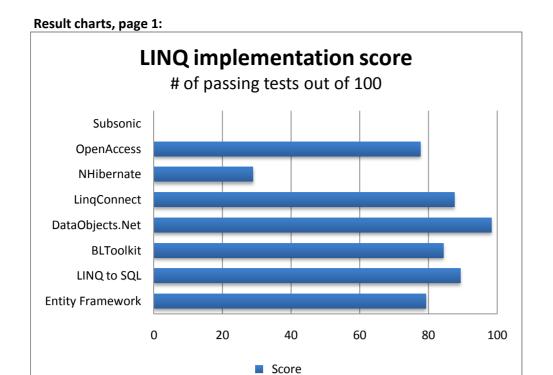
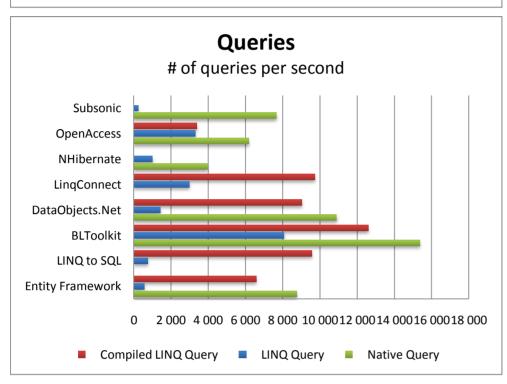
## **ORMeter.NET test results**

