TABLE XI: Performance comparison of DLiSA against its variants (i.e., DLiSA-I and DLiSA-II) of over 100 run in system LRZIP. Statistically significant discrepancies are shown in bold ( $\hat{A}_{12}>0.56$  and p value < 0.05), where green cells indicate that DLi SA performs better; or red cells

Workload	Algorithm	Mean (Std)	$\hat{A}_{12}$ (p value)
	DLiSA	3.137 (0.041)	
W1	DLiSA-I	3.158 (0.077)	<b>0.616</b> $(p = 0.003)$
	DLiSA-II	3.151 (0.064)	$0.626 \ (p = 0.001)$
	DLiSA	0.030 (0.000)	
W2	DLiSA-I	0.030 (0.000)	$0.500 \ (p = 1.000)$
	DLiSA-II	0.030 (0.001)	$0.505 \ (p = 0.322)$
	DLiSA	3.308 (0.015)	
W3	DLiSA-I	3.315 (0.023)	<b>0.595</b> $(p = 0.011)$
	DLiSA-II	3.318 (0.030)	<b>0.579</b> $(p = 0.035)$
	DLiSA	7.131 (0.062)	
W4	DLiSA-I	7.145 (0.107)	$0.530 \ (p = 0.409)$
	DLiSA-II	7.155 (0.083)	$0.582 \ (p = 0.026)$
	DLiSA	33.412 (0.109)	
W5	DLiSA-I	33.507 (0.314)	$0.560 \ (p = 0.088)$
	DLiSA-II	33.496 (0.302)	$0.524 \ (p = 0.486)$
	DLiSA	0.973 (0.007)	
W6	DLiSA-I	0.974 (0.006)	$0.525 \ (p = 0.421)$
	DLiSA-II	0.974 (0.008)	0.512 (p = 0.706)
	DLiSA	0.196 (0.005)	
W7	DLiSA-I	0.197 (0.005)	$0.532 \ (p = 0.350)$
	DLiSA-II	0.196 (0.005)	$0.505 \ (p = 0.887)$
	DLiSA	10.919 (0.029)	
W8	DLiSA-I	10.921 (0.027)	$0.541 \ (p = 0.269)$
	DLiSA-II	10.918 (0.031)	0.512 (p = 0.741)
	DLiSA	9.152 (0.401)	
W9	DLiSA-I	9.250 (0.397)	$0.606 \ (p = 0.007)$
	DLiSA-II	9.215 (0.453)	$0.532 \ (p = 0.419)$
	DLiSA	5.321 (0.137)	
W10	DLiSA-I	5.333 (0.157)	$0.525 \ (p = 0.461)$
	DLiSA-II	5.399 (0.271)	$0.546 \ (p = 0.170)$
	DLiSA	2.113 (0.043)	
W11	DLiSA-I	2.122 (0.045)	0.572 (p = 0.072)
	DLiSA-II	2.120 (0.045)	$0.548 \ (p = 0.222)$
	DLiSA	3.495 (0.094)	
W12	DLiSA-I	3.515 (0.103)	$0.536 \ (p = 0.307)$
	DLiSA-II	3.529 (0.111)	<b>0.581</b> $(p = 0.025)$
	DLiSA	2.532 (0.020)	
W13	DLiSA-I	2.537 (0.023)	$0.564 \ (p = 0.068)$
	DLiSA-II	2.541 (0.027)	$0.582 \ (p = 0.020)$

Workload Algorithm Mean (Std)  $\hat{A}_{12}$  (p value) 5.856 (0.011) DLiSA W1 5.856 (0.011) 0.519~(p=0.582)DLiSA-I DI.iSA-II  $0.558 \ (p = 0.095)$ 5.858 (0.012)

TABLE VIII: Performance comparison of DLiSA against its variants (i.e., DLiSA-I and DLiSA-II) of over 100 run in

system z3. Statistically significant discrepancies are shown

in bold ( $\hat{A}_{12}>0.56$  and p value < 0.05), where green cells

indicate that DLiSA performs better; or red cells otherwise.

