Type	Replication/	vCider Encryption		Native Encryption			
	Consistency	Nodes	Client	Nodes	Client	Cluster	Run
Unencrypted	R1/One	None	None	None	None	В	011
	R3/Quorum	None	None	None	None	В	009
Node	R1/One	On	None	On	None	В	006
Encrypted	R3/Quorum	On	None	On	None	В	005
Client	R1/One	On	On	On	OpenVPN	В	800
Encrypted	R3/Quorum	On	On	On	OpenVPN	В	007

Rows/Sec	
Unencrypted	Native
Node Encryp	Native
Full Encryp	Native
Unencrypted	vCider
Node Encryp	vCider
Full Encryp	vCider

R1 Results						
32	64	128	192	256		
8,070	7,442	7,397	7,121	7,123	Run 011	
7,441	7,271	6,907	6,679	6,397	Run 006	
4,469	4,411	4,376	4,269	3,897	Run 008	
7,411	7,500	7,224	6,960	6,648	Run 011	
7,388	6,909	7,038	7,037	6,699	Run 006	
7,321	6,856	7,003	6,571	6,302	Run 008	

Rows/Sec	
Unencrypted	Native
Node Encryp	Native
Full Encryp	Native
Unencrypted	vCider
Node Encryp	vCider
Full Encryp	vCider

R3 Results						
32	64	128	192	256		
6,529	6,186	5,862	5,116		Run 010	
5,881	5,502	5,004	4,447	4,106	Run 005	
4,319	3,944	3,649	3,424	3,086	Run 007	
6,235	5,897	5,520	4,887	4,525	Run 010	
6,103	5,718	5,310	4,816	4,268	Run 005	
5,677	5,112	4,797	4,360	4,010	Run 007	

Gains	
Unencrypted	R1
Node Encryp	R1
Full Encryp	R1
Unencrypted	R3
Node Encryp	R3
Full Encryp	R3

32	64	128	192	256		
-8.2%	0.8%	-2.3%	-2.3%	-6.7%	Run 010	-3.7%
-0.7%	-5.0%	1.9%	5.4%	4.7%	Run 005	1.3%
63.8%	55.4%	60.0%	53.9%	61.7%	Run 007	59.0%
-4.5%	-4.7%	-5.8%	-4.5%	-1.5%	Run 010	-4.2%
3.8%	3.9%	6.1%	8.3%	4.0%	Run 005	5.2%
31.5%	29.6%	31.4%	27.3%	29.9%	Run 007	30.0%

Notes

m2.xLarge Instances Singapore Region

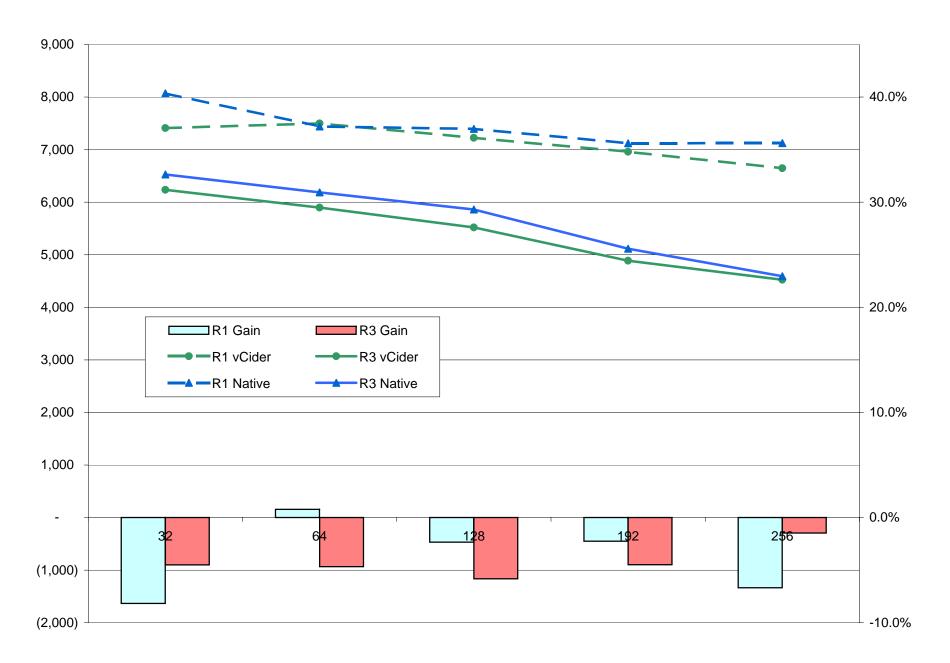
OpenVPN with AES/256 Encryption

Stress options: --consistency-level=[Quorum|ONE] --threads=10 --replication-factor=[1|3]