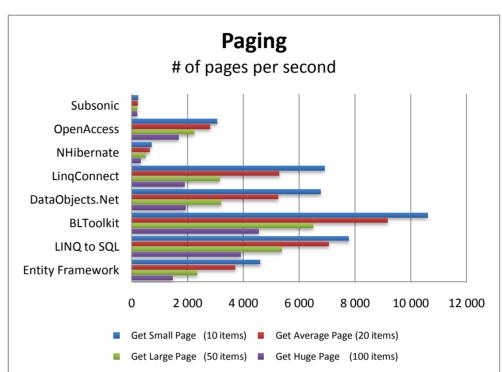
Visit $\underline{\text{http://ormeter.net}}$ for details
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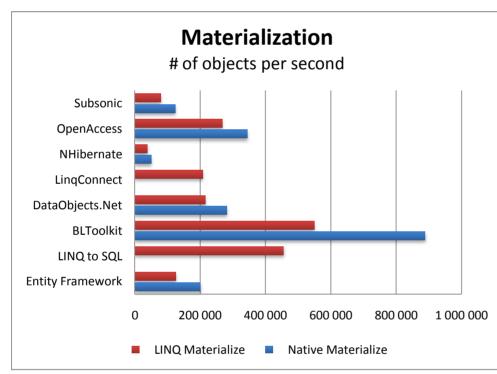
Visit <u>http://ormeter.net</u> for details	•		<del>Ľ</del>							LINQ imple	mentation
Гest name	Minimum	Maximum SqlClient	Entity Framework	LINQ to SQL	BLToolkit	Data Objects. Net	LingConnect	NHibernate	OpenAccess	Subsonic	Unit
INQ implementation		<u>≥</u>	ш		<u> </u>			Z	0	<u>v</u>	
Aggregates	0	5 n/a	0	0	1	0	1	3	1	n/a	f,a
All/Any/Contains	0	6 n/a		1	1	0	1	4,2	3	n/a	f,a
Complex	0	6 n/a		0	6	0	2	6	4	n/a	f,a
Element operations	0	9 n/a		2	5	0	0	6	5	n/a	f,a
· · · · · · · · · · · · · · · · · · ·	0	12 n/a			0	0	0	6,1	0	n/a	f,a
Filtering				2,2		0					
Grouping	0	10 n/a		1	3	0	2	10,2	2	n/a	f,a
Join	0	4 n/a		0	0		1	4	1	n/a	f,a
Ordering	0	8 n/a		2	0	0	2	6	1,1	n/a	f,a
Projections	0	13 n/a		1	2,1	0	1	6,1	1,1	n/a	f,a
References	0	4 n/a		0	0	0	0	3	0	n/a	f,a
Set operations	0	9 n/a		0	0	0	1	6,2	0	n/a	f,a
Standard functions	0	25 n/a		3,1	0	2	3,1	20	8,1	n/a	f,a
Take/Skip	0	5 n/a	1	0	1	0	0	2,1	1	n/a	f,a
Type casts	0	5 n/a	1	1	0	0	1	4	0	n/a	f,a
INQ Implementation total:											
Performed	0 1	121 n/a	121	121	121	121	121	121	121	n/a	#
Passed	0 1			108	102	119	106	35	94	n/a	#
Failed		121 n/a		13	19	2	15	86	27	n/a	#
Properly		121 n/a		10	18	2	14	77	24	n/a	#
Asserted		121 n/a		3	1	0	1	9	3	n/a	#
Score	0 1			89,3	84,3	98,3	87,6	28,9	77,7	n/a	%
score	U	11/4	79,5	09,3	04,3	30,3	67,0	20,9	//,/	II/a	70
Color bar						Worst result					Best result
Color bar						vvoist i esuit					Dest result
Jnits:											
f/a	total co	unt of failed tes	ts [ count of	tacts failad v	with accortic	on 1 less is h	attar (N is id	معا)			
#	count	unt of failed te.	its į, courit or	tests failed	with assertic	) i j, iess is b	etter (o is iu	Caij			
		-a-a- (0/ of passe	d tostal moore	ic bottor							
%	percent	age (% of passe	ed tests), more	e is better							
										4000 !!	
										1000 item	sequence
			l orl			et					
			ew			S.N	#		v		
	E	٤	Entity Framework	LINQ to SQL		Data Objects. Net	LingConnect	NHibernate	OpenAccess	o o	
	Ę	nu ent	튵	9	¥	je	oui	r.	Acc	nic	
	Minimum	Maximum SqlClient	Ęį	ğ	BLToolkit	taC	g	i <u>ë</u>	en	Subsonic	#
Гest name	Ξ	Maximun SqlClient	Ē			a_		눌	<u>o</u>	Su	Unit
CRUD Performance:											
Fetch	0	20 808	5 316	8 855	11 663	8 086	12 007	6 070	5 493	8 332	op/s
Single Operation:											
Create Instance	0	17 048	3 619	3 409	11 047	6 737	8 478	3 599	8 914	3 269	op/s
Update Instance	0	16 738		1 723	10 730	8 770	10 405	683	8 531	3 788	op/s
Remove Instance	0	17 666		1 950	11 193	9 144	11 130	1 149	9 870	4 004	op/s
CUD Average	0	17 142		2 163	10 986	8 036	9 853	1 148	8 972	3 602	op/s
Multiple Operations:	U	17 142	4 103	2 103	10 300	8 030	3 033	1 140	0372	3 002	υρ/ 3
Create Instance	0	39 342	5 383	5 124	19 329	10.096	14 929	12 417	14 443	3 711	on/s
	0					19 086					op/s
Update Instance	0	41 532		2 101	39 244	21 465	21 876	13 413	13 729	3 788	op/s
Remove Instance	0	25 463		2 244	60 092	25 306	27 844		24 660	3 982	op/s
CUD Average		22 752	6 246	2 602	31 926	21 519	40.000		16 421	3 738	op/s
	0	33 750	0 240	2 683	31 320	21313	19 968	13 277	10 421	3 730	
	0	33 /50	0 240	2 003	31 320,	21313	19 968	13 277	10 421	3 730	
Data Access Performance:	0	33 /50	0 240	2 003	31320,	21313	19 968	13 277	10 421	3730	
	0	33 /50	0240	2 063		21313	19 968	13 277	10 421	3730	
	0	33 /50 n/a		743	8 064	1 414	2 980	13 277	3 298	231	queries/s
Query:			563				_				queries/s queries/s
Query: LINQ Query	0	n/a	563 6 586	743	8 064	1 414	2 980	1 008	3 298	231	queries/s
Query: LINQ Query Compiled LINQ Query Native Query	0	n/a n/a	563 6 586	743 9 575	8 064 12 601	1 414 9 029	2 980 9 732	1 008 n/a	3 298 3 383	<b>231</b> n/a	
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only):	0 0 0	n/a n/a 18 017	563 6 586 8 758	743 9 575 n/a	8 064 12 601 15 374	1 414 9 029 10 898	2 980 9 732 n/a	1 008 n/a 3 945	3 298 3 383 6 174	231 n/a 7 656	queries/s queries/s
