

distance

count

1	15
2	20
3	12
4	14
5	11
6	17
7	16
8	11
9	17
10	14
11	16
12	15
13	13
14	13
15	14
16	14
17	12
18	18
19	8
20	14
21	12
22	6
23	9
24	13
25	10
26	10
27	9
28	9
29	9
30	14
31	7

32	10
33	6
34	8
35	9
36	14
37	6
38	2
39	11
40	5
41	13
42	10
43	6
44	10
45	13
46	11
47	11
48	8
49	10
50	4
51	8
52	7
53	7
54	9
55	6
56	5
57	7
58	3
59	5
60	2
61	7
62	10
63	4

64	8
65	6
66	9
67	8
68	6
69	4
70	6
71	5
72	8
73	6
74	4
75	4
76	5
77	8
78	3
79	3
80	6
81	5
82	2
83	2
84	6
85	6
86	1
87	3
88	6
89	3
90	4
91	4
92	1
93	3
94	1
95	3

96	2
97	4
98	2
99	5
100	1
101	3
102	6
103	2
104	4
105	3
106	5
107	4
108	3
109	2
110	2
111	1
112	1
113	1
114	2
115	1
116	1
117	3
118	3
119	2
120	3
121	2
123	5
124	3
125	4
126	4
127	2
128	2

129	2
130	3
132	3
133	3
134	6
136	3
137	5
138	8
139	3
140	1
141	1
142	3
143	1
145	2
147	2
148	2
149	2
150	1
151	3
152	1
153	1
155	4
156	1
157	1
158	2
159	1
160	1
161	3
162	2
163	2
164	4
165	2



166	1
168	1
171	2
173	1
174	1
176	1
177	1
180	3
181	1
183	1
187	1
188	1
190	1
193	1
194	2
195	2
198	1
199	1
202	1
203	2
204	1
205	1
206	1
207	3
211	1
220	3
221	1
226	2
229	1
233	1
236	3
238	1

243	2
247	1
249	2
250	1
254	1
269	1
273	1
276	1
277	1
278	1
283	1
284	1
285	1
286	1
289	1
298	1
307	2
319	2
330	1
332	1

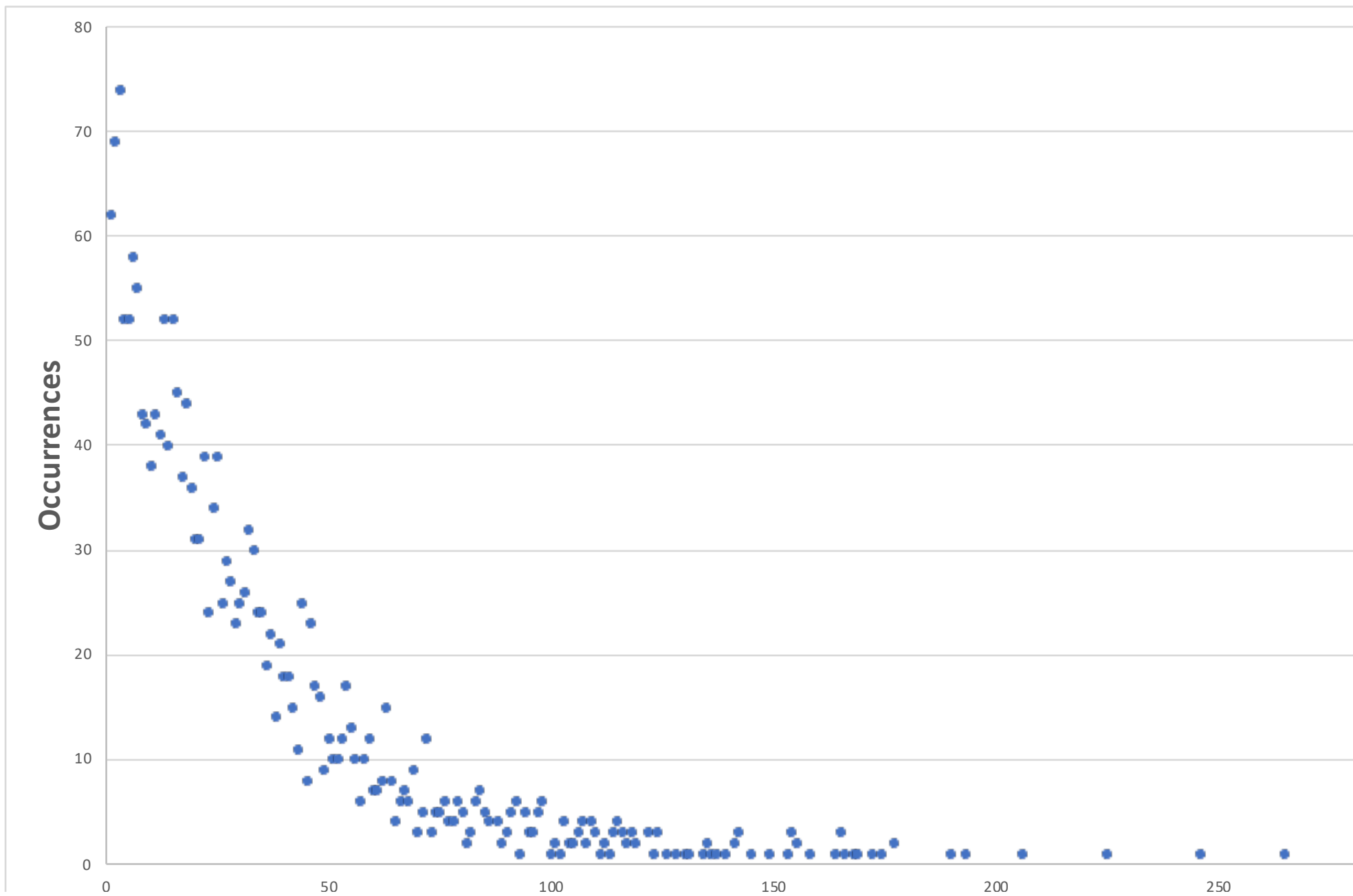
query_number	nodes
1	114
2	98
3	73
4	62
5	44
6	42
7	23
8	27
9	11
10	6