	DLiSA-II	5.858 (0.012)	$0.558 \ (p = 0.095)$
	DLiSA	2.254 (0.608)	
W2	DLiSA-I	2.120 (0.510)	$0.555 \ (p = 0.132)$
	DLiSA-II	1.998 (0.435)	<b>0.619</b> $(p < 0.001)$
	DLiSA	0.364 (0.660)	
W3	DLiSA-I	0.302 (0.617)	$0.506 \ (p = 0.861)$
	DLiSA-II	0.354 (0.627)	$0.511 \ (p = 0.770)$
	DLiSA	2.324 (0.150)	
W4	DLiSA-I	2.313 (0.130)	$0.503 \ (p = 0.933)$
	DLiSA-II	2.303 (0.107)	$0.508 \ (p = 0.826)$
	DLiSA	3.150 (0.111)	
W5	DLiSA-I	3.173 (0.237)	$0.532 \ (p = 0.385)$
	DLiSA-II	3.170 (0.097)	$0.629 \ (p < 0.001)$
	DLiSA	1.322 (0.130)	
W6	DLiSA-I	1.313 (0.085)	$0.513 \ (p = 0.618)$
	DLiSA-II	1.387 (0.245)	$0.585 \ (p = 0.006)$
	DLiSA	0.292 (0.458)	
W7	DLiSA-I	0.221 (0.004)	$0.532 \ (p = 0.102)$
	DLiSA-II	0.249 (0.152)	$0.522 \ (p = 0.365)$
	DLiSA	8.746 (0.005)	
W8	DLiSA-I	8.746 (0.005)	$0.508 \ (p = 0.823)$
	DLiSA-II	8.806 (0.590)	$0.520 \ (p = 0.570)$
	DLiSA	3.181 (0.003)	
W9	DLiSA-I	3.181 (0.003)	$0.515 \ (p = 0.491)$
	DLiSA-II	3.182 (0.004)	$0.530 \ (p = 0.237)$
	DLiSA	6.816 (0.236)	
W10	DLiSA-I	6.804 (0.222)	$0.502 \ (p = 0.953)$
	DLiSA-II	6.817 (0.246)	$0.513 \ (p = 0.746)$
	DLiSA	7.948 (0.654)	
W11	DLiSA-I	7.940 (0.499)	$0.504 \ (p = 0.919)$
	DLiSA-II	7.940 (0.506)	$0.517 \ (p = 0.677)$
	DLiSA	3.878 (0.009)	
W12	DLiSA-I	3.878 (0.008)	$0.507 \ (p = 0.846)$
	DLiSA-II	3.900 (0.148)	$0.595 \ (p = 0.014)$

Workload Mean (Std) Algorithm  $A_{12}$  (p value) DLiSA 0.907 (0.014) W1DLiSA-I 0.914 (0.029) 0.605 (p = 0.004)DLiSA-II 0.925 (0.043)  $0.631 \ (p < 0.001)$ 1.338 (0.019) DLiSA  $0.581 \ (p = 0.023)$ W2 DLiSA-I 1.342 (0.021) 1.348 (0.026) DLiSA-II **0.617** (p = 0.001)DLiSA 4.196 (0.056)

TABLE XVI: Performance comparison of DLiSA against

its variants (i.e., DLiSA-I and DLiSA-II) of over 100

run in system BATLIK. Statistically significant discrepancies

are shown in bold ( $\hat{A}_{12}$ >0.56 and p value < 0.05), where

green cells indicate that DLiSA performs better; or red cells

otherwise.

Workload

W1

otherwise.