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items)	0 0 0	n/a n/a 18 017 n/a	563 6 586 8 758 4 600	743 9 575 n/a 7 779	8 064 12 601 15 374 10 608	1 414 9 029 10 898 6 769	2 980 9 732 n/a 6 912	1 008 n/a 3 945 707	3 298 3 383 6 174 3 057	231 n/a 7 656 221	queries/s queries/s pages/s
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items) Get Average Page (20 items)	0 0 0	n/a n/a 18 017 n/a n/a	563 6 586 8 758 4 600 3 708	743 9 575 n/a 7 779 7 050	8 064 12 601 15 374 10 608 9 174	1 414 9 029 10 898 6 769 5 246	2 980 9 732 n/a 6 912 5 290	1 008 n/a 3 945 707 631	3 298 3 383 6 174 3 057 2 805	231 n/a 7 656 221 212	queries/s queries/s pages/s pages/s
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items) Get Average Page (20 items) Get Large Page (50 items)	0 0 0 0	n/a n/a 18 017 n/a n/a n/a	563 6 586 8 758 4 600 3 708 2 348	743 9 575 n/a 7 779 7 050 5 373	8 064 12 601 15 374 10 608 9 174 6 494	1 414 9 029 10 898 6 769 5 246 3 198	2 980 9 732 n/a 6 912 5 290 3 151	1 008 n/a 3 945 707 631 496	3 298 3 383 6 174 3 057 2 805 2 235	231 n/a 7 656 221 212 191	queries/s queries/s pages/s pages/s pages/s
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items) Get Average Page (20 items) Get Large Page (50 items) Get Huge Page (100 items)	0 0 0	n/a n/a 18 017 n/a n/a	563 6 586 8 758 4 600 3 708 2 348	743 9 575 n/a 7 779 7 050	8 064 12 601 15 374 10 608 9 174	1 414 9 029 10 898 6 769 5 246	2 980 9 732 n/a 6 912 5 290	1 008 n/a 3 945 707 631	3 298 3 383 6 174 3 057 2 805	231 n/a 7 656 221 212	queries/s queries/s pages/s pages/s
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items) Get Average Page (20 items) Get Large Page (50 items) Get Huge Page (100 items) Materialization:	0 0 0 0	n/a n/a 18 017 n/a n/a n/a	563 6 586 8 758 4 600 3 708 2 348 1 467	743 9 575 n/a 7 779 7 050 5 373 3 910	8 064 12 601 15 374 10 608 9 174 6 494 4 538	1 414 9 029 10 898 6 769 5 246 3 198 1 929	2 980 9 732 n/a 6 912 5 290 3 151 1 890	1 008 n/a 3 945 707 631 496 325	3 298 3 383 6 174 3 057 2 805 2 235 1 671	231 n/a 7 656 221 212 191 189	queries/s queries/s pages/s pages/s pages/s pages/s
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items) Get Average Page (20 items) Get Large Page (50 items) Get Huge Page (100 items) Materialization: LINQ Materialize	0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a n/a	563 6 586 8 758 4 600 3 708 2 348 1 467	743 9 575 n/a 7 779 7 050 5 373 3 910	8 064 12 601 15 374 10 608 9 174 6 494 4 538	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973	2 980 9 732 n/a 6 912 5 290 3 151 1 890	1 008 n/a 3 945 707 631 496 325	3 298 3 383 6 174 3 057 2 805 2 235 1 671	231 n/a 7 656 221 212 191 189	queries/s queries/s pages/s pages/s pages/s pages/s
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items) Get Average Page (20 items) Get Large Page (50 items) Get Huge Page (100 items) Materialization:	0 0 0 0	n/a n/a 18 017 n/a n/a n/a	563 6 586 8 758 4 600 3 708 2 348 1 467	743 9 575 n/a 7 779 7 050 5 373 3 910	8 064 12 601 15 374 10 608 9 174 6 494 4 538	1 414 9 029 10 898 6 769 5 246 3 198 1 929	2 980 9 732 n/a 6 912 5 290 3 151 1 890	1 008 n/a 3 945 707 631 496 325	3 298 3 383 6 174 3 057 2 805 2 235 1 671	231 n/a 7 656 221 212 191 189	queries/s queries/s pages/s pages/s pages/s pages/s
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items) Get Average Page (20 items) Get Large Page (50 items) Get Huge Page (100 items) Materialization: LINQ Materialize Native Materialize	0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a n/a	563 6 586 8 758 4 600 3 708 2 348 1 467	743 9 575 n/a 7 779 7 050 5 373 3 910	8 064 12 601 15 374 10 608 9 174 6 494 4 538	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973	2 980 9 732 n/a 6 912 5 290 3 151 1 890	1 008 n/a 3 945 707 631 496 325	3 298 3 383 6 174 3 057 2 805 2 235 1 671	231 n/a 7 656 221 212 191 189	queries/s queries/s pages/s pages/s pages/s pages/s
