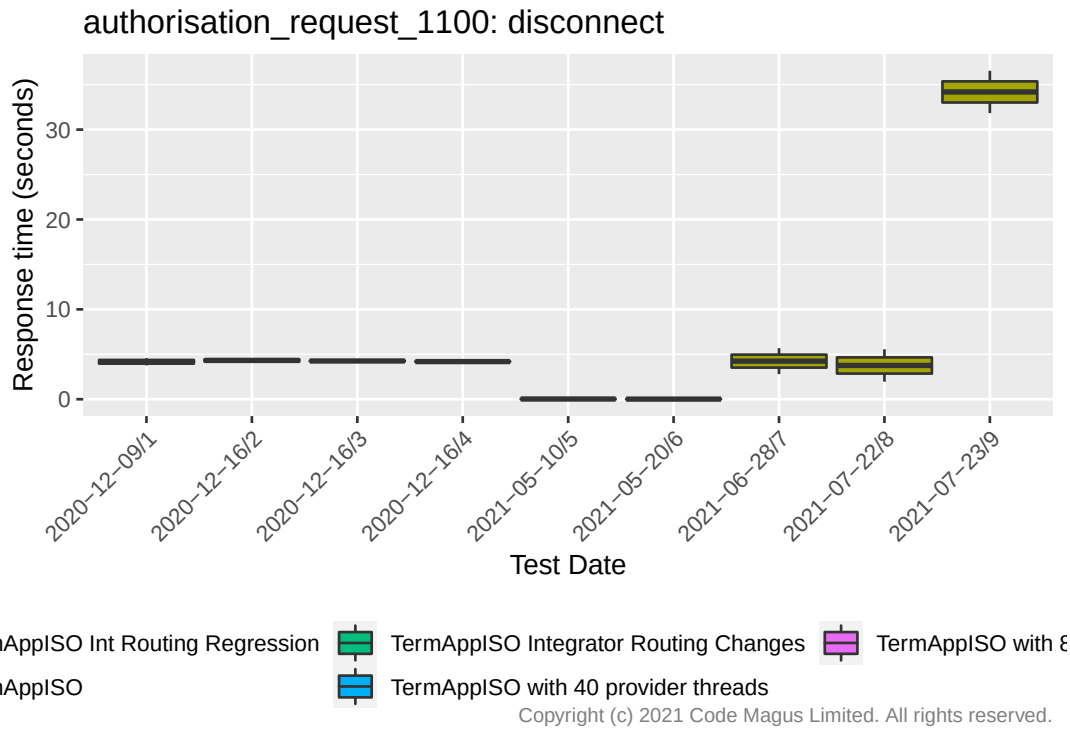
4.2 Performance of authorisation_request_1100 with outcome: disconnect

The following table shows the performance descriptive statistics for authorisation_request_1100 when the outcomes are disconnect.

TestDate	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2020-12-09	TermAppISO Int Routing Regression	authorisation_request_1100	disconnect	304	1.602	4.166	0.205
2020-12-16	TermAppISO Integrator Routing Changes	authorisation_request_1100	disconnect	3	0.015	4.318	0.124
2020-12-16	TermAppISO with 40 provider threads	authorisation_request_1100	disconnect	2	0.010	4.258	0.060
2020-12-16	TermAppISO with 80 provider threads	authorisation_request_1100	disconnect	5	0.026	4.191	0.021
2021-05-10	TermAppISO	authorisation_request_1100	disconnect	7173	50.000	0.027	0.037
2021-05-20	TermAppISO	authorisation_request_1100	disconnect	7089	49.979	0.016	0.024
2021-06-28	TermAppISO	authorisation_request_1100	disconnect	467	2.142	4.241	0.721
2021-07-22	TermAppISO	authorisation_request_1100	disconnect	568	2.579	3.758	0.901
2021-07-23	TermAppISO	authorisation_request_1100	disconnect	177	1.257	34.187	1.177

