Operation	Latonov	Operands
Operation bswap r12d	Latency	2 r32
bswap r12d		2 r32
bswap r15d		2 r32
bswap edi		2 r32
rorx eax, r12d, 9		1 r32, r32, i
rorx ecx, edi, 9		1 r32, r32, i
xor edi, -200715707		1 r32, i
lea eax, [rax + rdi + 1]		1 r32, AGEN
mov edx, eax		1
xor edx, -546766179		1
rorx edi, r14d, 27		1
xor eax, 2078592312		1
lea eax, [rdi + rax + 1]		1
mov edi, eax		1
xor edi, -546766179		1
rorx r8d, r15d, 29		1
xor eax, -338608899		1
lea eax, [r8 + rax + 1]		1
mov r8d, eax		1
xor r8d, -546766179		1
xor eax, -1356326361		1
lea eax, [rcx + rax + 1]		1
mov ecx, eax		1
xor ecx, -814464733		1
rorx edx, edx, 27		1
xor eax, -1594379076		1
<pre>lea eax, [rdx + rax + 1]</pre>		1
mov edx, eax		1
xor edx, -814464733		1
rorx edi, edi, 29		1
xor eax, -1298246935		1
<pre>lea eax, [rdi + rax + 1]</pre>		1
mov edi, eax		1
xor edi, -814464733		1
rorx r8d , r8d , 9		1
xor eax, -1781840417		1
lea eax, [r8 + rax + 1]		1
mov r8d, eax		1
xor r8d, 884053734		1
rorx ecx, ecx, 27		1
xor eax, 1015440564		1
lea eax, [rcx + rax + 1]		1
mov ecx, eax		1
xor ecx, 884053734		1
rorx edx, edx, 29		1
xor eax, -1158540067		1

```
lea eax, [rdx + rax + 1]
                                                   1
mov edx, eax
                                                   1
xor edx, 884053734
                                                   1
rorx edi, edi, 9
                                                   1
xor eax, -1189504979
                                                   1
lea eax, [rdi + rax + 1]
                                                   1
mov edi, eax
                                                   1
xor edi, 100997698
                                                   1
rorx r8d, r8d, 27
                                                   1
xor eax, -817493316
                                                   1
lea eax, [r8 + rax + 1]
                                                   1
mov r8d, eax
                                                   1
xor r8d, 100997698
                                                   1
rorx ecx, ecx, 29
                                                   1
xor eax, 1337143449
                                                   1
lea eax, [rcx + rax + 1]
                                                   1
mov ecx, eax
                                                   1
                                                   1
xor ecx, 100997698
rorx edx, edx, 9
                                                   1
xor eax, 1653955617
                                                   1
lea eax, [rdx + rax + 1]
                                                   1
mov edx, eax
                                                   1
xor edx, 88614219
                                                   1
rorx edi, edi, 27
                                                   1
xor eax, 2002660726
                                                   1
                                                   1
lea eax, [rdi + rax + 1]
mov edi, eax
                                                   1
xor edi, 88614219
                                                   1
rorx r8d, r8d, 29
                                                   1
xor eax, 1275268082
                                                   1
lea eax, [r8 + rax + 1]
                                                   1
                                                   1
mov r8d, eax
xor r8d, 88614219
                                                   1
                                                   1
rorx ecx, ecx, 9
xor eax, 1021562721
                                                   1
                                                   1
lea eax, [rcx + rax + 1]
mov ecx, eax
                                                   1
xor ecx, 1373730486
                                                   1
rorx edx, edx, 27
                                                   1
xor eax, 1119224496
                                                   1
lea eax, [rdx + rax + 1]
                                                   1
                                                   1
mov edx, eax
xor edx, 1373730486
                                                   1
rorx edi, edi, 29
                                                   1
xor eax, 1134958471
                                                   1
lea eax, [rdi + rax + 1]
                                                   1
mov edi, eax
                                                   1
```

xor edi,	1373730486	1
rorx r	r8d, r8d, 9	1
xor eax,	1595845160	1
	[r8 + rax + 1]	1
mov r8d,		1
	-437755965	1
	ecx, ecx, 27	1
	85763124	1
	[rcx + rax + 1]	1
mov ecx,		1
	-437755965	1
	edx, edx, 29	1
	1385814776	1
	[rdx + rax + 1]	1
mov edx,		1
	-437755965	1
_	edi, edi, 9	1
	946612432	1
	[rdi + rax + 1]	1
mov edi,		1
_	-793511313	1
	r8d, r8d, 27	1
	-416936595	1
	[r8 + rax + 1]	1
mov r8d,		1
	-793511313	1
	ecx, ecx, 29	1
	-2027368903	1
	[rcx + rax + 1]	1
mov ecx,		1
	-793511313	1
	edx, edx, 9	1
	137233687	1
	[rdx + rax + 1]	1
mov edx,		1
	643757934	1
_		1
	edi, edi, 27	1
	-1777102603	
	[rdi + rax + 1]	1
mov edi,		1
	643757934	
	r8d, r8d, 29	1
xor eax,		1
	[r8 + rax + 1]	1
mov r8d,		1
	643757934	1
rorx 6	ecx, ecx, 9	1

```
xor eax, 580635461
                                                  1
                                                  1
lea eax, [rcx + rax + 1]
mov ecx, eax
                                                  1
xor ecx, -1814075890
                                                  1
rorx edx, edx, 27
                                                  1
xor eax, 1128612178
                                                  1
lea eax, [rdx + rax + 1]
                                                  1
mov edx, eax
                                                  1
xor edx, -1814075890
                                                  1
                                                  1
rorx edi, edi, 29
xor eax, -1280147824
                                                  1
lea eax, [rdi + rax + 1]
                                                  1
mov edi, eax
                                                  1
xor edi, -1814075890
                                                  1
rorx r8d, r8d, 9
                                                  1
xor eax, -1302701437
                                                  1
lea eax, [r8 + rax + 1]
                                                  1
                                                  1
mov r8d, eax
xor r8d, -1808355376