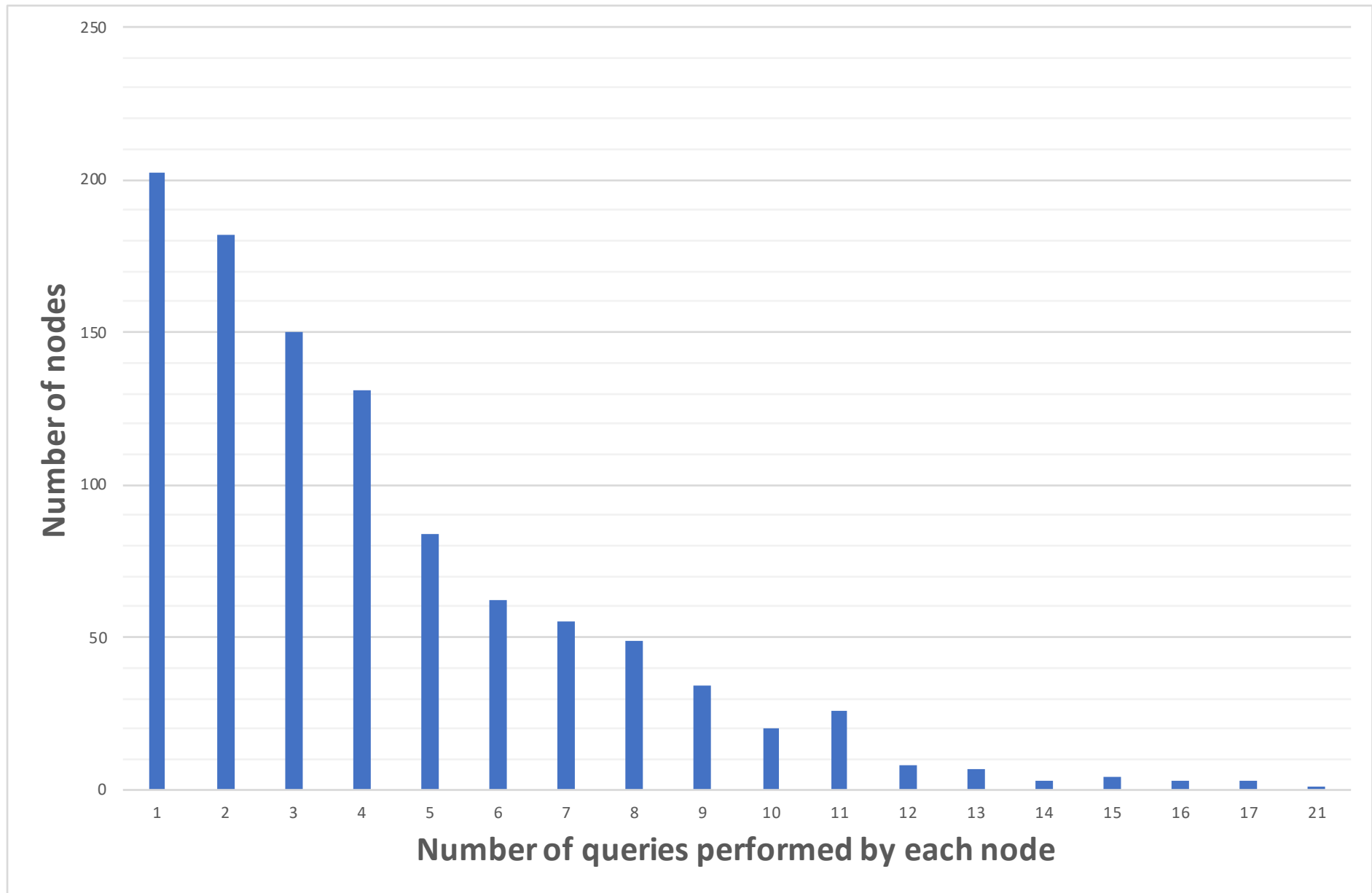
11	5
12	4
13	2
15	1

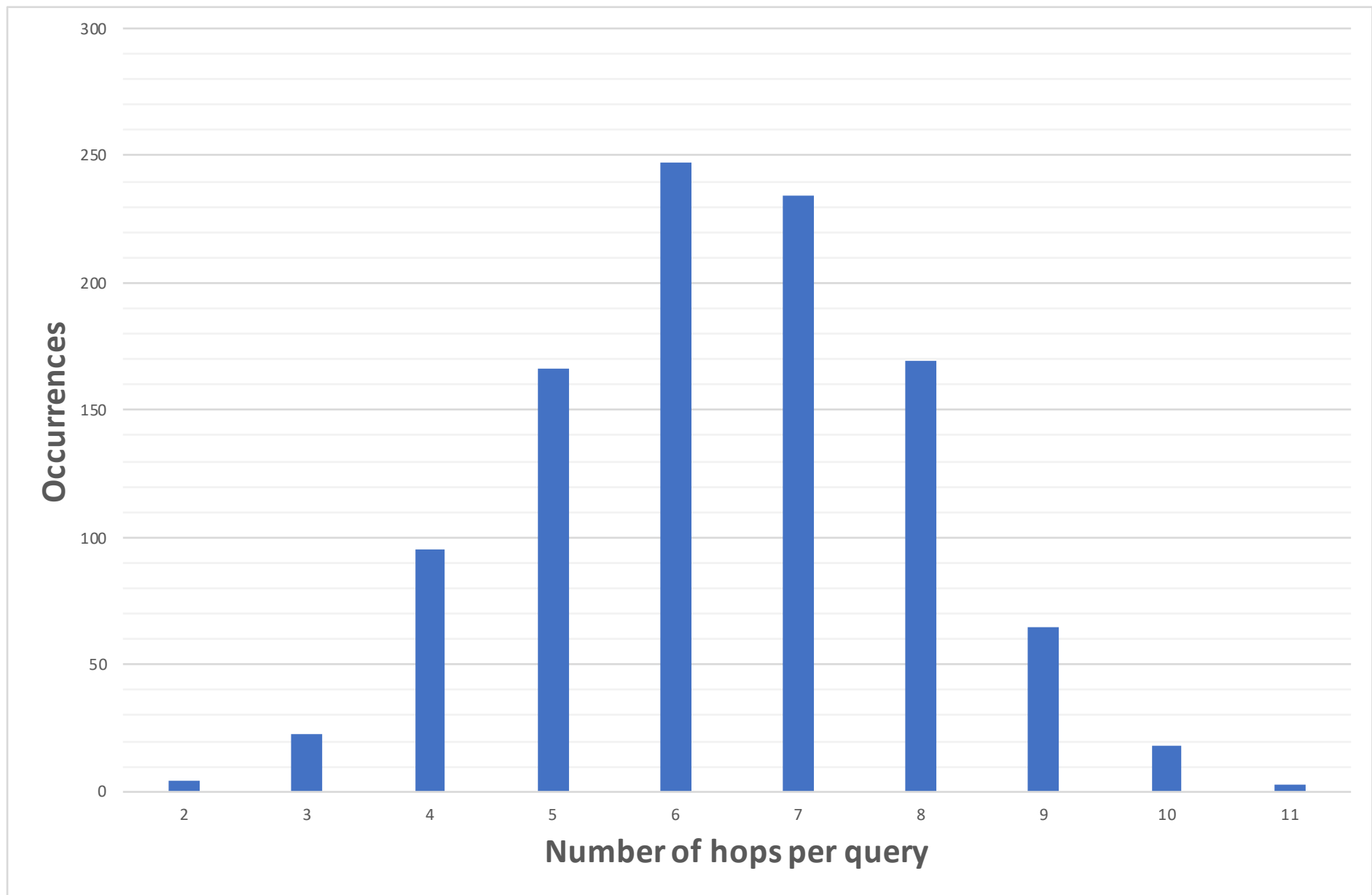
hops\_per\_query

times

2	7
3	30
4	66
5	103
6	133
7	109
8	47
9	17







distance

count

1	62
2	69
3	74
4	52
5	52
6	58
7	55
8	43
9	42
265	1
10	38
11	43
12	41
13	52
14	40
15	52
16	45
17	37
18	44
19	36
20	31
21	31
22	39
23	24
24	34
25	39
26	25
27	29
28	27
29	23
30	25

31	26
32	32
33	30
34	24
35	24
36	19
37	22
38	14
39	21
40	18
41	18
42	15
43	11
44	25
45	8
46	23
47	17
48	16
49	9
50	12
51	10
52	10
53	12
54	17
55	13
56	10
57	6
58	10
59	12
60	7
61	7
62	8



63	15
64	8
65	4
66	6
67	7
68	6
69	9
70	3
71	5
72	12
73	3
74	5
75	5
76	6
77	4
78	4
79	6
80	5
81	2
82	3
83	6
84	7
85	5
86	4
88	4
89	2
90	3
91	5
92	6
93	1
94	5
95	3

96	3
97	5
98	6
100	1
101	2
102	1
103	4
104	2
105	2
106	3
107	4
108	2
109	4
110	3
111	1
112	2
113	1
114	3
115	4
116	3
117	2
118	3
119	2
122	3
123	1
124	3
126	1
128	1
130	1
131	1
134	1
135	2

136	1
137	1
139	1
141	2
142	3
145	1
149	1
153	1
154	3
155	2
158	1
164	1
165	3
166	1
168	1
169	1
172	1
174	1
177	2
190	1
193	1
206	1
225	1
246	1

query\_number

nodes

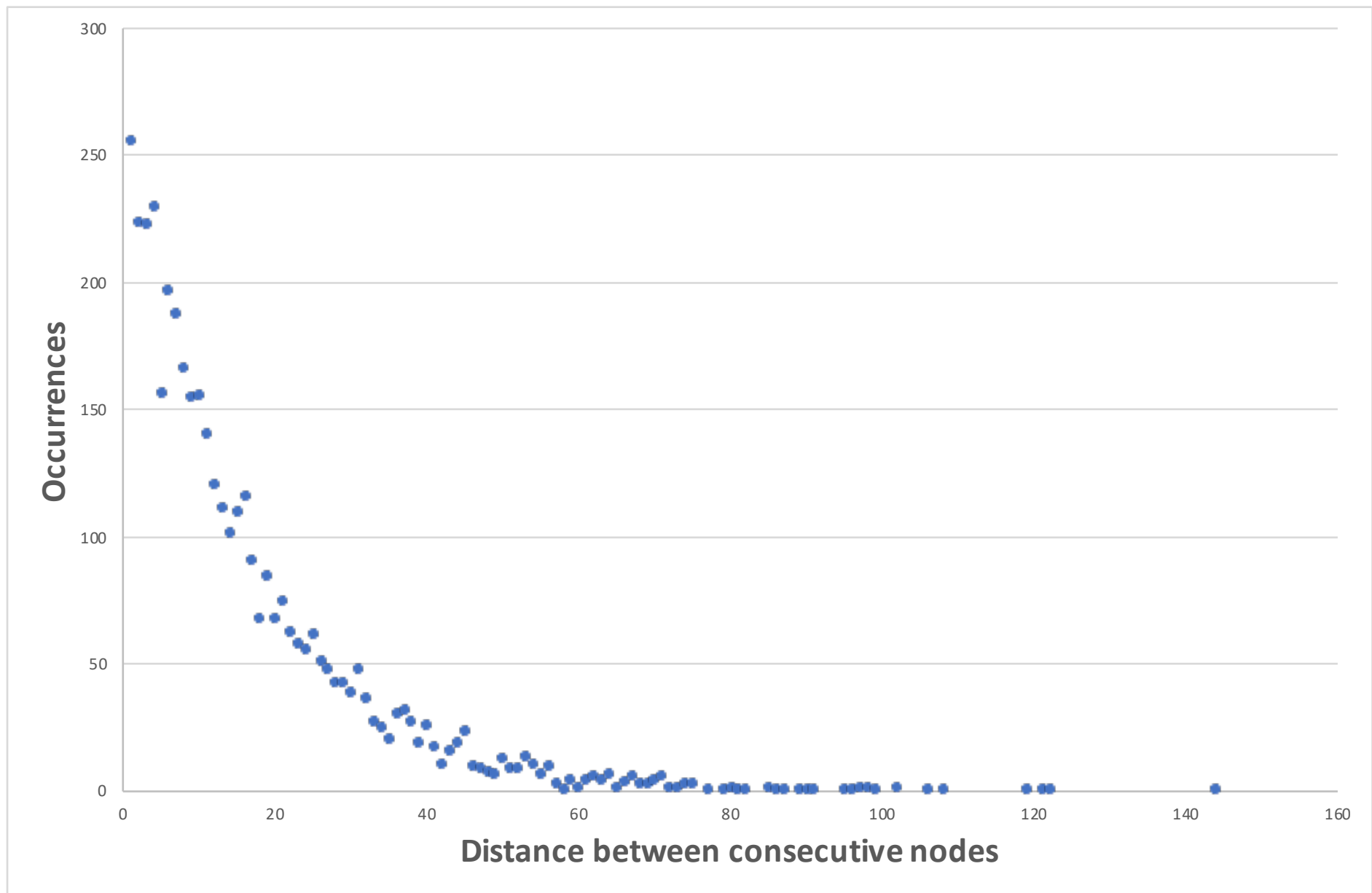
1	202
2	182
3	150
4	131
5	84
6	62

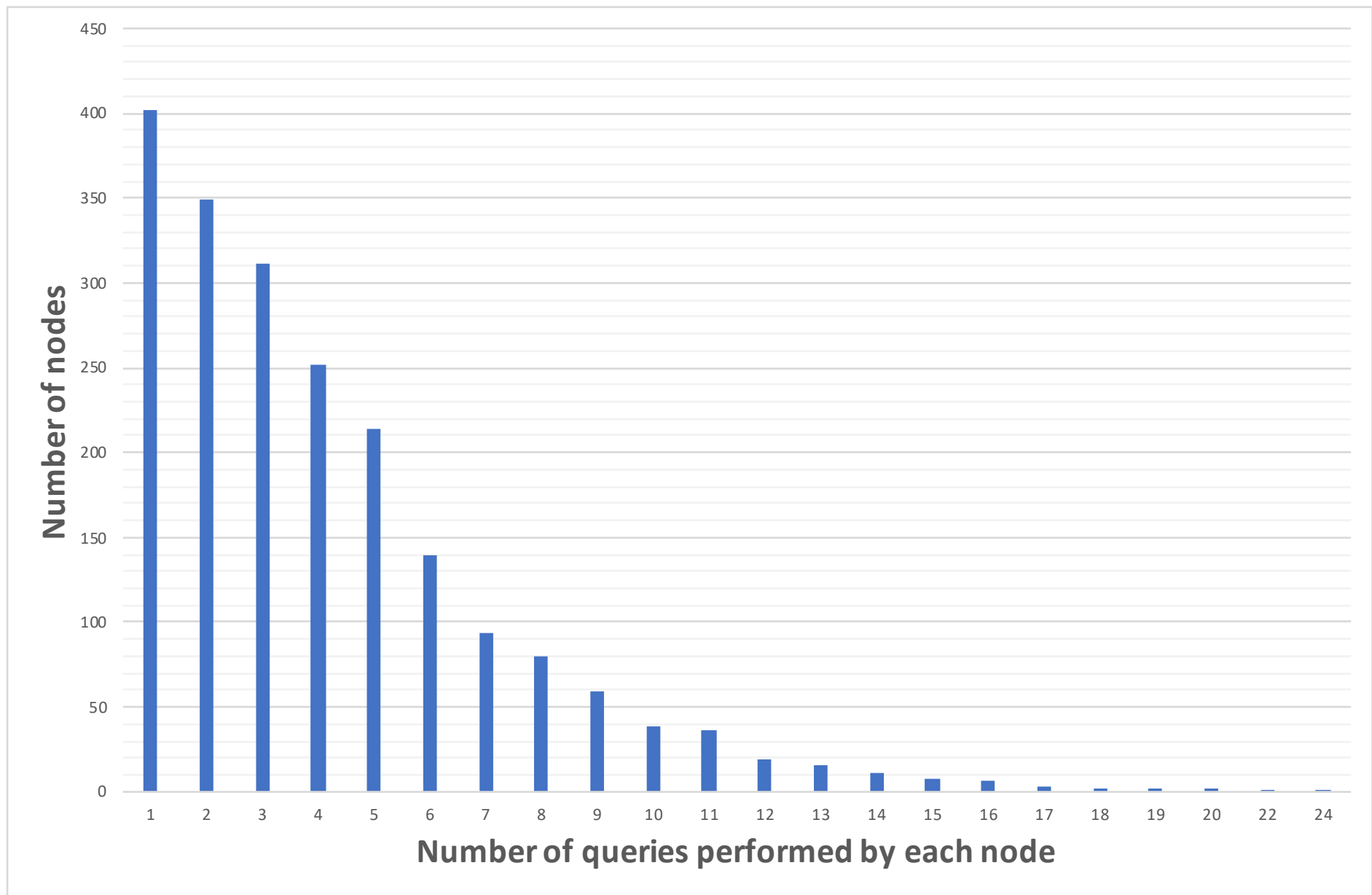
7	55
8	49
9	34
10	20
11	26
12	8
13	7
14	3
15	4
16	3
17	3
21	1