TestDate	Description	Basename	Outcome	Count	Percent	Resp	StdDev



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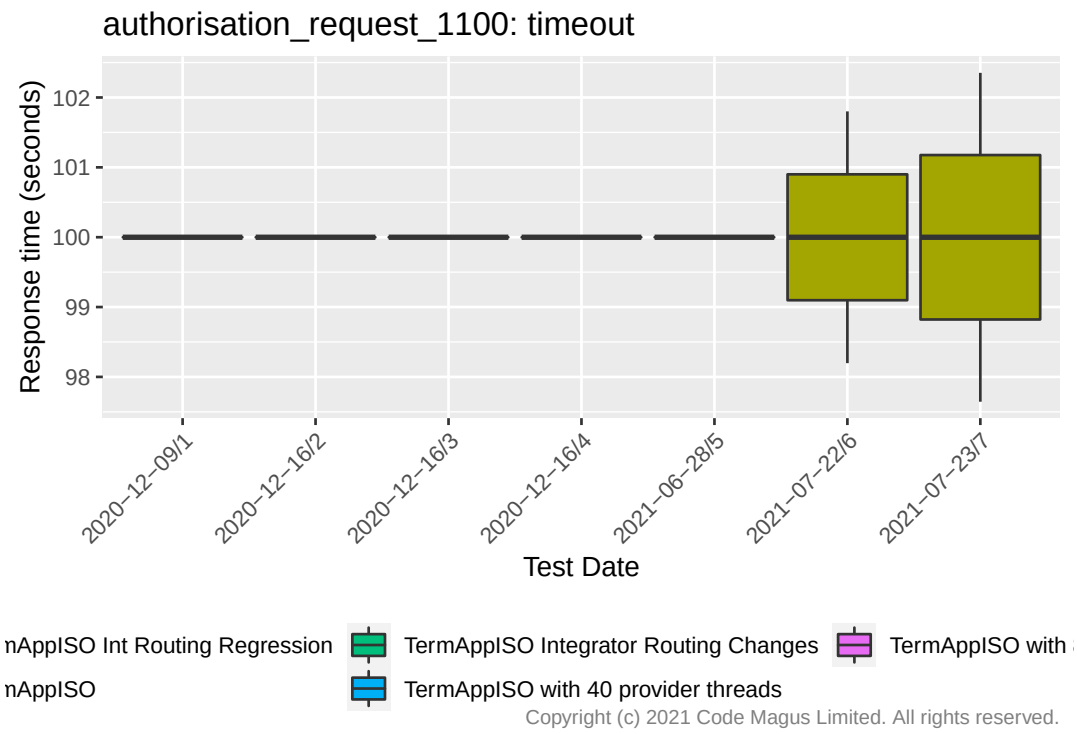
4.3 Performance of authorisation_request_1100 with outcome: timeout

The following table shows the performance descriptive statistics for authorisation_request_1100 when the outcomes are timeout.

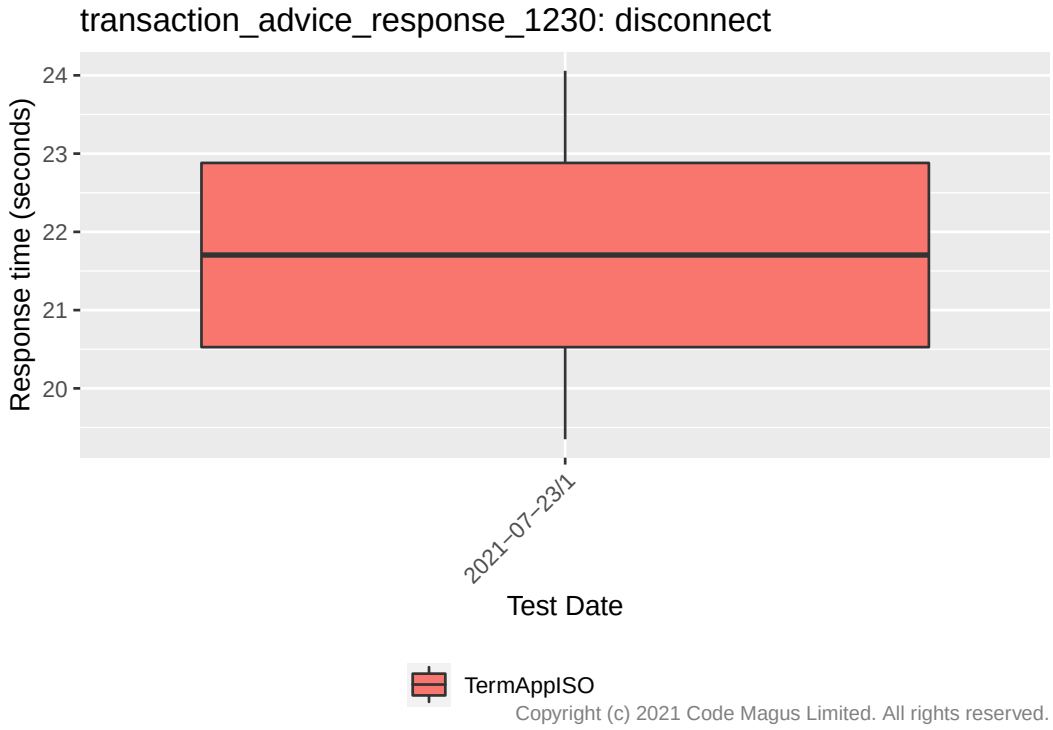
TestDate	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2020-12-09	TermAppISO Int Routing Regression	authorisation_request_1100	timeout	41	0.216	99.999	0.000
2020-12-16	TermAppISO Integrator Routing Changes	authorisation_request_1100	timeout	6	0.031	99.999	0.000
2020-12-16	TermAppISO with 40 provider threads	authorisation_request_1100	timeout	3	0.015	99.999	0.000
2020-12-16	TermAppISO with 80 provider threads	authorisation_request_1100	timeout	6	0.031	99.999	0.000
2021-06-28	TermAppISO	authorisation_request_1100	timeout	17396	79.784	99.999	0.000
2021-07-22	TermAppISO	authorisation_request_1100	timeout	17342	78.727	99.999	0.901
2021-07-23	TermAppISO	authorisation_request_1100	timeout	1696	12.045	99.999	1.177