                                                  1
rorx ecx, ecx, 27
                                                  1
xor eax, 2080001455
                                                  1
lea eax, [rcx + rax + 1]
                                                  1
mov ecx, eax
                                                  1
xor ecx, -1808355376
                                                  1
rorx edx, edx, 29
                                                  1
xor eax, -1729122633
                                                  1
lea eax, [rdx + rax + 1]
                                                  1
mov edx, eax
                                                  1
xor edx, -1808355376
                                                  1
rorx edi, edi, 9
                                                  1
xor eax, 1242843394
                                                  1
lea eax, [rdi + rax + 1]
                                                  1
mov edi, eax
                                                  1
                                                  1
xor edi, 2009482466
rorx r8d, r8d, 27
                                                  1
xor eax, 1116082520
                                                  1
lea eax, [r8 + rax + 1]
                                                  1
mov r8d, eax
                                                  1
xor r8d, 2009482466
                                                  1
rorx ecx, ecx, 29
                                                  1
xor eax, -534406304
                                                  1
                                                  1
lea eax, [rcx + rax + 1]
                                                  1
mov ecx, eax
xor ecx, 2009482466
                                                  1
rorx edx, edx, 9
                                                  1
xor eax, 443116357
                                                  1
lea eax, [rdx + rax + 1]
                                                  1
```

```
mov edx, eax
                                                  1
                                                  1
xor edx, 1371361311
rorx edi, edi, 27
                                                  1
xor eax, -1292459442
                                                  1
lea eax, [rdi + rax + 1]
                                                  1
mov edi, eax
                                                  1
xor edi, 1371361311
                                                  1
rorx r8d, r8d, 29
                                                   1
xor eax, -1258451347
                                                  1
lea eax, [r8 + rax + 1]
                                                  1
mov r8d, eax
                                                  1
xor r8d, 1371361311
                                                  1
rorx ecx, ecx, 9
                                                  1
xor eax, -505173114
                                                  1
lea eax, [rcx + rax + 1]
                                                  1
                                                   1
mov ecx, eax
xor ecx, -148315530
                                                  1
                                                  1
rorx edx, edx, 27
xor eax, -628990830
                                                  1
lea eax, [rdx + rax + 1]
                                                  1
mov edx, eax
                                                   1
xor edx, -148315530
                                                  1
rorx edi, edi, 29
                                                  1
xor eax, 1841243172
                                                   1
lea eax, [rdi + rax + 1]
                                                  1
                                                  1
mov edi, eax
xor edi, -148315530
                                                  1
rorx r8d, r8d, 9
                                                  1
xor eax, -1794554427
                                                   1
lea eax, [r8 + rax + 1]
                                                  1
mov r8d, eax
                                                  1
xor r8d, -889141121
                                                   1
rorx ecx, ecx, 27
                                                  1
xor eax, 1937742566
                                                  1
lea eax, [rcx + rax + 1]
                                                   1
                                                  1
mov ecx, eax
xor ecx, -889141121
                                                   1
rorx edx, edx, 29
                                                  1
xor eax, -756782517
                                                  1
lea eax, [rdx + rax + 1]
                                                   1
mov edx, eax
                                                   1
                                                  1
xor edx, -889141121
rorx edi, edi, 9
                                                  1
xor eax, -1092218850
                                                  1
lea eax, [rdi + rax + 1]
                                                  1
mov edi, eax
                                                  1
xor edi, 1874071550
                                                   1
```

```
rorx r8d, r8d, 27
                                                  1
                                                  1
xor eax, 361627795
lea eax, [r8 + rax + 1]
                                                  1
mov r8d, eax
                                                  1
xor r8d, 1874071550
                                                  1
rorx ecx, ecx, 29
                                                  1
xor eax, 42430244
                                                  1
lea eax, [rcx + rax + 1]
                                                  1
mov ecx, eax
                                                  1
xor ecx, 1874071550
                                                  1
rorx edx, edx, 9
                                                  1
xor eax, -982956019
                                                  1
lea eax, [rdx + rax + 1]
                                                  1
mov edx, eax
                                                  1
xor edx, -299709832
                                                  1
rorx edi, edi, 27
                                                  1