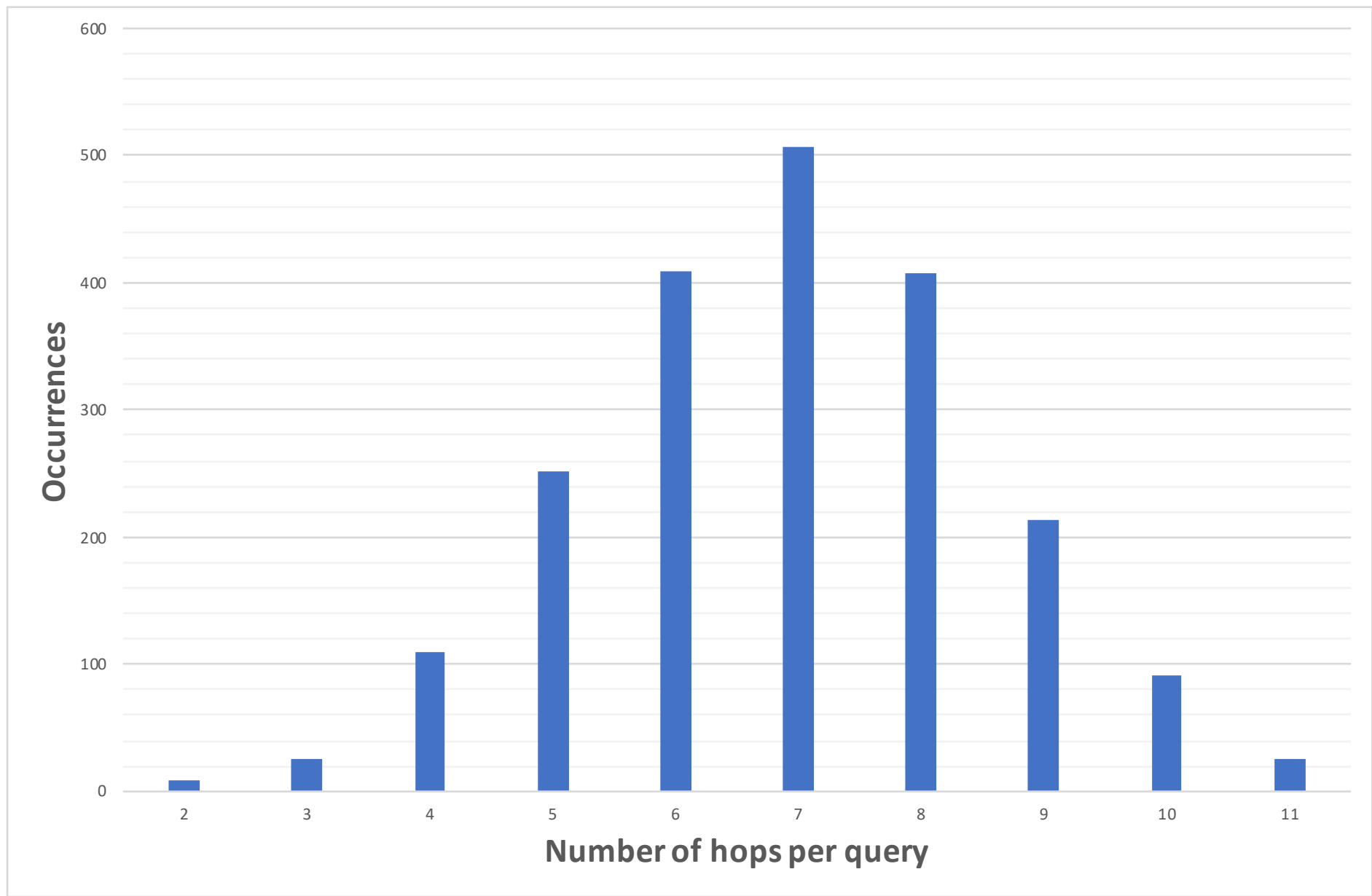
hops\_per\_query

times

2	4
3	23
4	95
5	166
6	247
7	234
8	169
9	65
10	18
11	3







distance	count
1	256
2	224
3	223
4	230
5	157
6	197
7	188
8	167
9	155
10	156
11	141
12	121
13	112
14	102
15	110
16	116
17	91
18	68
19	85
20	68
21	75
22	63
23	58
24	56
25	62
26	51
27	48
28	43
29	43
30	39
31	48



32	37
33	28
34	25
35	21
36	31
37	32
38	28
39	19
40	26
41	18
42	11
43	16
44	19
45	24
46	10
47	9
48	8
49	7
50	13
51	9
52	9
53	14
54	11
55	7
56	10
57	3
58	1
59	5
60	2
61	5
62	6
63	5

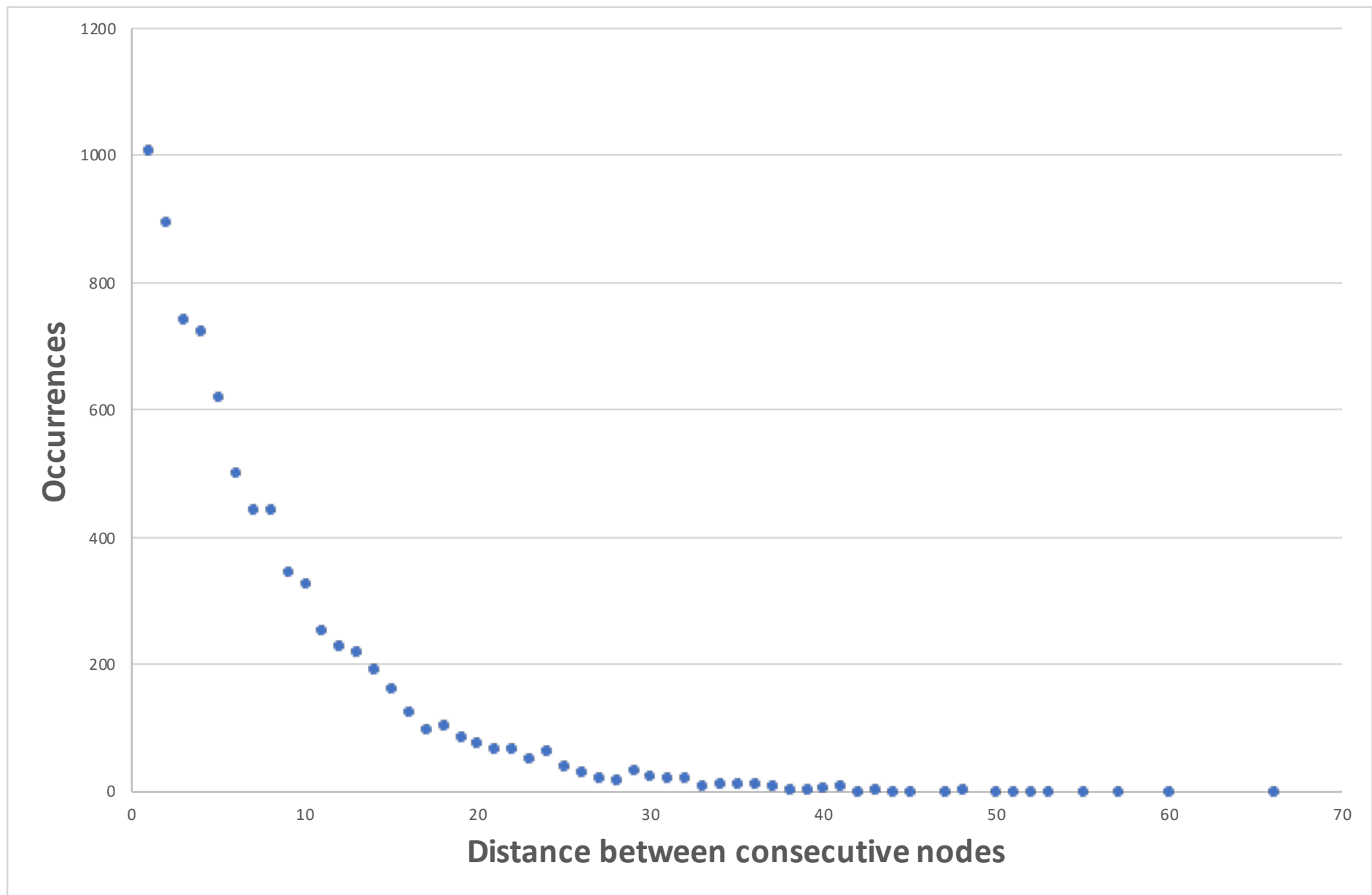
64	7
65	2
66	4
67	6
68	3
69	3
70	5
71	6
72	2
73	2
74	3
75	3
77	1
79	1
80	2
81	1
82	1
85	2
86	1
87	1
89	1
90	1
91	1
95	1
96	1
97	2
98	2
99	1
102	2
106	1
108	1
119	1