Algorithm

DLiSA-I

DLiSA

W4		4.209 (0.071)	$0.612 \ (p = 0.004)$
W4	DLiSA-II	4.247 (0.123)	<b>0.691</b> $(p < 0.001)$
W4	DLiSA	1.193 (0.026)	
, ,	DLiSA-I	1.197 (0.022)	$0.556 \ (p = 0.140)$
	DLiSA-II	1.204 (0.027)	$0.624 \ (p = 0.001)$
	DLiSA	2.404 (0.036)	
W5	DLiSA-I	2.411 (0.037)	$0.581 \ (p = 0.023)$
	DLiSA-II	2.432 (0.057)	$0.662 \ (p < 0.001)$
	DLiSA	3.152 (0.042)	
W6	DLiSA-I	3.160 (0.052)	$0.545 \ (p = 0.224)$
	DLiSA-II	3.182 (0.081)	0.615 (p = 0.002)
	DLiSA	1.137 (0.016)	
W7	DLiSA-I	1.139 (0.022)	$0.532 \ (p = 0.350)$
	DLiSA-II	1.146 (0.027)	$0.626 \ (p = 0.001)$
	DLiSA	7.076 (0.077)	
W8	DLiSA-I	7.090 (0.111)	$0.547 \ (p = 0.217)$
	DLiSA-II	7.151 (0.193)	$0.648 \ (p < 0.001)$
	DLiSA	1.051 (0.014)	
W9	DLiSA-I	1.050 (0.013)	$0.513 \ (p = 0.730)$
	DLiSA-II	1.057 (0.018)	$0.625 \ (p = 0.001)$
	DLiSA	1.117 (0.017)	
W10	DLiSA-I	1.117 (0.012)	$0.530 \ (p = 0.360)$
	DLiSA-II	1.120 (0.017)	$0.553 \ (p = 0.110)$
	DLiSA	1.628 (0.038)	
W11	DLiSA-I	1.640 (0.049)	$0.600 \ (p = 0.006)$
	DLiSA-II	1.650 (0.052)	<b>0.632</b> $(p < 0.001)$

DLiSA-II 0.941 (0.219) 0.532 (p = 0.427)3.496 (0.501) DLiSA W2 5.120 (6.379) **0.702** (p < 0.001)DLiSA-I 3.637 (0.640) DLiSA-II  $0.576 \ (p = 0.063)$ 1.313 (0.313) DLiSA W3 DLiSA-I 2.131 (2.990) 0.616 (p = 0.004)

Mean (Std)

0.933 (0.152)

1.466 (1.755)

 $\hat{A}_{12}$  (p value)

**0.697** (p < 0.001)

	DLiSA-II	1.334 (0.275)	$0.552 \ (p = 0.206)$		
	DLiSA	1.613 (0.373)			
W4	DLiSA-I	2.277 (2.193)	<b>0.699</b> $(p < 0.001)$		
	DLiSA-II	1.683 (0.389)	$0.589 \ (p = 0.03)$		
	DLiSA	3.185 (0.424)			
W5	DLiSA-I	4.688 (5.025)	<b>0.668</b> $(p < 0.001)$		
	DLiSA-II	3.256 (0.529)	$0.534 \ (p = 0.409)$		
	DLiSA	0.100 (0.016)			
W6	DLiSA-I	0.130 (0.105)	<b>0.678</b> $(p < 0.001)$		
	DLiSA-II	0.102 (0.015)	$0.561 \ (p = 0.124)$		
	DLiSA	0.589 (0.151)			
W7	DLiSA-I	0.917 (1.191)	$0.626 \ (p = 0.002)$		
	DLiSA-II	0.589 (0.125)	$0.528 \ (p = 0.495)$		
	DLiSA	0.137 (0.022)			
W8	DLiSA-I	0.187 (0.188)	<b>0.656</b> $(p < 0.001)$		
	DLiSA-II	0.139 (0.024)	$0.504 \ (p = 0.922)$		
	DLiSA	0.247 (0.034)			
W9	DLiSA-I	0.283 (0.195)	$0.577 \ (p = 0.056)$		
	DLiSA-II	0.251 (0.039)	$0.514 \ (p = 0.732)$		
TABLE X	III. Performai	ice comparisor	n of DLiSA against		
TABLE XIII: Performance comparison of DLiSA against its variants (i.e., DLiSA-I and DLiSA-II) of over 100					
run in syst	em JUMP3R.	Statistically sig	gnificant discrepancies		
	, , ,				