Query:  LINQ Query  Compiled LINQ Query  Native Query  Paging (LINQ only):  Get Small Page (10 items)  Get Average Page (20 items)  Get Large Page (50 items)  Get Huge Page (100 items)  Materialization:  LINQ Materialize  Native Materialize	0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a n/a 1 186 661	563 6 586 8 758 4 600 3 708 2 348 1 467 125 922 201 328	743 9 575 n/a 7 779 7 050 5 373 3 910 455 497 n/a	8 064 12 601 15 374 10 608 9 174 6 494 4 538 549 480 888 651	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973 281 056	2 980 9 732 n/a 6 912 5 290 3 151 1 890 208 281 n/a	1 008 n/a 3 945 707 631 496 325 37 802 49 879	3 298 3 383 6 174 3 057 2 805 2 235 1 671 268 046 344 317	231 n/a 7 656 221 212 191 189 79 624 124 055	queries/s queries/s pages/s pages/s pages/s objects/s objects/s
Query:  LINQ Query  Compiled LINQ Query  Native Query  Paging (LINQ only):  Get Small Page (10 items)  Get Average Page (20 items)  Get Large Page (50 items)  Get Huge Page (100 items)  Materialization:  LINQ Materialize  Native Materialize	0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a n/a	563 6 586 8 758 4 600 3 708 2 348 1 467 125 922 201 328	743 9 575 n/a 7 779 7 050 5 373 3 910 455 497 n/a	8 064 12 601 15 374 10 608 9 174 6 494 4 538	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973 281 056	2 980 9 732 n/a 6 912 5 290 3 151 1 890 208 281 n/a	1 008 n/a 3 945 707 631 496 325	3 298 3 383 6 174 3 057 2 805 2 235 1 671 268 046 344 317	231 n/a 7 656 221 212 191 189	queries/s queries/s pages/s pages/s pages/s pages/s objects/s
Query: LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items) Get Average Page (20 items) Get Large Page (50 items) Get Huge Page (100 items) Materialization: LINQ Materialize Native Materialize Sile sizes (in bytes): Runtime libraries (.dlls)	0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a n/a 1 186 661	563 6 586 8 758 4 600 3 708 2 348 1 467 125 922 201 328	743 9 575 n/a 7 779 7 050 5 373 3 910 455 497 n/a	8 064 12 601 15 374 10 608 9 174 6 494 4 538 549 480 888 651	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973 281 056	2 980 9 732 n/a 6 912 5 290 3 151 1 890 208 281 n/a	1 008 n/a 3 945 707 631 496 325 37 802 49 879	3 298 3 383 6 174 3 057 2 805 2 235 1 671 268 046 344 317	231 n/a 7 656 221 212 191 189 79 624 124 055	queries/s queries/s queries/s pages/s pages/s pages/s pages/s objects/s objects/s
Query:  LINQ Query  Compiled LINQ Query  Native Query  Paging (LINQ only):  Get Small Page (10 items)  Get Average Page (20 items)  Get Large Page (50 items)  Get Huge Page (100 items)  Materialization:  LINQ Materialize  Native Materialize  Sile sizes (in bytes):  Runtime libraries (.dlls)	0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a n/a 1 186 661	563 6 586 8 758 4 600 3 708 2 348 1 467 125 922 201 328	743 9 575 n/a 7 779 7 050 5 373 3 910 455 497 n/a	8 064 12 601 15 374 10 608 9 174 6 494 4 538 549 480 888 651	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973 281 056	2 980 9 732 n/a 6 912 5 290 3 151 1 890 208 281 n/a	1 008 n/a 3 945 707 631 496 325 37 802 49 879	3 298 3 383 6 174 3 057 2 805 2 235 1 671 268 046 344 317	231 n/a 7 656 221 212 191 189 79 624 124 055	queries/s queries/s pages/s pages/s pages/s pages/s objects/s
Query:  LINQ Query  Compiled LINQ Query  Native Query  Paging (LINQ only):  Get Small Page (10 items)  Get Average Page (20 items)  Get Large Page (50 items)  Get Huge Page (100 items)  Materialization:  LINQ Materialize  Native Materialize  Sile sizes (in bytes):  Runtime libraries (.dlls)	0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a n/a 1 186 661	563 6 586 8 758 4 600 3 708 2 348 1 467 125 922 201 328	743 9 575 n/a 7 779 7 050 5 373 3 910 455 497 n/a	8 064 12 601 15 374 10 608 9 174 6 494 4 538 549 480 888 651	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973 281 056	2 980 9 732 n/a 6 912 5 290 3 151 1 890 208 281 n/a	1 008 n/a 3 945 707 631 496 325 37 802 49 879	3 298 3 383 6 174 3 057 2 805 2 235 1 671 268 046 344 317	231 n/a 7 656 221 212 191 189 79 624 124 055	queries/s queries/s queries/s pages/s pages/s pages/s pages/s objects/s objects/s