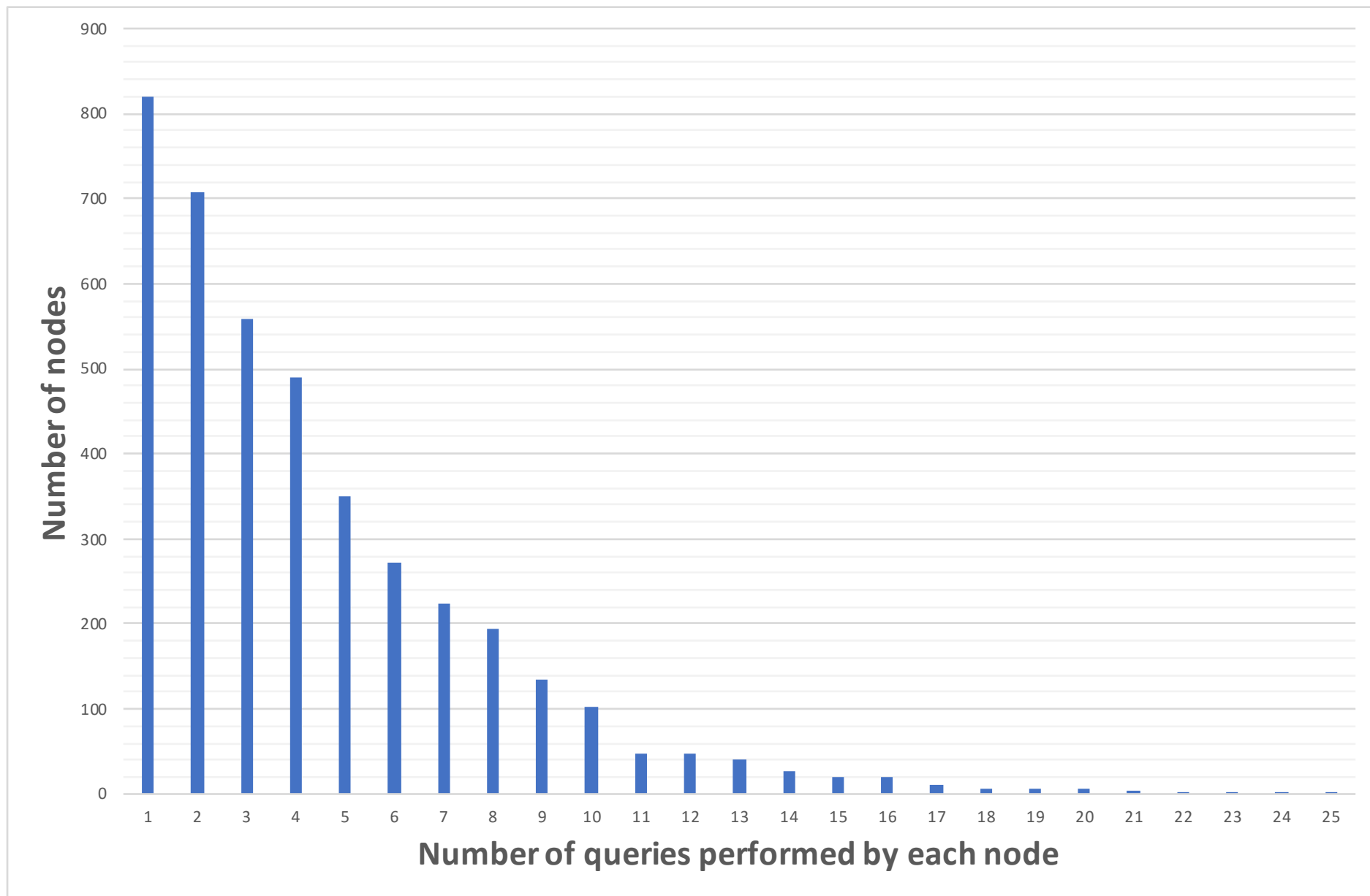
121	1
122	1
144	1

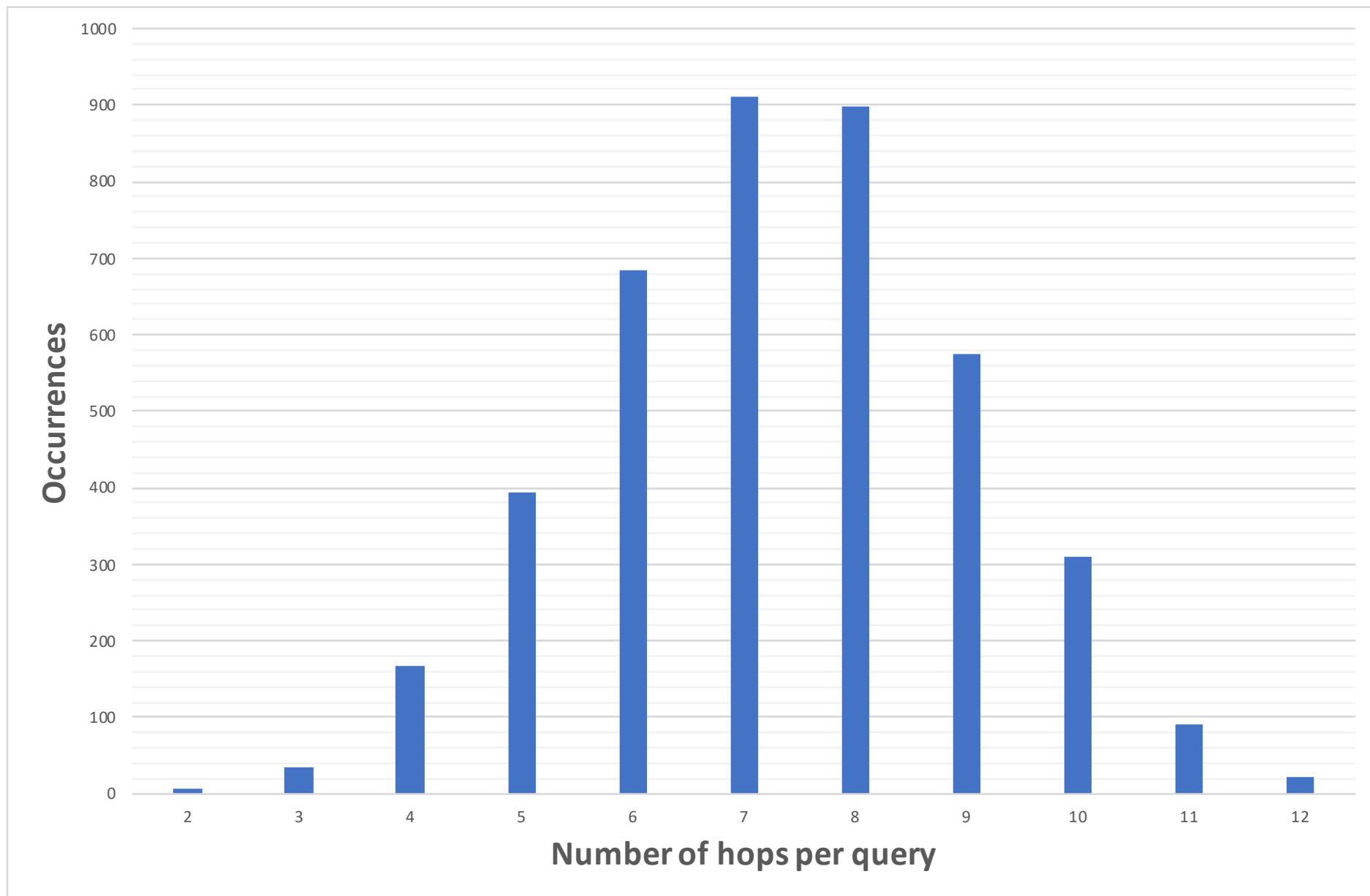
query_number	nodes
1	402
2	349
3	311
4	252
5	214
6	140
7	94
8	80
9	59
10	39
11	36
12	19
13	16
14	11
15	8
16	7
17	3
18	2
19	2
20	2
22	1
24	1

hops_per_query	times
2	9
3	26
4	109

5	252
6	409
7	507
8	407
9	213
10	91
11	25







distance	count
1	1008
2	895
3	742
4	726
5	620
6	503
7	445
8	444
9	346
10	329
11	254
12	231
13	221
14	194
15	162
16	125
17	97
18	106
19	86
20	78
21	69
22	69
23	53
24	65
25	39
26	32
27	22
28	20
29	34
30	25
31	23



32	22
33	9
34	13
35	14
36	13
37	9
38	5
39	3
40	6
41	10
42	2
43	3
44	2
45	2
47	2
48	3
50	1
51	2
52	2
53	1
55	1
57	1
60	2
66	1