Workload  $\hat{A}_{12}$  (p value) Algorithm Mean (Std)

are shown in bold ( $A_{12}>0.56$  and p value < 0.05), where green cells indicate that DLiSA performs better; or red cells

W1 DLiSA-I 2.644 (0.629) 0.593 (p = 0.023) DLiSA-II 2.565 (0.624) 0.546 (p = 0.263)  DLiSA 0.846 (0.197)  W2 DLiSA-I 0.927 (0.252) 0.606 (p = 0.009) DLiSA-II 0.908 (0.226) 0.592 (p = 0.025)  DLiSA 1.309 (0.368)  W3 DLiSA-I 1.431 (0.384) 0.611 (p = 0.007) DLiSA-II 1.380 (0.365) 0.573 (p = 0.075)  DLISA 0.642 (0.076)  W4 DLISA-I 0.678 (0.136) 0.582 (p = 0.045) DLISA-II 0.691 (0.141) 0.594 (p = 0.021)  DLISA 1.045 (0.246)  W5 DLISA-I 1.127 (0.281) 0.642 (p = 0.001) DLISA 0.298 (0.018)  DLISA 0.298 (0.018)  DLISA-I 0.307 (0.028) 0.662 (p = 0.002) DLISA-II 0.305 (0.033) 0.565 (p = 0.099)		DLiSA	2.573 (0.828)	
DLiSA	W1	DLiSA-I	2.644 (0.629)	$0.593 \ (p = 0.023)$
W2 DLiSA-I 0.927 (0.252) 0.606 (p = 0.009) DLiSA-II 0.908 (0.226) 0.592 (p = 0.025)  DLiSA 1.309 (0.368) W3 DLiSA-I 1.431 (0.384) 0.611 (p = 0.007) DLiSA-II 1.380 (0.365) 0.573 (p = 0.075)  DLISA 0.642 (0.076)  DLISA-I 0.678 (0.136) 0.582 (p = 0.045) DLISA-II 0.691 (0.141) 0.594 (p = 0.021)  DLISA 1.045 (0.246)  W5 DLISA-I 1.127 (0.281) 0.642 (p = 0.001) DLISA 0.298 (0.018) DLISA 0.298 (0.018) DLISA-I 0.307 (0.028) 0.622 (p = 0.002)		DLiSA-II	2.565 (0.624)	$0.546 \ (p = 0.263)$
DLiSA-II 0.908 (0.226) 0.592 (p = 0.025)  DLiSA 1.309 (0.368)  W3 DLiSA-I 1.431 (0.384) 0.611 (p = 0.007)  DLiSA-II 1.380 (0.365) 0.573 (p = 0.075)  DLISA 0.642 (0.076)  DLISA-I 0.678 (0.136) 0.582 (p = 0.045)  DLISA-II 0.691 (0.141) 0.594 (p = 0.021)  DLISA 1.045 (0.246)  W5 DLISA-I 1.127 (0.281) 0.642 (p = 0.001)  DLISA 0.298 (0.018)  DLISA 0.298 (0.018)  DLISA-I 0.307 (0.028) 0.622 (p = 0.002)		DLiSA	0.846 (0.197)	
DLiSA 1.309 (0.368)  W3 DLiSA-I 1.431 (0.384)	W2	DLiSA-I	0.927 (0.252)	$0.606 \ (p = 0.009)$
W3 DLiSA-I 1.431 (0.384) 0.611 (p = 0.007) DLiSA-II 1.380 (0.365) 0.573 (p = 0.075)  DLiSA 0.642 (0.076)  W4 DLiSA-I 0.678 (0.136) 0.582 (p = 0.045) DLiSA-II 0.691 (0.141) 0.594 (p = 0.021)  DLiSA 1.045 (0.246)  W5 DLiSA-I 1.127 (0.281) 0.642 (p = 0.001) DLiSA-II 1.174 (0.378) 0.631 (p = 0.001)  DLiSA 0.298 (0.018) DLiSA-I 0.307 (0.028) 0.622 (p = 0.002)		DLiSA-II	0.908 (0.226)	$0.592 \ (p = 0.025)$
