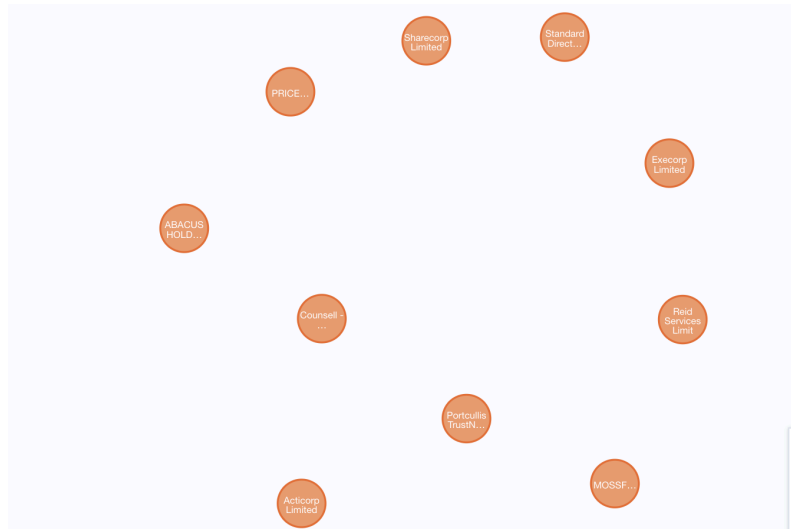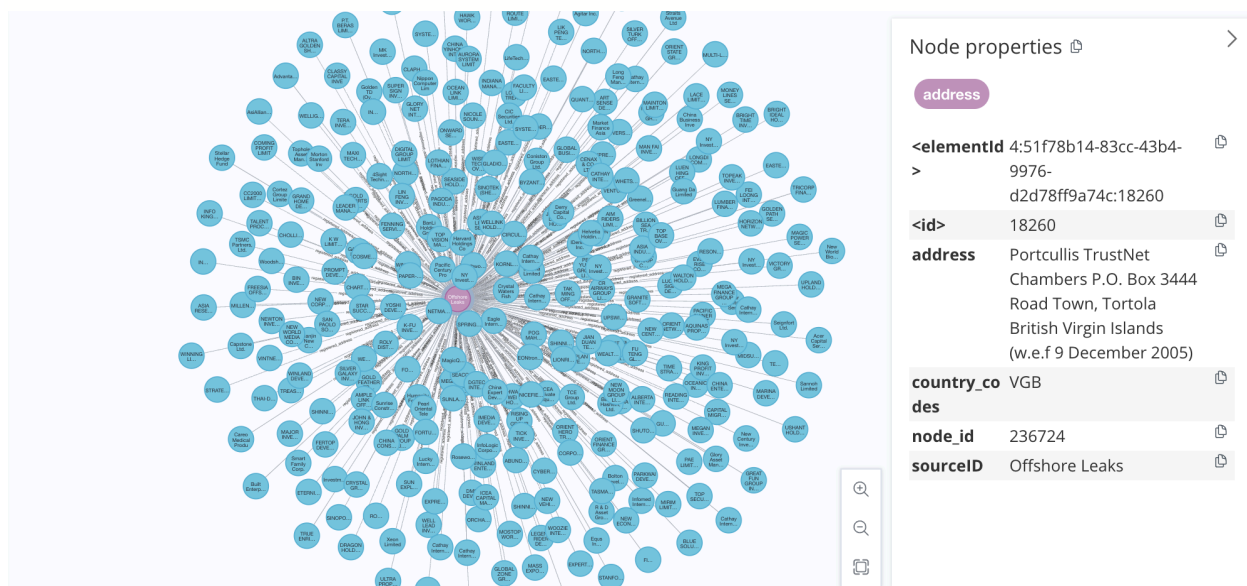In my first query I found the 10 officers that officer the most companies.


```
match (o:officer)-[:officer_of]->(e:entity)
with o, count(e) as num_companies
order by num_companies desc
limit 10
match (o)-[:officer_of]->(e)
return o;
```

In the next query I found the address with the most entities registered there and displayed the address and its corresponding entities.