query\_number

nodes

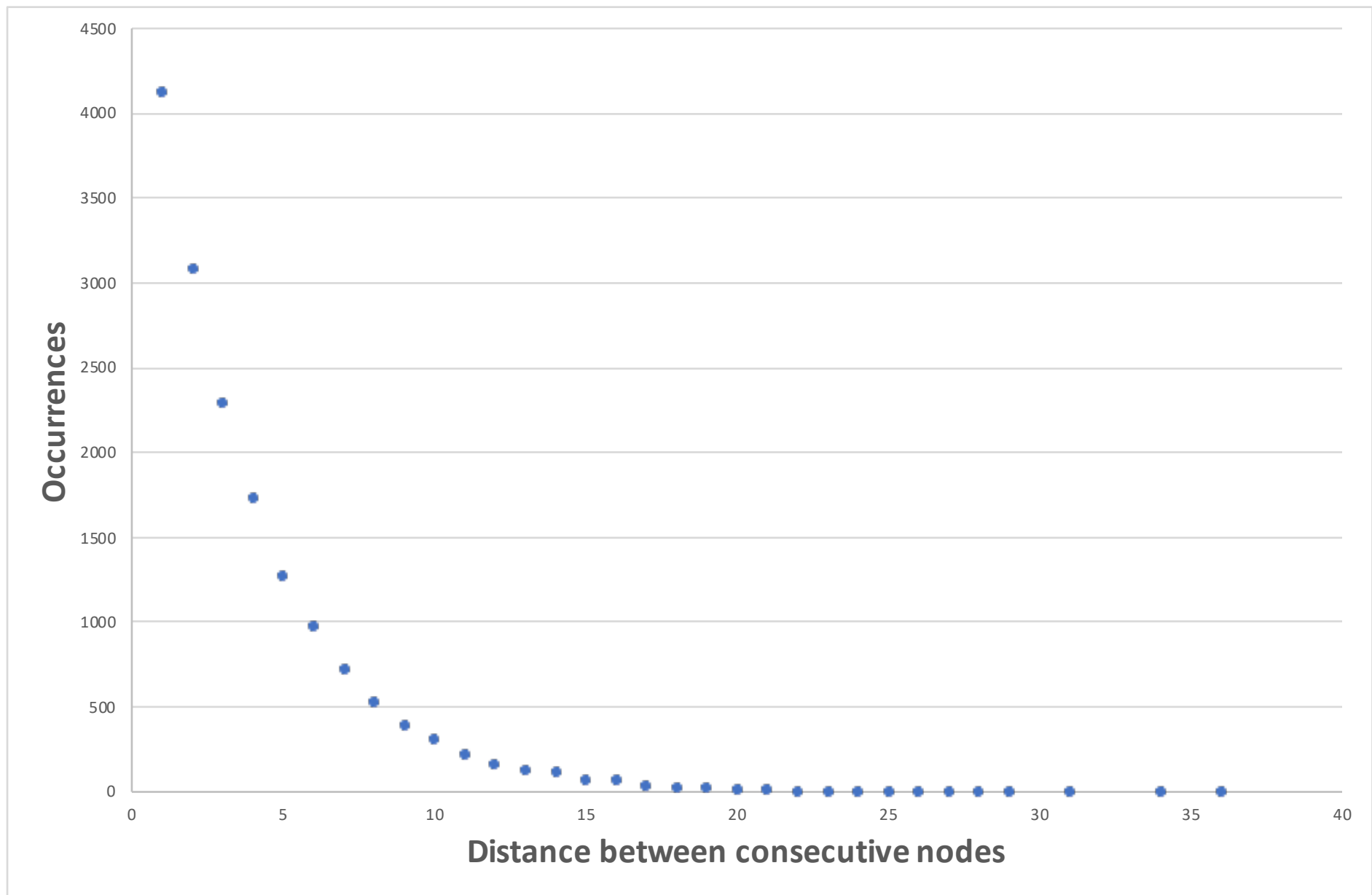
1	819
2	707
3	559
4	490
5	351
6	272

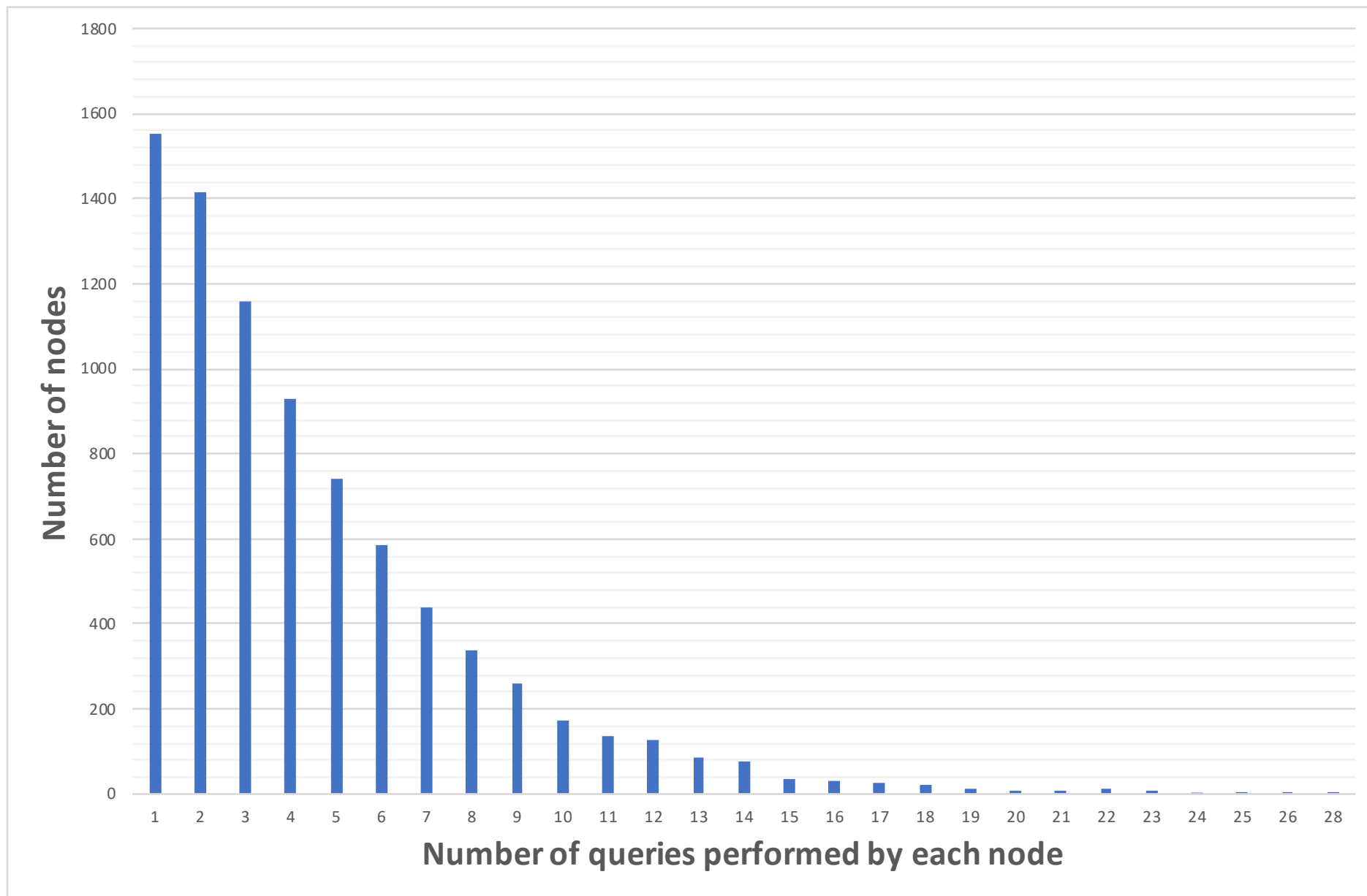
7	225
8	194
9	135
10	103
11	47
12	48
13	40
14	28
15	20
16	20
17	10
18	7
19	7
20	7
21	3
22	1
23	1
24	1
25	1

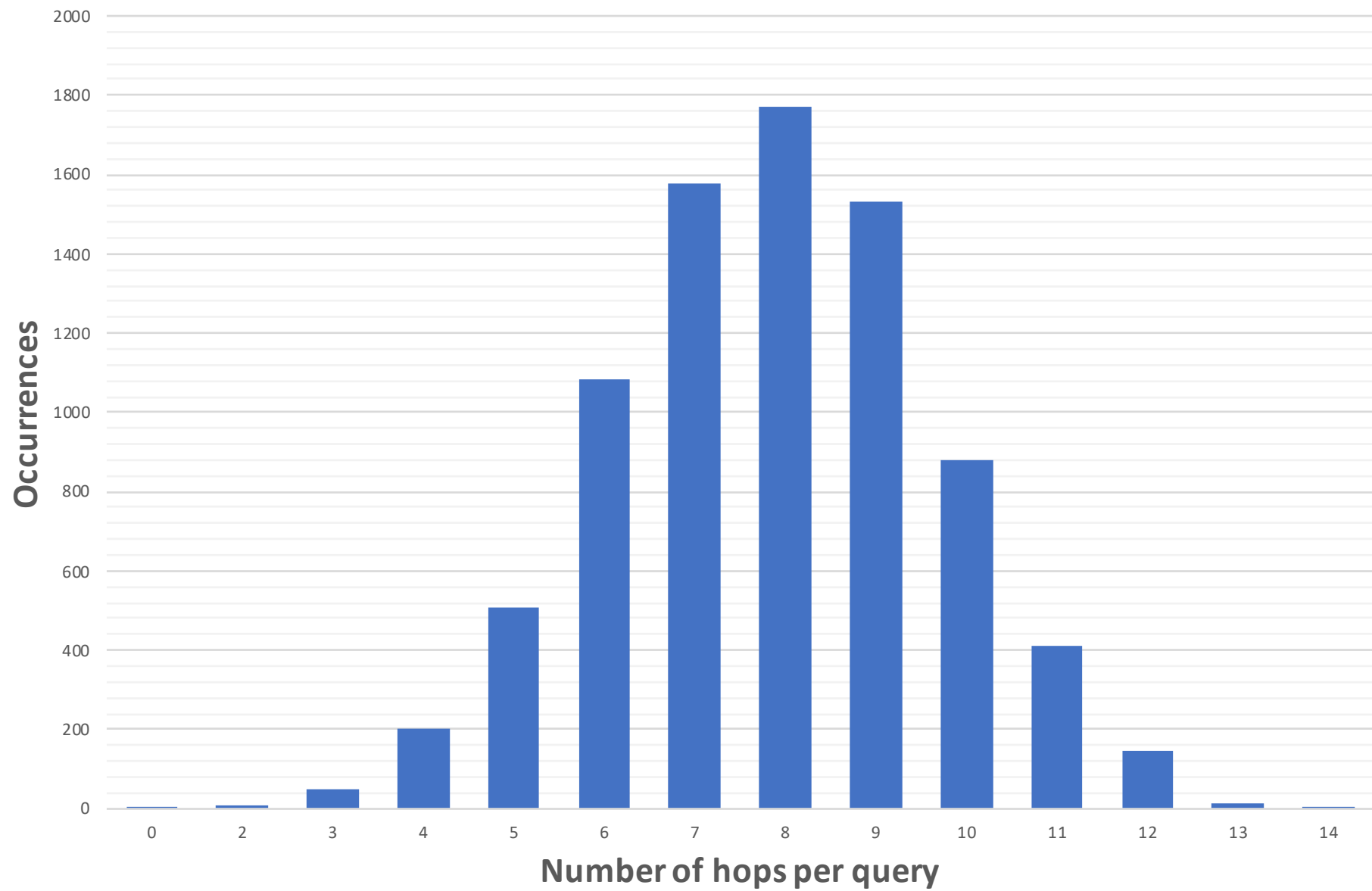
hops\_per\_query

times

2	6
3	35
4	168
5	395
6	684
7	912
8	897
9	576
10	311
11	90
12	22







distance	count
1	4132
2	3084
3	2290
4	1729
5	1272
6	979
7	722
8	535
9	389
10	317
11	225
12	163
13	123
14	122
15	67
16	69
17	42
18	27
19	24
20	17
21	14
22	7
23	7
24	7
25	2
26	3
27	4
28	7
29	2
31	1
34	1

36 1

query\_number

nodes

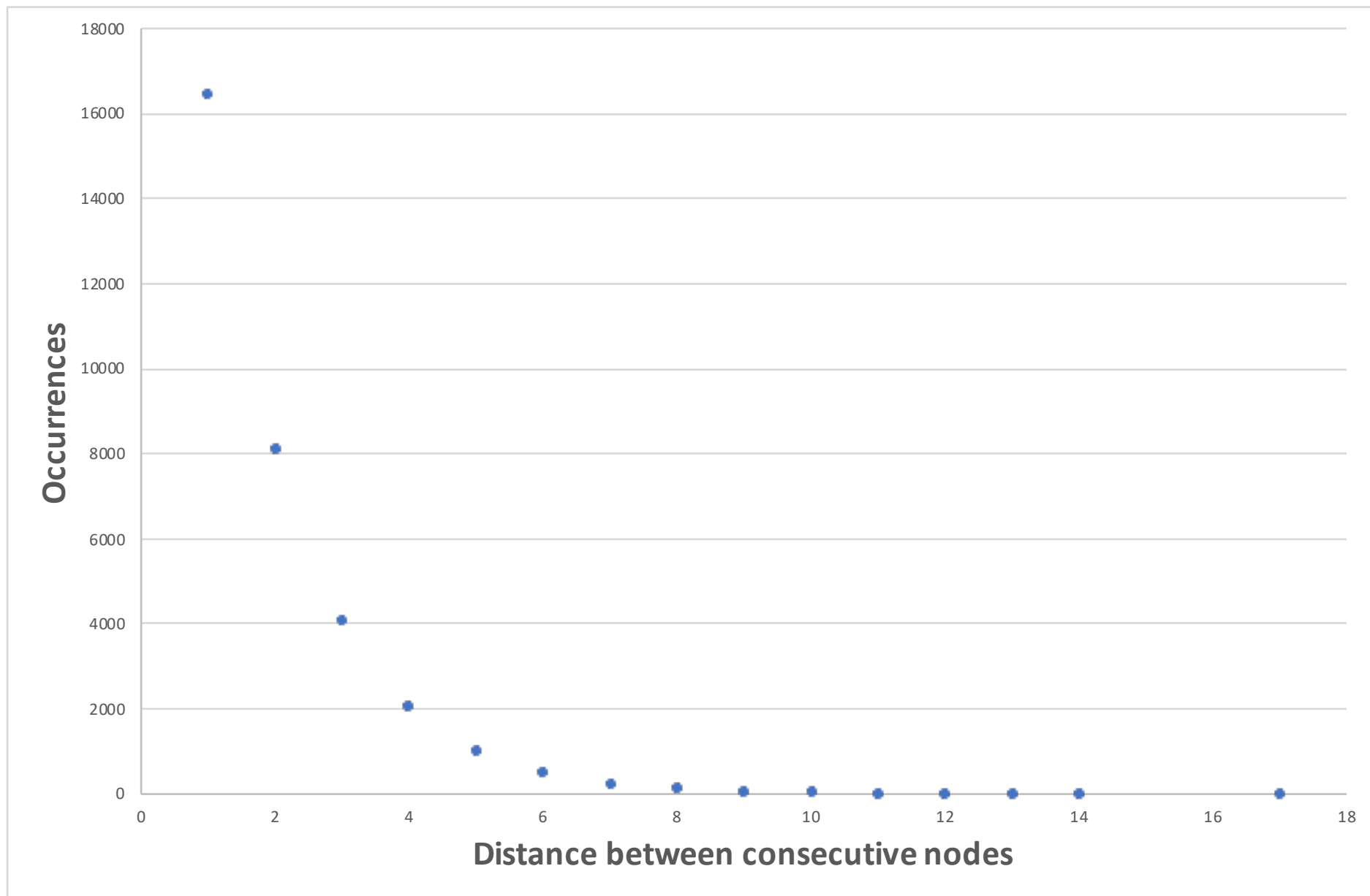
1	1554
2	1415
3	1157
4	931
5	742
6	584
7	440
8	340
9	261
10	173
11	138
12	129
13	87
14	76
15	37
16	29
17	24
18	21
19	13
20	6
21	7
22	12
23	7
24	5
25	2
26	1
28	1

