

Interactive / complex / 2

IC 1	query	Interactive / complex / 2			
IC 2	title	Recent messages by your friends			
IC 3	pattern	<pre> graph LR person["person: Person id = \$personId"] -- knows --> friend["friend: Person id firstName lastName"] friend -- hasCreator --> message["Message creationDate < \$maxDate id content / imageFile creationDate"] </pre>			
IC 4					
IC 5					
IC 6					
IC 7					
IC 8	desc.	Given a start Person (person), find the most recent Messages from all of that Person's friends (friend nodes). Only consider Messages created before the given maxDate (excluding that day).			
IC 9					
IC 10	params	1	personId	ID	
IC 11		2	maxDate	Date	
IC 12					
IC 13	result	1	friend.id	ID	R
IC 14		2	friend.firstName	String	R
		3	friend.lastName	String	R
		4	message.id	ID	R
		5	message.content or message.imageFile (for photos)	Text	R
		6	message.creationDate	DateTime	R
	sort	1	message.creationDate	↓	
		2	message.id	↑	
	limit	20			
	CPs	1.1, 2.2, 2.3, 3.2, 8.5			
	relevance	<p>This is a navigational query looking for paths of length two, starting from a given Person, going to their friends and from them, moving to their published Posts and Comments. This query exercises both the optimizer and how data is stored. It tests the ability to create execution plans taking advantage of the orderings induced by some operators to avoid performing expensive sorts. This query requires selecting Posts and Comments based on their creation date, which might be correlated with their identifier and therefore, having intermediate results with interesting orders. Also, messages could be stored in an order correlated with their creation date to improve data access locality. Finally, as many of the attributes required in the projection are not needed for the execution of the query, it is expected that the query optimizer will move the projection to the end.</p>			