4.4 Performance of transaction_advice_response_1230 with outcome: disconnect

The following table shows the performance descriptive statistics for transaction_advice_response_1230 when the outcomes are disconnect.

TestDate	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2021-07-23	TermAppISO	transaction_advice_response_1230	disconnect	2	0.016	21.704	1.177

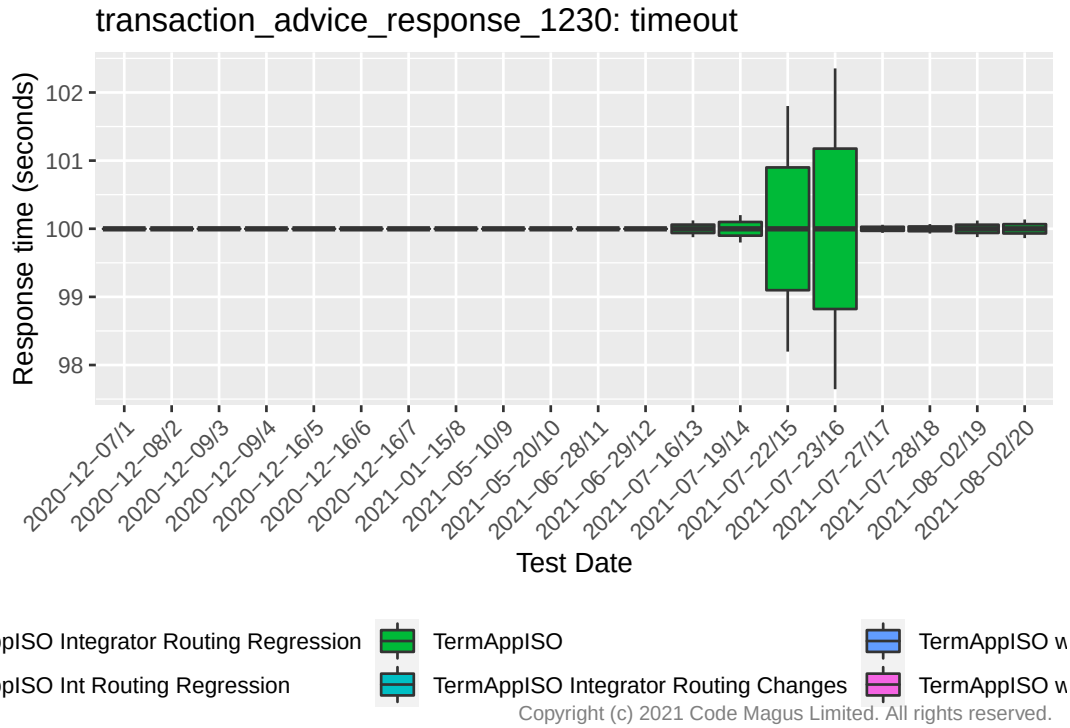


4.5 Performance of transaction_advice_response_1230 with outcome: timeout

The following table shows the performance descriptive statistics for transaction_advice_response_1230 when the outcomes are timeout.