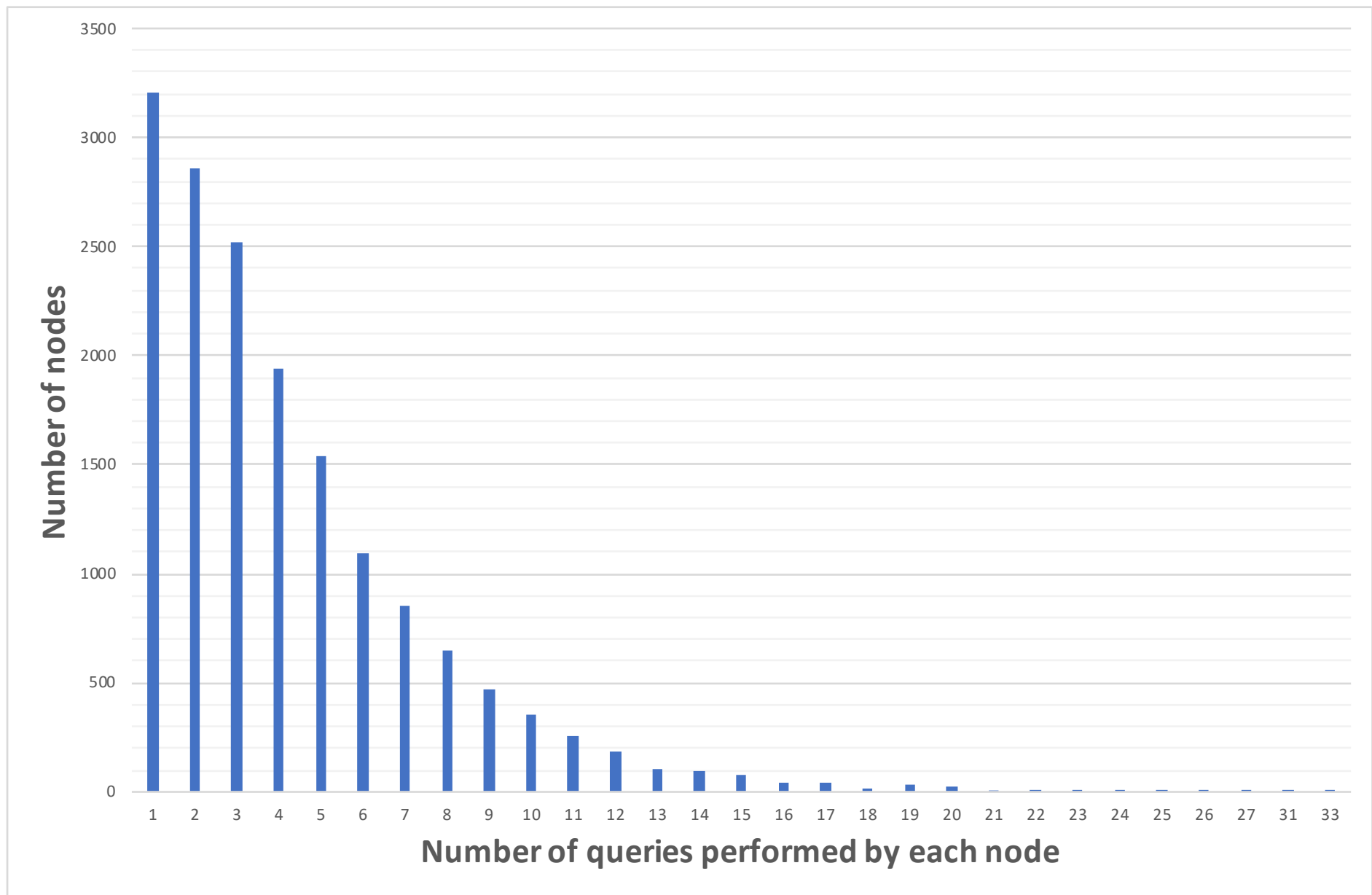
hops\_per\_query

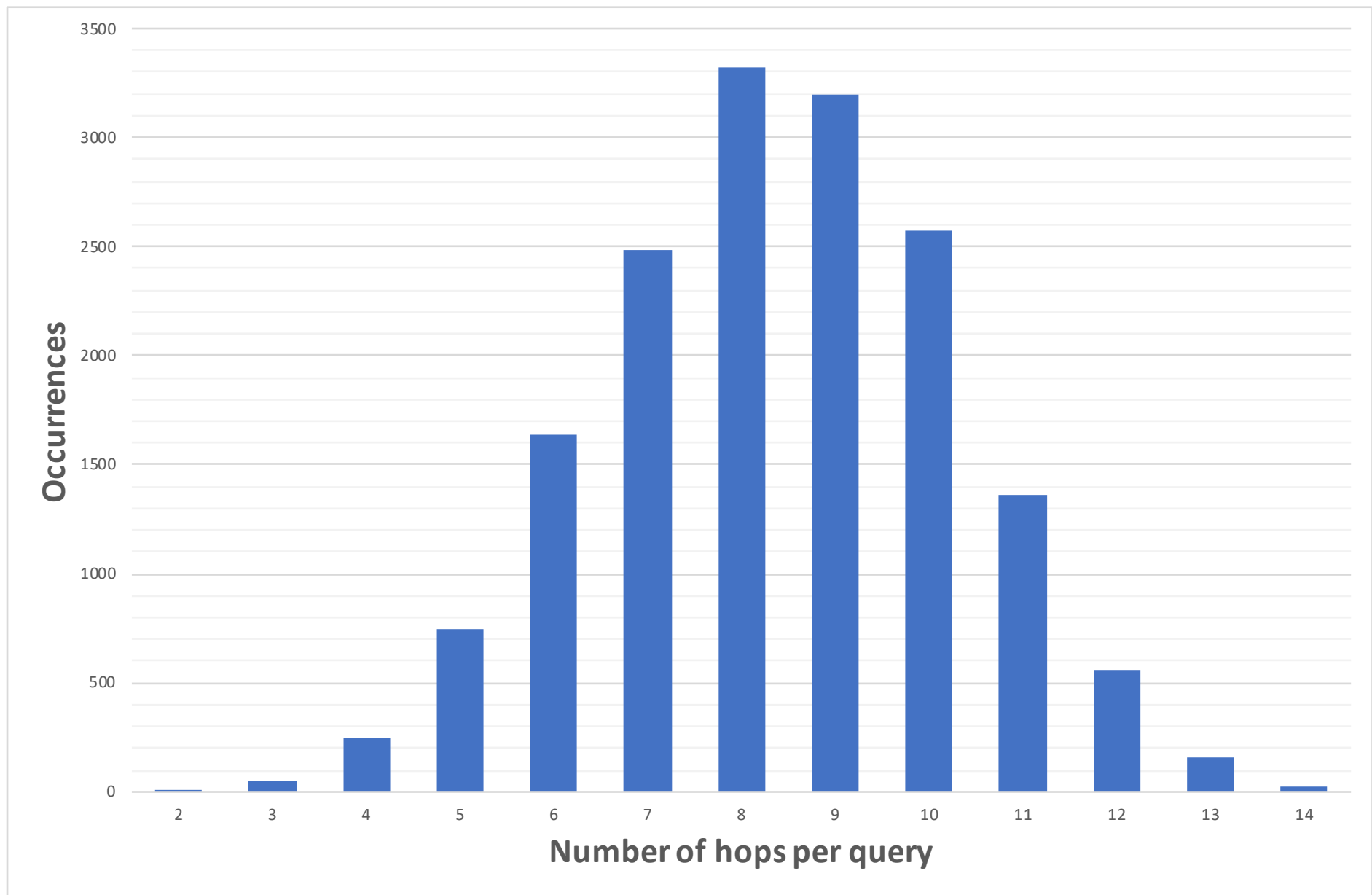
times

0	2
2	9
3	51
4	204
5	507
6	1085
7	1575
8	1772
9	1534
10	879
11	411
12	144
13	15
14	4









distance	count
1	16475
2	8103
3	4087
4	2052
5	1000
6	528
7	246
8	138
9	67
10	36
11	17
12	10
13	7
14	1
17	1