xor eax, -1682793164
                                                  1
lea eax, [rdi + rax + 1]
                                                  1
mov edi, eax
                                                  1
xor edi, -299709832
                                                  1
rorx r8d, r8d, 29
                                                  1
xor eax, 1958629107
                                                  1
lea eax, [r8 + rax + 1]
                                                  1
mov r8d, eax
                                                  1
xor r8d, -299709832
                                                  1
                                                  1
rorx ecx, ecx, 9
xor eax, -1423585203
                                                  1
lea eax, [rcx + rax + 1]
                                                  1
mov ecx, eax
                                                  1
xor ecx, 1049849047
                                                  1
rorx edx, edx, 27
                                                  1
xor eax, -827623783
                                                  1
lea eax, [rdx + rax + 1]
                                                  1
mov edx, eax
                                                  1
xor edx, 1049849047
                                                  1
rorx edi, edi, 29
                                                  1
xor eax, 816081316
                                                  1
lea eax, [rdi + rax + 1]
                                                  1
mov edi, eax
                                                  1
xor edi, 1049849047
                                                  1
rorx r8d, r8d, 9
                                                  1
xor eax, 632406895
                                                  1
lea eax, [r8 + rax + 1]
                                                  1
mov r8d, eax
                                                  1
xor r8d, -158062498
                                                  1
rorx ecx, ecx, 27
                                                  1
xor eax, -391560516
                                                  1
```

```
lea eax, [rcx + rax + 1]
                                                    1
                                                    1
mov ecx, eax
xor ecx, -158062498
                                                    1
rorx edx, edx, 29
                                                    1
xor eax, -2050034803
                                                    1
lea eax, \lceil rdx + rax + 1 \rceil
                                                    1
mov edx, eax
                                                    1
xor edx, -158062498
                                                    1
rorx edi, edi, 9
                                                    1
xor eax, 1867157626
                                                    1
lea eax, [rdi + rax + 1]
                                                    1
mov edi, eax
                                                    1
xor edi, -969423750
                                                    1
rorx r8d, r8d, 27
                                                    1
xor eax, 2140779191
                                                    1
lea eax, [r8 + rax + 1]
                                                    1
mov r8d, eax
                                                    1
xor r8d, -969423750
                                                    1
rorx ecx, ecx, 29
                                                    1
xor eax, 451848677
                                                    1
lea eax, [rcx + rax + 1]
                                                    1
mov ecx, eax
                                                    1
xor ecx, -969423750
                                                    1
rorx edx, edx, 9
                                                    1
xor eax, 1306148276
                                                    1
                                                    1
lea eax, \lceil rdx + rax + 1 \rceil
mov edx, eax
                                                    1
xor edx, -624313065
                                                    1
rorx edi, edi, 27
                                                    1
xor eax, -399995428
                                                    1
lea eax, [rdi + rax + 1]
                                                    1
mov edi, eax
                                                    1
xor edi, -624313065
                                                    1
rorx r8d, r8d, 29
                                                    1
xor eax, 1899574297
                                                    1
lea eax, [r8 + rax + 1]
                                                    1
mov r8d, eax
                                                    1
xor r8d, -624313065
                                                    1
rorx ecx, ecx, 9
                                                    1
xor eax, -700892835
                                                    1
lea eax, [rcx + rax + 1]
                                                    1
                                                    1
mov ecx, eax
xor ecx, 1835411675
                                                    1
rorx edx, edx, 27
                                                    1
xor eax, 634882697
                                                    1
lea eax, \lceil rdx + rax + 1 \rceil
                                                    1
mov edx, eax
                                                    1
```

xor edx, 1835411675	1
rorx edi, edi, 29	1
xor eax, 885494260	1
lea eax, [rdi + rax + 1]	1
mov edi, eax	1
xor edi, 1835411675	1
rorx r8d, r8d, 9	1
xor eax, -2090591083	1
lea eax, [r8 + rax + 1]	1
mov r8d, eax	1
xor r8d, -1634148152	1
rorx ecx, ecx, 27	1
xor eax, 2043834360	1
lea eax, [rcx + rax + 1]	1
mov ecx, eax	1
xor ecx, -1634148152	1
rorx edx, edx, 29	1
xor eax, -56482482	1
lea eax, [rdx + rax + 1]	1
mov ebp, eax	1
xor ebp, -1634148152	1
rorx edx, edi, 9	1
xor eax, 1633489123	1
<pre>lea eax, [rdx + rax + 1]</pre>	1
mov r14d, eax	1
xor r14d, 38367248	1
rorx edx, r8d, 27	1
xor eax, -453381538	1
<pre>lea eax, [rdx + rax + 1]</pre>	1
mov r15d, eax	1
xor r15d, 38367248	1
rorx ecx, ecx, 29	1
xor eax, -189036692	1
lea r12d, [rcx + rax + 1]	1
xor r12d, 38367248	1
bswap ebp	2
bswap r14d	2
bswap r15d	2
bswap r12d	2