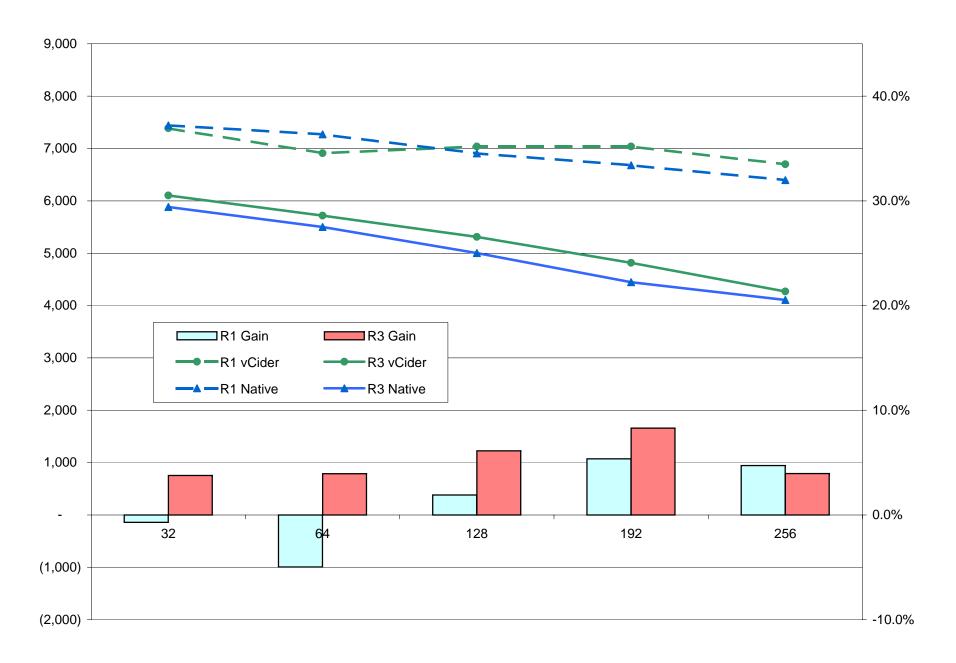
--column-size=[32-256] --keep-going --num-keys=500000 -r

Each result data point is the average of 10 interations with the specified parameters

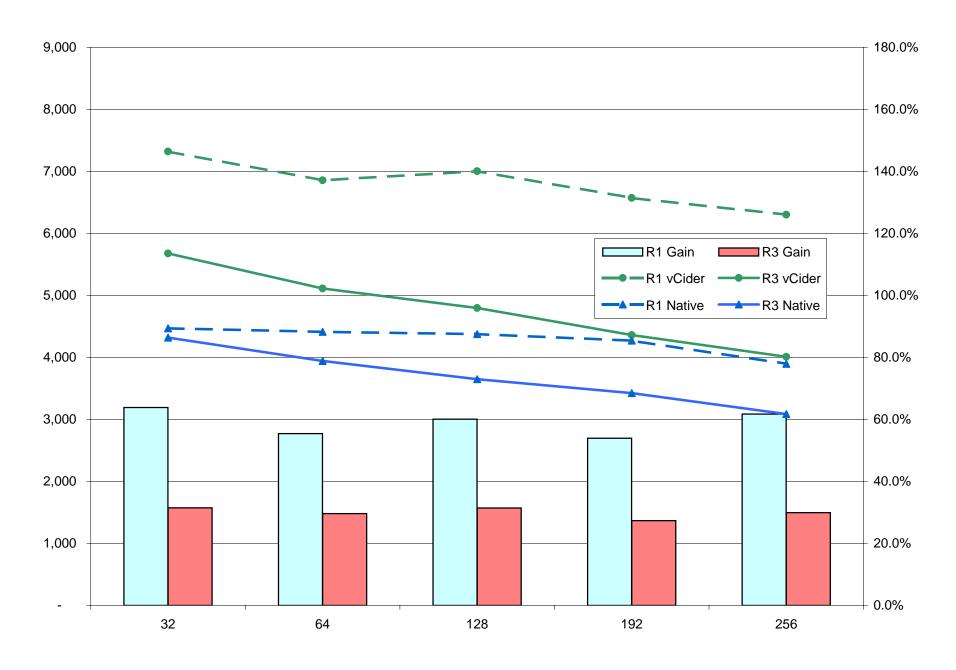
Unencrypted 4 Node Cassandra Cluster, Single Region



Encrypted 4 Node Cassandra Cluster, Single Region



Client Encrypted 4 Node Cassandra Cluster, Single Region



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