DLiSA-II 1.380 (0.365) 0.573 (p = 0.075)  DLiSA 0.642 (0.076)  W4 DLiSA-I 0.678 (0.136) 0.582 (p = 0.045)  DLiSA-II 0.691 (0.141) 0.594 (p = 0.021)  DLiSA 1.045 (0.246)  W5 DLiSA-I 1.127 (0.281) 0.642 (p = 0.001)  DLISA 0.298 (0.018)  DLISA 0.298 (0.018)  W6 DLISA-I 0.307 (0.028) 0.622 (p = 0.002)		DLiSA	1.309 (0.368)	
DLiSA 0.642 (0.076)  W4 DLiSA-I 0.678 (0.136) DLiSA-II 0.691 (0.141)  DLiSA 1.045 (0.246)  W5 DLiSA-I 1.127 (0.281) DLiSA-II 1.174 (0.378) DLiSA 0.298 (0.018)  DLiSA-I 0.307 (0.028)  W6 DLiSA-I 0.307 (0.028)	W3	DLiSA-I	1.431 (0.384)	<b>0.611</b> $(p = 0.007)$
W4 DLiSA-I 0.678 (0.136) 0.582 (p = 0.045) DLiSA-II 0.691 (0.141) 0.594 (p = 0.021)  DLiSA 1.045 (0.246)  W5 DLiSA-I 1.127 (0.281) 0.642 (p = 0.001) DLiSA-II 1.174 (0.378) 0.631 (p = 0.001) DLiSA 0.298 (0.018)  W6 DLiSA-I 0.307 (0.028) 0.622 (p = 0.002)		DLiSA-II	1.380 (0.365)	$0.573 \ (p = 0.075)$
DLiSA-II 0.691 (0.141) 0.594 (p = 0.021)  DLiSA 1.045 (0.246)  W5 DLiSA-I 1.127 (0.281) 0.642 (p = 0.001)  DLiSA-II 1.174 (0.378) 0.631 (p = 0.001)  DLiSA 0.298 (0.018)  W6 DLiSA-I 0.307 (0.028) 0.622 (p = 0.002)		DLiSA	0.642 (0.076)	
W5 DLiSA 1.045 (0.246) W5 DLiSA-I 1.127 (0.281) 0.642 (p = 0.001) DLiSA-II 1.174 (0.378) 0.631 (p = 0.001) DLiSA 0.298 (0.018) W6 DLiSA-I 0.307 (0.028) 0.622 (p = 0.002)	W4	DLiSA-I	0.678 (0.136)	$0.582 \ (p = 0.045)$
W5 DLiSA-I 1.127 (0.281) 0.642 (p = 0.001) DLiSA-II 1.174 (0.378) 0.631 (p = 0.001)  DLiSA 0.298 (0.018) W6 DLiSA-I 0.307 (0.028) 0.622 (p = 0.002)		DLiSA-II	0.691 (0.141)	$0.594 \ (p = 0.021)$
DLiSA-II 1.174 (0.378) 0.631 (p = 0.001)  DLiSA 0.298 (0.018)  W6 DLiSA-I 0.307 (0.028) 0.622 (p = 0.002)		DLiSA	1.045 (0.246)	
DLiSA 0.298 (0.018) W6 DLiSA-I 0.307 (0.028) 0.622 (p = 0.002)	W5	DLiSA-I	1.127 (0.281)	$0.642 \ (p = 0.001)$
W6 DLiSA-I 0.307 (0.028) <b>0.622</b> ( $p = 0.002$ )		DLiSA-II	1.174 (0.378)	<b>0.631</b> $(p = 0.001)$
		DLiSA	0.298 (0.018)	
DLiSA-II $0.305 (0.033)$ $0.565 (p = 0.099)$	W6	DLiSA-I	0.307 (0.028)	$0.622 \ (p = 0.002)$
		DLiSA-II	0.305 (0.033)	$0.565 \ (p = 0.099)$