TestDate	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2020-12-07	TermAppISO Integrator Routing Regression	transaction_advice_response_1230	timeout	33	0.211	99.999	0.000
2020-12-08	TermAppISO Integrator Routing Regression	transaction_advice_response_1230	timeout	16	0.101	99.999	0.000
2020-12-09	TermAppISO Int Routing Regression	transaction_advice_response_1230	timeout	15	0.081	99.999	0.000
2020-12-09	TermAppISO	transaction_advice_response_1230	timeout	35	0.214	99.999	0.000
2020-12-16	TermAppISO Integrator Routing Changes	transaction_advice_response_1230	timeout	28	0.145	99.999	0.000
2020-12-16	TermAppISO with 40 provider threads	transaction_advice_response_1230	timeout	16	0.082	99.999	0.000
2020-12-16	TermAppISO with 80 provider threads	transaction_advice_response_1230	timeout	57	0.296	99.999	0.000
2021-01-15	TermAppISO	transaction_advice_response_1230	timeout	20	0.122	99.999	0.000

TestDate	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2021-05-10	TermAppISO	transaction_advice_response_1230	timeout	14	0.196	99.999	0.000
2021-05-20	TermAppISO	transaction_advice_response_1230	timeout	13	0.184	99.999	0.000
2021-06-28	TermAppISO	transaction_advice_response_1230	timeout	14	0.357	99.999	0.000
2021-06-29	TermAppISO	transaction_advice_response_1230	timeout	17	0.122	99.999	0.000
2021-07-16	TermAppISO	transaction_advice_response_1230	timeout	23	0.156	99.999	0.062
2021-07-19	TermAppISO	transaction_advice_response_1230	timeout	32	0.205	99.999	0.100
2021-07-22	TermAppISO	transaction_advice_response_1230	timeout	18	0.439	99.999	0.901
2021-07-23	TermAppISO	transaction_advice_response_1230	timeout	17	0.140	99.999	1.177
2021-07-27	TermAppISO	transaction_advice_response_1230	timeout	16	0.103	99.999	0.030
2021-07-28	TermAppISO	transaction_advice_response_1230	timeout	15	0.095	99.999	0.035
2021-08-02	TermAppISO	transaction_advice_response_1230	timeout	28	0.191	99.999	0.061
2021-08-02	TermAppISO	transaction_advice_response_1230	timeout	35	0.252	99.999	0.068

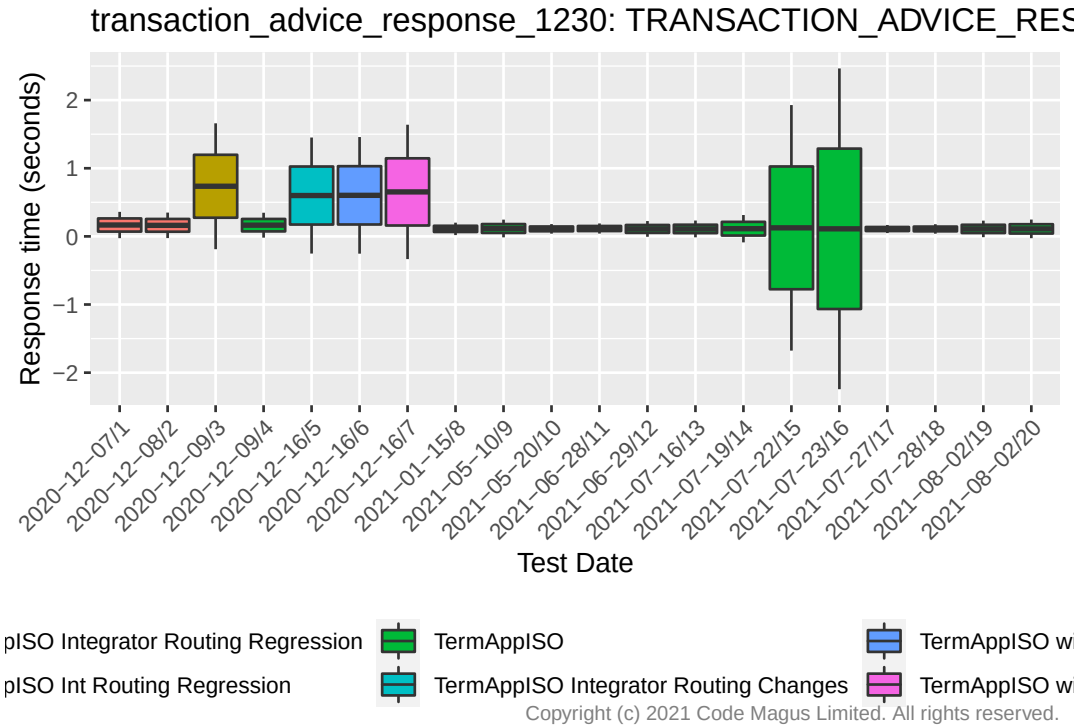


4.6 Performance of transaction_advice_response_1230 with outcome: TRANSACTION_ADVICE_RESPONSE_1230_OK

The following table shows the performance descriptive statistics for transaction_advice_response_1230 when the outcomes are TRANSACTION_ADVICE_RESPONSE_1230_OK.