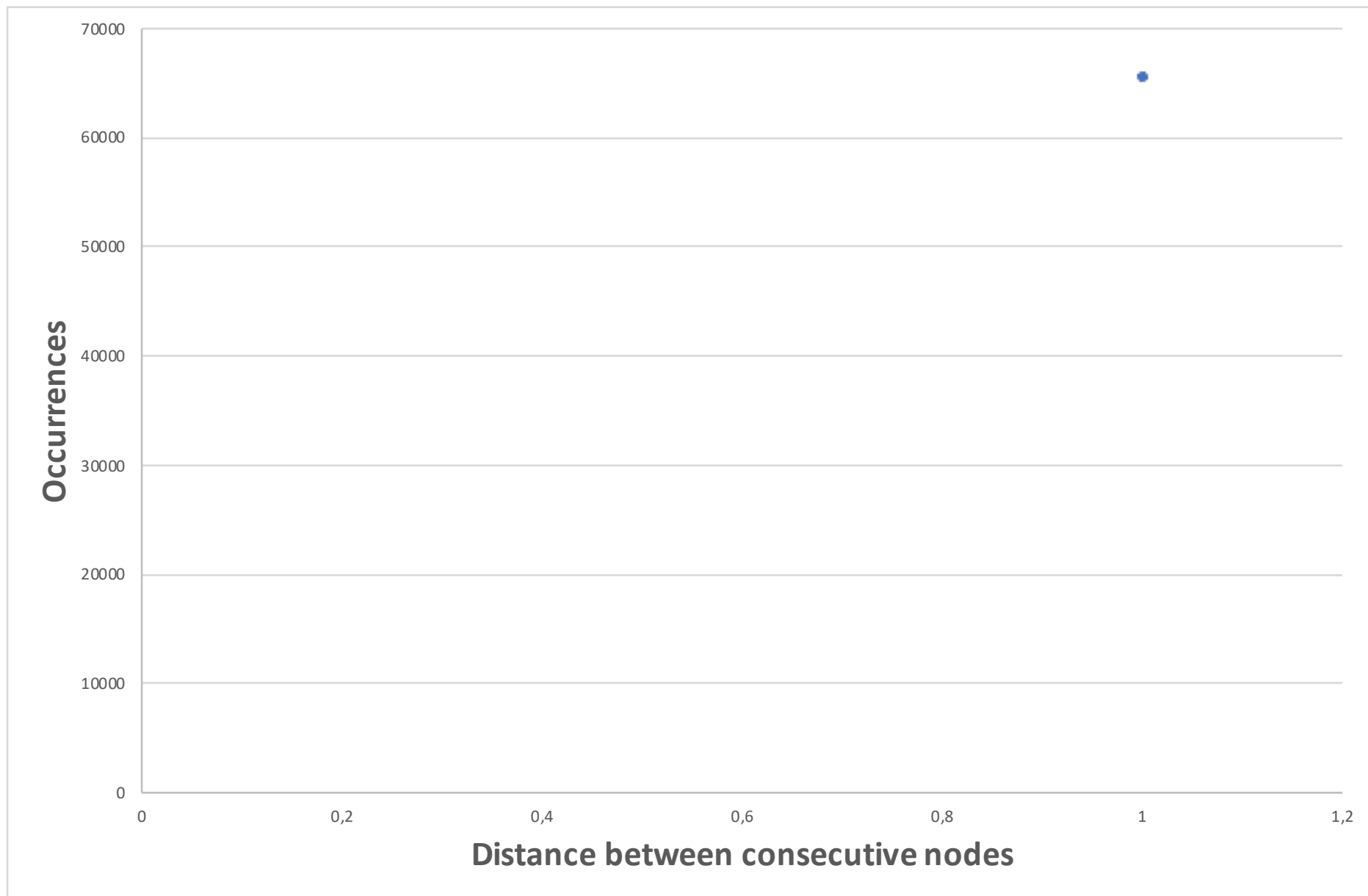
query_number	nodes
1	3204
2	2855
3	2519
4	1943
5	1538
6	1097
7	849
8	649
9	473
10	352
11	259
12	185
13	103
14	93

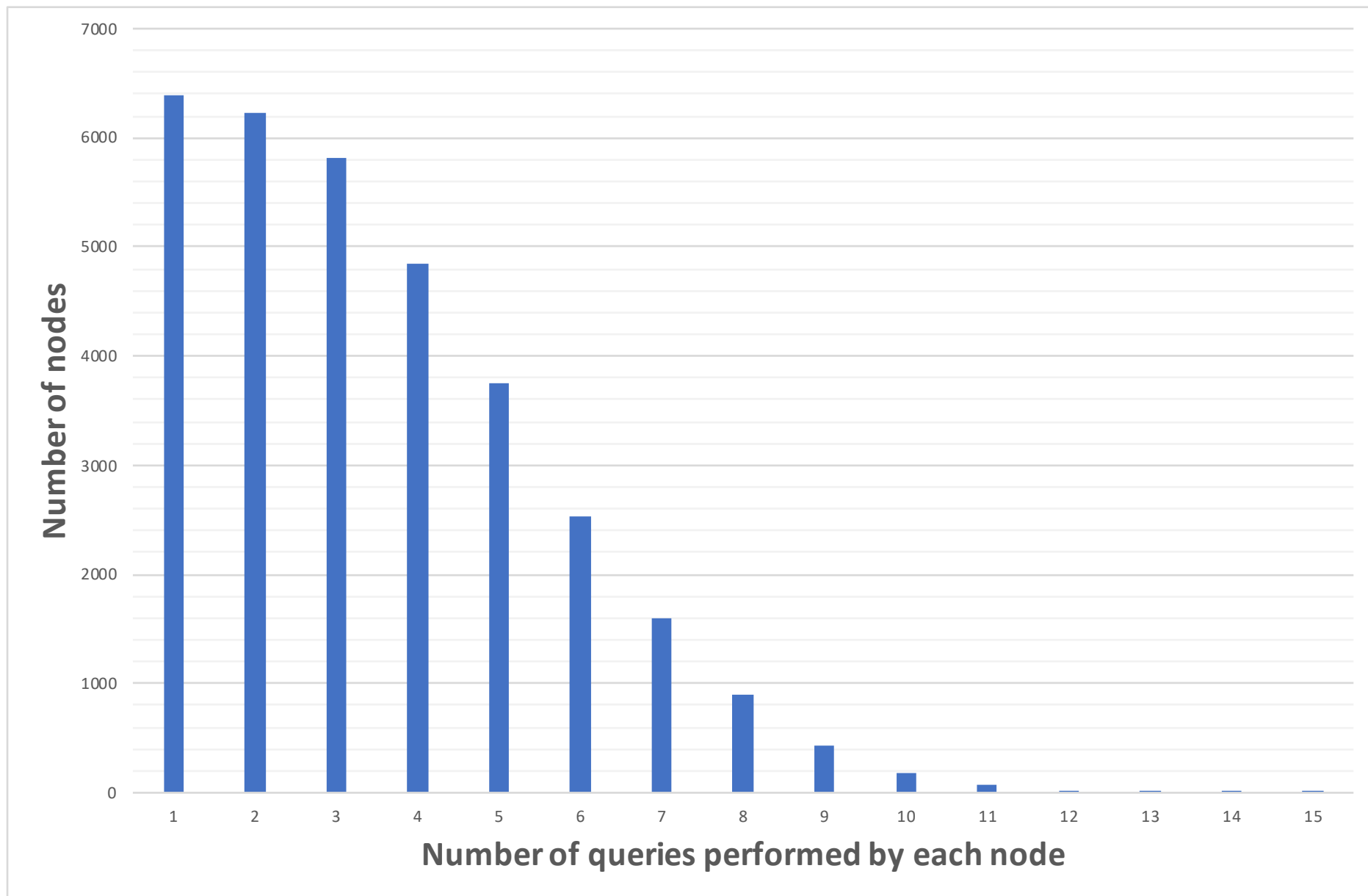
15	75
16	46
17	43
18	13
19	31
20	20
21	9
22	8
23	3
24	7
25	2
26	4
27	2
31	1
33	1

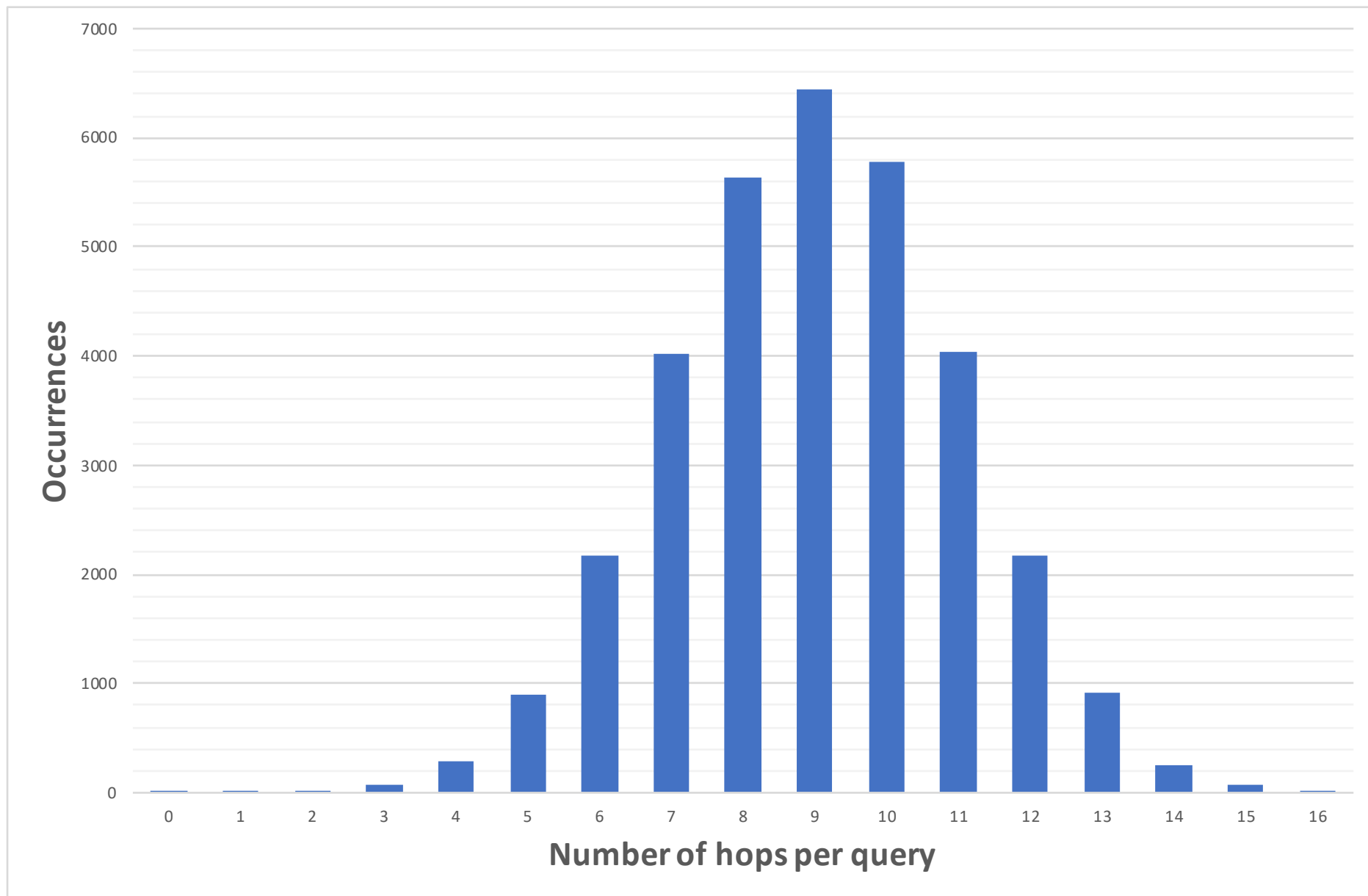
hops\_per\_query

times

2	2
3	54
4	250
5	750
6	1639
7	2481
8	3323
9	3201
10	2574
11	1365
12	560
13	160
14	25