Node properties

address

<elementId> 4:51f78b14-83cc-43b4-9976-d2d78ff9a74c:18260

<id> 18260

address Portcullis TrustNet Chambers P.O. Box 3444 Road Town, Tortola British Virgin Islands (w.e.f 9 December 2005)

country_codes VGB

node_id 236724

sourceID Offshore Leaks

```
match (a:address)<-[:registered_address]-(e:entity)
with a, count(e) as num_entities
order by num_entities desc
limit 1
match (a)<-[:registered_address]-(e)
return a, e;
```

In the third query I found the most influential nodes in the graph (page rank score). These nodes were all addresses.
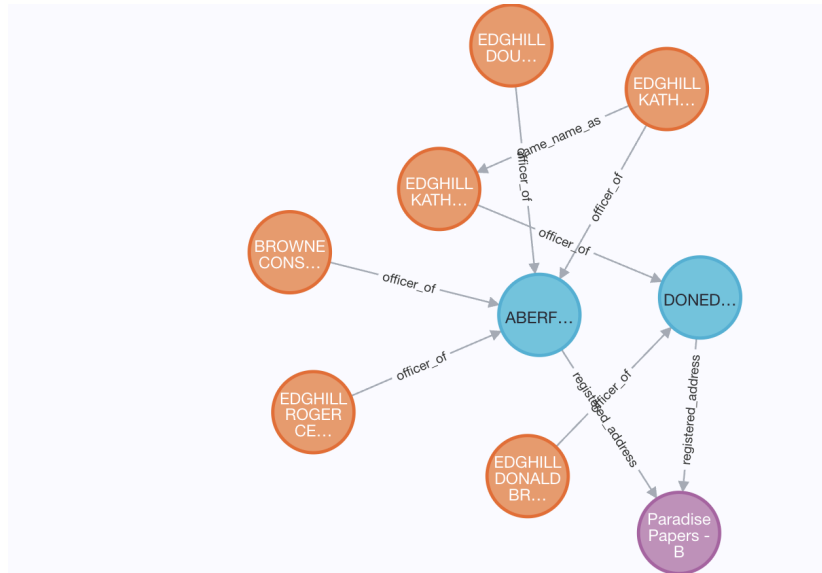
	node	score
1	"Portcullis TrustNet Chambers P.O. Box 3444 Road Town, Tortola British Virgin Islands (w.e.f 9 December 2005)"	8856.700869413178
2	"3rd Floor, Yamraj Building, Market Square, P.O. Box 3175 Road Town, Tortola British Virgin Islands"	2500.6348437505108
3	"Canon's Court"	1939.5707408855312
4	"Clifton House"	1843.393043035857
5	"Argyle House"	1337.7118401267455
6	"Unitrust Corporate Services Ltd. John Humphries House, Room 304 4-10 Stockwell Street, Greenwich London SE10 9JN"	904.651510177943
7	"CHANCERY HOUSE, HIGH STREET, HIGH STREET, BRIDGETOWN, BARBADOS."	686.7060736455547
8	"Company Kit Limited Unit A, 6/F Shun On Comm Bldg. 112-114 Des Voeux Road C., Hong Kong SAR"	667.7229383208736
9	"171 OLD BAKERY STREET, VALLETTA, MALTA"	580.5960005677497
10	"Sealight Incorporations Limited Room 1201, Connaught Commercial Building 185 Wanchai Road Wanchai, Hong Kong"	562.6768227550297

```
CALL gds.pageRank.stream('icij_graph')
YIELD nodeId, score
RETURN gds.util.asNode(nodeId).address AS node, score
ORDER BY score DESC
LIMIT 10;
```

In the last query I found a mid sized louvian community and displayed it. From this we can see how nodes interact with one another.


```
CALL gds.louvain.stream('icij_graph')
YIELD nodeId, communityId
WITH communityId AS selectedCommunityId, COUNT(nodeId) AS communitySize
ORDER BY communitySize ASC
SKIP 505000 LIMIT 1
WITH selectedCommunityId
CALL gds.louvain.stream('icij_graph')
YIELD nodeId, communityId
WHERE communityId = selectedCommunityId
WITH selectedCommunityId, collect(nodeId) AS communityNodeIds
MATCH (n)-[r]-(m)
WHERE id(n) IN communityNodeIds AND id(m) IN communityNodeIds
RETURN n, r, m, selectedCommunityId
```