Query:  LINQ Query  Compiled LINQ Query  Native Query  Paging (LINQ only):  Get Small Page (10 items)  Get Average Page (20 items)  Get Large Page (50 items)  Get Huge Page (100 items)  Materialization:  LINQ Materialize  Native Materialize  File sizes (in bytes):  Runtime libraries (.dlls)  Color bar	0 0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a 1 186 661 n/a	563 6 586 8 758 4 600 3 708 2 348 1 467 125 922 201 328	743 9 575 n/a 7 779 7 050 5 373 3 910 455 497 n/a	8 064 12 601 15 374 10 608 9 174 6 494 4 538 549 480 888 651	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973 281 056	2 980 9 732 n/a 6 912 5 290 3 151 1 890 208 281 n/a	1 008 n/a 3 945 707 631 496 325 37 802 49 879	3 298 3 383 6 174 3 057 2 805 2 235 1 671 268 046 344 317	231 n/a 7 656 221 212 191 189 79 624 124 055	queries/s queries/s queries/s pages/s pages/s pages/s pages/s objects/s objects/s
Query:  LINQ Query  Compiled LINQ Query  Native Query  Paging (LINQ only):  Get Small Page (10 items)  Get Average Page (20 items)  Get Large Page (50 items)  Get Huge Page (100 items)  Materialization:  LINQ Materialize  Native Materialize  File sizes (in bytes):  Runtime libraries (.dlls)  Color bar	0 0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a 1 186 661 n/a	563 6 586 8 758 4 600 3 708 2 348 1 467 125 922 201 328 n/a	743 9 575 n/a 7 779 7 050 5 373 3 910 455 497 n/a	8 064 12 601 15 374 10 608 9 174 6 494 4 538 549 480 888 651	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973 281 056	2 980 9 732 n/a 6 912 5 290 3 151 1 890 208 281 n/a	1 008 n/a 3 945 707 631 496 325 37 802 49 879	3 298 3 383 6 174 3 057 2 805 2 235 1 671 268 046 344 317	231 n/a 7 656 221 212 191 189 79 624 124 055	queries/s queries/s queries/s pages/s pages/s pages/s pages/s objects/s objects/s
Query:  LINQ Query  Compiled LINQ Query  Native Query  Paging (LINQ only):  Get Small Page (10 items)  Get Average Page (20 items)  Get Large Page (50 items)  Get Huge Page (100 items)  Materialization:  LINQ Materialize  Native Materialize  File sizes (in bytes):  Runtime libraries (.dlls)  Color bar	0 0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a 1 186 661 n/a	563 6 586 8 758 4 600 3 708 2 348 1 467 125 922 201 328 n/a	743 9 575 n/a 7 779 7 050 5 373 3 910 455 497 n/a	8 064 12 601 15 374 10 608 9 174 6 494 4 538 549 480 888 651	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973 281 056	2 980 9 732 n/a 6 912 5 290 3 151 1 890 208 281 n/a	1 008 n/a 3 945 707 631 496 325 37 802 49 879	3 298 3 383 6 174 3 057 2 805 2 235 1 671 268 046 344 317	231 n/a 7 656 221 212 191 189 79 624 124 055	queries/s queries/s queries/s pages/s pages/s pages/s pages/s objects/s objects/s
LINQ Query Compiled LINQ Query Native Query Paging (LINQ only): Get Small Page (10 items) Get Average Page (20 items) Get Large Page (50 items) Get Huge Page (100 items) Materialization: LINQ Materialize	0 0 0 0 0 0 0	n/a n/a 18 017 n/a n/a n/a 1 186 661 n/a	563 6 586 8 758 4 600 3 708 2 348 1 467 125 922 201 328 n/a	743 9 575 n/a 7 779 7 050 5 373 3 910 455 497 n/a	8 064 12 601 15 374 10 608 9 174 6 494 4 538 549 480 888 651	1 414 9 029 10 898 6 769 5 246 3 198 1 929 215 973 281 056	2 980 9 732 n/a 6 912 5 290 3 151 1 890 208 281 n/a	1 008 n/a 3 945 707 631 496 325 37 802 49 879	3 298 3 383 6 174 3 057 2 805 2 235 1 671 268 046 344 317	231 n/a 7 656 221 212 191 189 79 624 124 055	queries/s queries/s queries/s pages/s pages/s pages/s pages/s objects/s objects/s