TABLE IX: Performance comparison of DLiSA against its variants (i.e., DLiSA-I and DLiSA-II) of over 100 run in system XZ. Statistically significant discrepancies are shown in bold ( $\hat{A}_{12}>0.56$  and p value < 0.05), where green cells indicate that DLiSA performs better; or red cells otherwise.

Workload	Algorithm	Mean (Std)	$\hat{A}_{12}$ (p value)
	DLiSA	3.693 (0.772)	
W1	DLiSA-I	5.958 (3.322)	<b>0.809</b> ( $p < 0.001$
	DLiSA-II	3.954 (1.016)	$0.615 \ (p = 0.005)$
	DLiSA	0.012 (0.004)	
W2	DLiSA-I	0.017 (0.007)	$0.688 \ (p < 0.001)$
	DLiSA-II	0.012 (0.004)	$0.525 \ (p = 0.374)$
	DLiSA	3.582 (0.650)	
W3	DLiSA-I	5.619 (2.737)	$0.776 \ (p < 0.001)$
	DLiSA-II	3.786 (0.882)	$0.576 \ (p = 0.063)$
	DLiSA	11.001 (3.132)	
W4	DLiSA-I	18.954 (15.539)	<b>0.785</b> $(p < 0.001)$
	DLiSA-II	11.113 (2.941)	$0.528 \ (p = 0.500)$
	DLiSA	10.406 (2.390)	
W5	DLiSA-I	16.746 (8.990)	<b>0.809</b> ( $p < 0.001$
	DLiSA-II	11.480 (3.324)	$0.592 \ (p = 0.025)$
	DLiSA	1.552 (0.410)	
W6	DLiSA-I	2.749 (1.397)	$0.850 \ (p < 0.001)$
	DLiSA-II	1.750 (0.457)	$0.646 \ (p < 0.001$
	DLiSA	0.193 (0.010)	
W7	DLiSA-I	0.230 (0.047)	$0.828 \ (p < 0.001$
	DLiSA-II	0.201 (0.018)	$0.620 \ (p = 0.002)$
	DLiSA	22.957 (5.456)	
W8	DLiSA-I	34.327 (14.209)	<b>0.775</b> ( $p < 0.001$
	DLiSA-II	24.631 (7.130)	$0.556 \ (p = 0.174)$
	DLiSA	20.050 (4.127)	
W9	DLiSA-I	35.576 (29.394)	<b>0.811</b> ( $p < 0.001$
	DLiSA-II	21.464 (5.679)	$0.572 \ (p = 0.079)$
	DLiSA	10.280 (2.502)	
W10	DLiSA-I	16.846 (10.210)	<b>0.811</b> ( $p < 0.001$
	DLiSA-II	10.978 (3.135)	$0.566 \ (p = 0.109)$
	DLiSA	2.604 (0.539)	
W11	DLiSA-I	3.957 (1.900)	$0.782 \ (p < 0.001$
	DLiSA-II	2.858 (0.832)	$0.586 \ (p = 0.035)$
	DLiSA	5.132 (1.234)	
W12	DLiSA-I	9.175 (6.526)	$0.830 \ (p < 0.001)$
	DLiSA-II	5.678 (1.753)	$0.588 \ (p = 0.032)$
	DLiSA	2.840 (0.573)	
W13	DLiSA-I	4.112 (1.645)	<b>0.774</b> ( $p < 0.001$
	DLiSA-II	3.123 (0.856)	$0.586 \ (p = 0.036)$
BLE XV:	DLiSA-II	3.123 (0.856)	$0.586 \ (p = 0.036)$