TestDate	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2020-12-07	TermAppISO Integrator Routing Regression	transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	15_7	99.78	0.16	0.07
2020-12-08	TermAppISO Integrator Routing Regression	transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	17_8	99.89	0.16	0.04
2020-12-09	TermAppISO Int Routing Regression	transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	15_5	99.91	0.16	0.02
2020-12-09	TermAppISO	transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	16_3	99.78	0.16	0.01
2020-12-16	TermAppISO Integrator Routing Changes	transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	19_9	99.85	0.16	0.06
2020-12-16	TermAppISO with 40 provider threads	transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	15_0	99.91	0.16	0.08
2020-12-16	TermAppISO with 80 provider threads	transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	19_2	99.74	0.16	0.03
2021-01-15	TermAppISO	transaction_advice_response_1230	TRANSACTION_ADVICE_RESPONSE_1230_OK	16_3	99.87	0.11	0.06

TestDate	Description	Basename	Outcome	Count	Percent	Resp	StdDev
2021-05-10	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	7138	99.04	1230	0.65
2021-05-20	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	7053	99.01	1230	0.35
2021-06-28	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	3912	99.04	1230	0.37
2021-06-29	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	3875	99.07	1230	0.58
2021-07-16	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	4757	99.04	1230	0.62
2021-07-19	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	5552	99.09	1230	0.10
2021-07-22	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	4085	99.06	1230	0.01
2021-07-23	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	2126	99.04	1230	0.07
2021-07-27	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	5559	99.07	1230	0.30
2021-07-28	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	5703	99.00	1230	0.35
2021-08-02	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	4615	99.00	1230	0.61
2021-08-02	TermAppISO	transaction_advice_response_	TRANSACTION_ADVICE_RESPONSE	3859	99.04	1230	0.68



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5 Session details

```
sessionInfo();
```

```
## R version 3.6.0 (2019-04-26)
## Platform: x86_64-redhat-linux-gnu (64-bit)
## Running under: CentOS Linux 7 (Core)
##
## Matrix products: default
## BLAS/LAPACK: /usr/lib64/R/lib/libRblas.so
##
## locale:
##  [1] LC_CTYPE=en_GB.UTF-8       LC_NUMERIC=C
##  [3] LC_TIME=en_GB.UTF-8        LC_COLLATE=en_GB.UTF-8
##  [5] LC_MONETARY=en_GB.UTF-8    LC_MESSAGES=en_GB.UTF-8
##  [7] LC_PAPER=en_GB.UTF-8       LC_NAME=C
##  [9] LC_ADDRESS=C               LC_TELEPHONE=C
## [11] LC_MEASUREMENT=en_GB.UTF-8 LC_IDENTIFICATION=C
##
## attached base packages:
## [1] grid      stats     graphics  grDevices utils     datasets  methods
## [8] base
##
```

```
## other attached packages:
## [1] pander_0.6.3    doBy_4.6.7      cmlrutils_1.19  XML_3.98-1.20
## [5] scales_1.1.1    ggplot2_3.3.2   BSDA_1.2.0      lattice_0.20-38
##
## loaded via a namespace (and not attached):
##  [1] Rcpp_1.0.5       highr_0.8        pillar_1.4.6     compiler_3.6.0
##  [5] class_7.3-15     tools_3.6.0      digest_0.6.25    evaluate_0.14
##  [9] lifecycle_0.2.0  tibble_3.0.3     gtable_0.3.0     pkgconfig_2.0.3
## [13] rlang_0.4.7      Matrix_1.2-17    yaml_2.2.1       xfun_0.17
## [17] e1071_1.7-4      withr_2.2.0      stringr_1.4.0    dplyr_1.0.2
## [21] knitr_1.30       generics_0.0.2   vctrs_0.3.2      tidyselect_1.1.0
## [25] glue_1.4.1       R6_2.4.1         rmarkdown_2.6    farver_2.0.3
## [29] tidyr_1.1.2      purrr_0.3.4      cmlbrandr_3.0    magrittr_1.5
## [33] backports_1.1.8  ellipsis_0.3.1   htmltools_0.5.0  MASS_7.3-51.4
## [37] colorspace_1.4-1 Deriv_4.0.1      labeling_0.3     stringi_1.5.3
## [41] munsell_0.5.0    broom_0.7.0      crayon_1.3.4
```