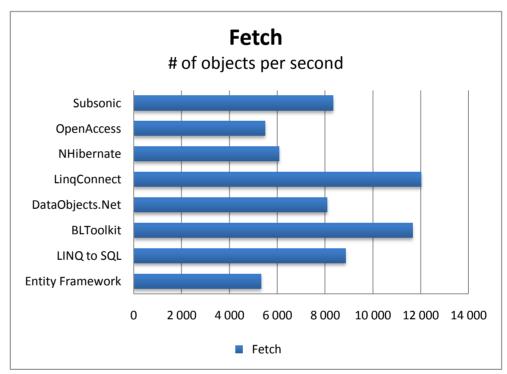


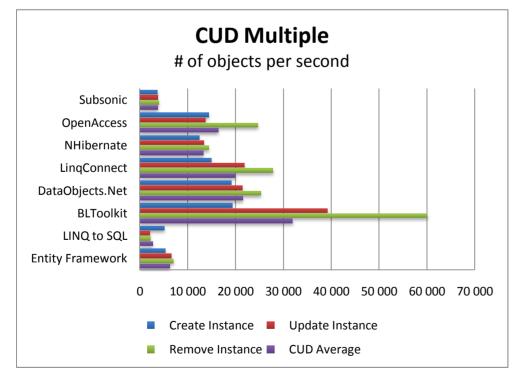
## Larger = better!

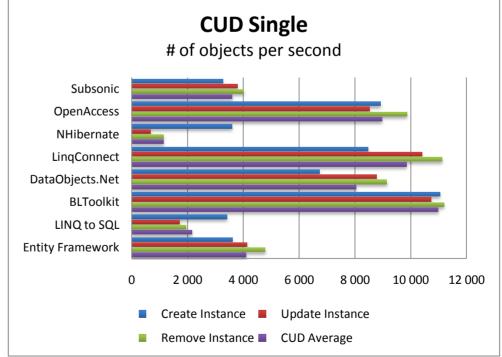












**Cell:** R46C7

Comment: Alex Yakunin:

Specialized API:

SqlQuery<T>.Insert(..., int batchSize, IEnumerable<T> sequence)

Cell: R46C10

**Comment:** Alex Yakunin:

Specialized API: ISessionFactory.OpenStatelessSession is used in this test.

Cell: R47C7

**Comment:** Alex Yakunin:

Specialized API:

SqlQuery<T>.Update(..., int batchSize, IEnumerable<T> sequence)

Cell: R47C10

**Comment:** Alex Yakunin:

 $Specialized \ API: IS ession Factory. Open Stateless Session \ is \ used \ in \ this \ test.$ 

**Cell:** R48C7

**Comment:** Alex Yakunin:

Specialized API:

SqlQuery<T>.Delete(..., int batchSize, IEnumerable<T> sequence)

Cell: R48C10

**Comment:** Alex Yakunin:

 $Specialized \ API: IS ession Factory. Open Stateless Session is used in this test.\\$ 

**Cell:** R54C10

**Comment:** Alex Yakunin:

Complied queries are not supported, result is copied from above cell.

**Cell:** R54C12

Comment: Alex Yakunin:

Complied queries are not supported, result is copied from above cell.

**Cell:** R55C6

Comment: Alex Yakunin:

No native queries, result is copied from above cell.