Algorithm Workload Mean (Std)  $\hat{A}_{12}$  (p value) 1.849 (0.105) DLiSA W1DLiSA-T  $0.638 \ (p = 0.001)$ 1.881 (0.130) 1.881 (0.117)  $0.646 \ (p < 0.001)$ DLiSA-II 1.115 (0.049) DLiSA 1.128 (0.078) 0.524 (p = 0.552)W2 DLiSA-I  $0.544 \ (p = 0.280)$ DLiSA-II 1.132 (0.081) 0.375 (0.008) DLiSA 0.376 (0.007) W3 DLiSA-I 0.548 (p = 0.182)DLiSA-II 0.377 (0.008) **0.589** (p = 0.017) 1.605 (0.067) DLiSA W4 DLiSA-I 1.611 (0.072) 0.549 (p = 0.223)DLiSA-II 1.618 (0.075) 0.576 (p = 0.059)DLiSA 0.503 (0.019) W5 DLiSA-I 0.505 (0.021)  $0.541 \ (p = 0.304)$ 0.509 (0.020)  $0.596 \ (p = 0.016)$ DLiSA-II DLiSA 0.376 (0.011) 0.379 (0.011)  $0.579 \ (p = 0.041)$ DLiSA-I DLiSA-II 0.383 (0.013)  $0.641 \ (p < 0.001)$ DLiSA 17.366 (2.734)

variants (i.e., DLiSA-I and DLiSA-II) of over 100 run

in system DCONVERT. Statistically significant discrepancies

are shown in bold ( $A_{12}>0.56$  and p value < 0.05), where

green cells indicate that DLiSA performs better; or red cells

otherwise

W7 DLiSA-I 17.582 (3.134)  $0.566 \ (p = 0.103)$ DLiSA-II 17.754 (3.067)  $0.565\ (p=0.109)$ DLiSA 1.032 (0.027) W8 DLiSA-I 1.040 (0.032)  $0.570\ (p=0.081)$ DLiSA-II 1.044 (0.033) 0.617 (p = 0.004)DLiSA 0.473 (0.014) W9 DLiSA-I 0.476 (0.014)  $0.566 \ (p = 0.098)$ DLiSA-II 0.475 (0.016) 0.555 (p = 0.170)DLiSA 1.438 (0.009) 0.554 (p = 0.165)W10 DLiSA-I 1.440 (0.010) DLiSA-II 1.440 (0.011)  $0.532 \ (p = 0.403)$ DLiSA 1.444 (0.019) W11 DLiSA-I 1.447 (0.017) 0.555 (p = 0.171)DLiSA-II 1.447 (0.018)  $0.533 \ (p = 0.415)$ 0.487 (0.007) DLiSA W12 DLiSA-I 0.488 (0.010) 0.522 (p = 0.561)DLiSA-II 0.488 (0.008)  $0.559 \ (p = 0.118)$ TABLE XII: Performance comparison of DLiSA against its variants (i.e., DLiSA-I and DLiSA-II) of over 100

otherwise. Workload Algorithm Mean (Std)  $A_{12}$  (p value) 0.986 (0.866) DLiSA W1 $0.682 \ (p < 0.001)$ DLiSA-I 2.148 (3.514) 1.227 (1.142) 0.587 (p = 0.034)DLiSA-II 0.131 (0.032) DLiSA W2 0.158(0.049) $0.680 \ (p < 0.001)$ DLiSA-I 0.146 (0.039)  $0.618 \ (p = 0.003)$ DLiSA-II

run in system KANZI. Statistically significant discrepancies

are shown in bold ( $\hat{A}_{12}>0.56$  and p value < 0.05), where

green cells indicate that DLiSA performs better; or red cells

	DLiSA	0.308 (0.129)		
W3	DLiSA-I	0.527 (0.94)	$0.579 \ (p = 0.054)$	
	DLiSA-II	0.312 (0.208)	$0.529 \ (p = 0.470)$	
	DLiSA	1.173 (0.697)		
W4	DLiSA-I	2.601 (3.114)	<b>0.702</b> $(p < 0.001)$	
	DLiSA-II	1.603 (1.173)	$0.619 \ (p = 0.004)$	
	DLiSA	0.938 (0.604)	•	
W5	DLiSA-I	1.589 (1.446)	$0.708 \ (p < 0.001)$	
	DLiSA-II	1.194 (0.881)	$0.593 \ (p = 0.023)$	
	DLiSA	0.433 (0.263)	,	
W6	DLiSA-I	0.647 (0.536)	$0.644 \ (p < 0.001)$	
	DLiSA-II	0.514 (0.402)	$0.521 \ (p = 0.616)$	
	DLiSA	0.177 (0.078)	<u> </u>	
W7	DLiSA-I	0.234 (0.155)	$0.637 \ (p = 0.001)$	
	DLiSA-II	0.188 (0.075)	$0.568 \ (p = 0.093)$	
	DLiSA	2.347 (2.228)		
W8	DLiSA-I	5.643 (9.41)	<b>0.690</b> ( $p < 0.001$ )	
	DLiSA-II	3.203 (3.692)	$0.593 \ (p = 0.024)$	
	DLiSA	0.709 (0.585)	,	
W9	DLiSA-I	1.402 (2.631)	$0.670 \ (p < 0.001)$	
	DLiSA-II	0.851 (0.621)	$0.595 \ (p = 0.021)$	
		,	· · · · · · · · · · · · · · · · · · ·	
TABLE YE	V. Performan	ce comparison (	of DI i SA against its	
IADLE AI	TABLE XIV: Performance comparison of DLiSA against its			

Workload Algorithm Mean (Std)  $\hat{A}_{12}$  (p value) 26721.450 (705.601) DLiSA W1DLiSA-I 26489.732 (775.103) **0.641** (p = 0.001)26644.835 (654.267) DLiSA-II  $0.566 \ (p = 0.104)$ 18972.982 (758.262) DLiSA W2 DLiSA-I 18863.828 (809.835) **0.599** (p = 0.015) $0.559 \ (p = 0.150)$ DLiSA-II 18931.037 (547.111) 948.344 (38.602) DLiSA DLiSA-I W3 943.536 (41.821)  $0.541 \ (p = 0.315)$ 

938.459 (45.506)

 $0.567 \ (p = 0.100)$ 

variants (i.e., DLiSA-I and DLiSA-II) of over 100 run in

system H2. Statistically significant discrepancies are shown

in bold  $(A_{12}>0.56$  and p value < 0.05), where green cells

indicate that DLiSA performs better; or red cells otherwise.

	DLiSA	1032.006 (45.261)	
W4	DLiSA-I	1013.514 (82.642)	$0.578 \ (p = 0.057)$
	DLiSA-II	1006.602 (88.074)	$0.602 \ (p = 0.013)$
	DLiSA	47835.194 (2491.758)	
W5	DLiSA-I	47999.853 (1876.084)	$0.509 \ (p = 0.830)$
	DLiSA-II	47763.929 (2437.681)	$0.543 \ (p = 0.290)$
	DLiSA	48335.083 (488.968)	
W6	DLiSA-I	48277.883 (559.910)	$0.548 \ (p = 0.239)$
	DLiSA-II	47866.219 (1882.315)	$0.638 \ (p = 0.001)$
	DLiSA	20037.040 (1584.735)	
W7	DLiSA-I	20103.313 (1244.099)	$0.530 \ (p = 0.457)$
	DLiSA-II	20124.243 (1258.559)	$0.500 \ (p = 0.993)$
	DLiSA	28129.890 (1669.565)	
W8	DLiSA-I	28033.752 (1665.729)	$0.523 \ (p = 0.572)$
	DLiSA-II	27691.456 (1923.862)	$0.566 \ (p = 0.108)$
	DHION II	27071.130 (1723.002)	0.500 (p = 0.100)