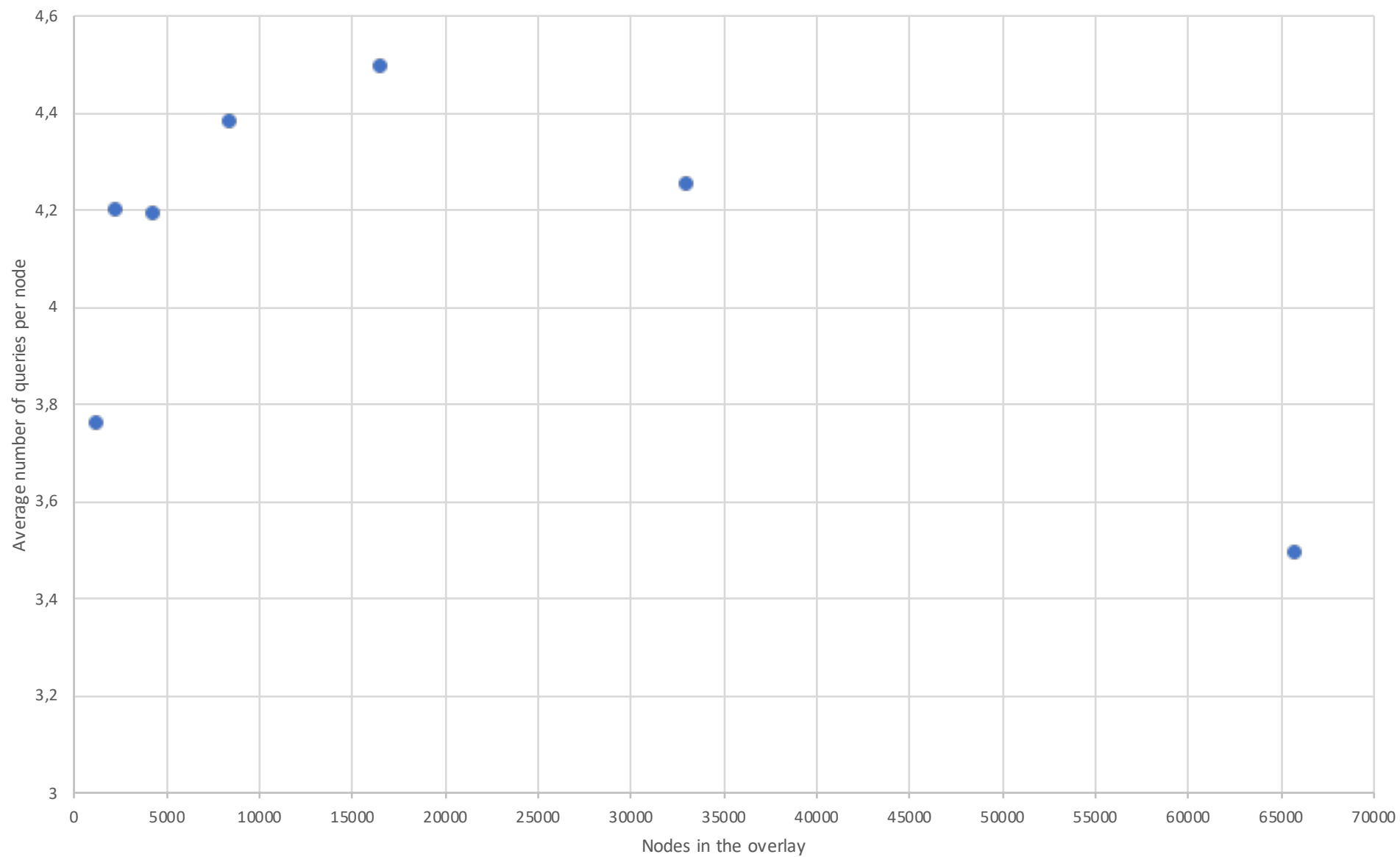
distance	count
1	65536

query_number	nodes
1	6396
2	6224
3	5810
4	4850
5	3748
6	2526
7	1606
8	906
9	434
10	172
11	67
12	15
13	11
14	1
15	2

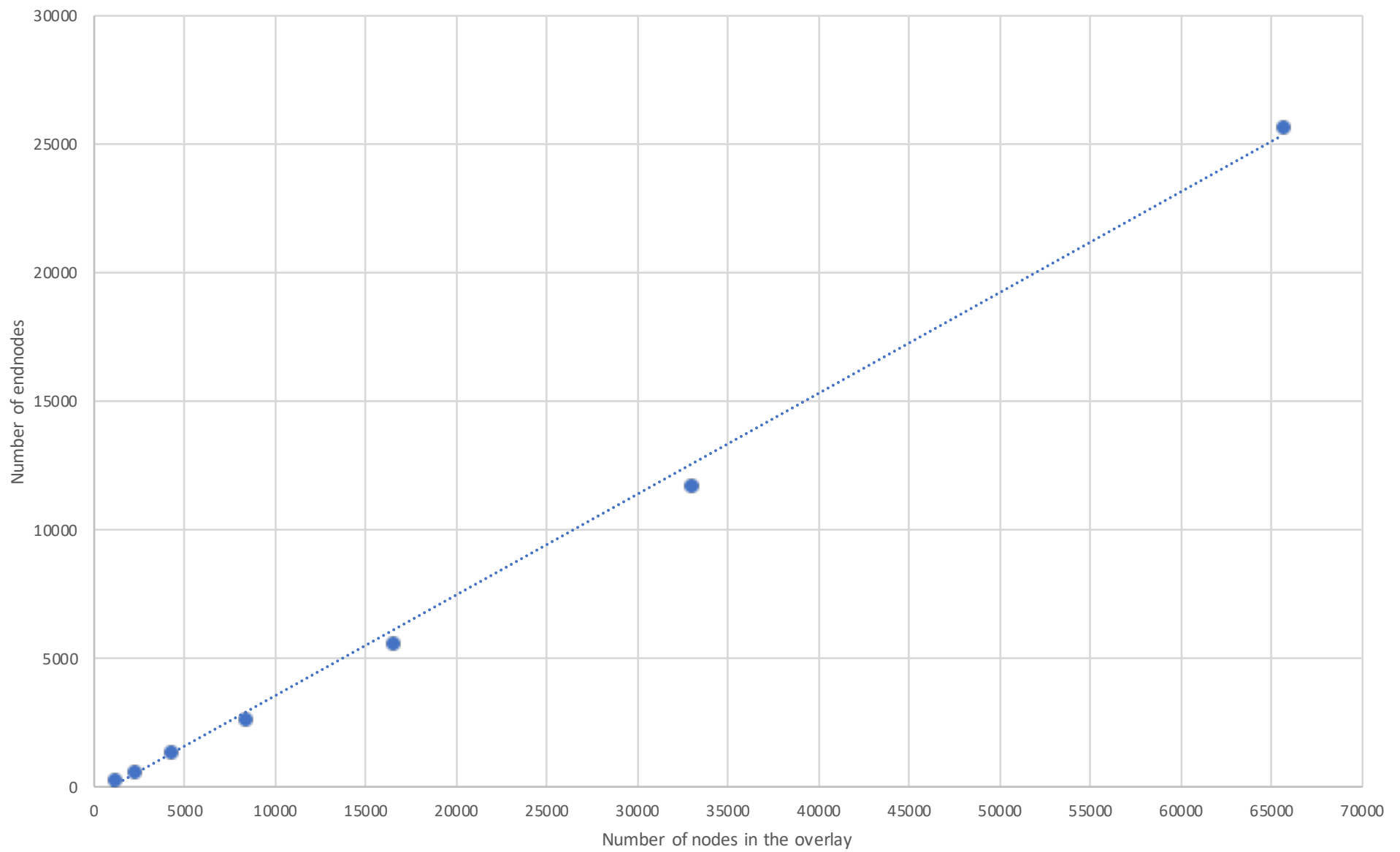
hops_per_query	times
0	1
1	1
2	12
3	70
4	289
5	890
6	2173
7	4023
8	5643
9	6446
10	5776

11	4037
12	2166
13	913
14	258
15	64
16	6

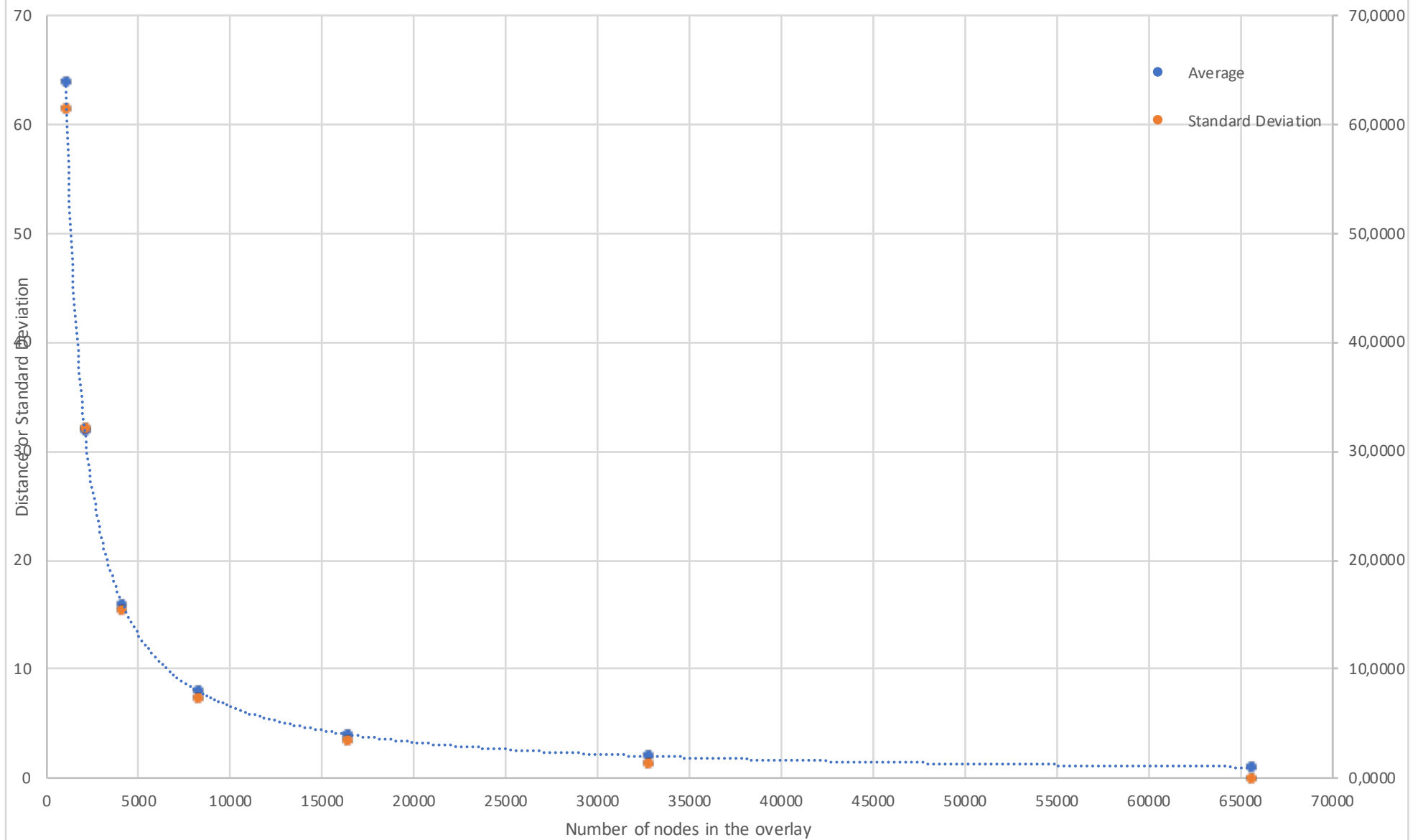
Average number of queries per node w.r.t. number of nodes in the overlay



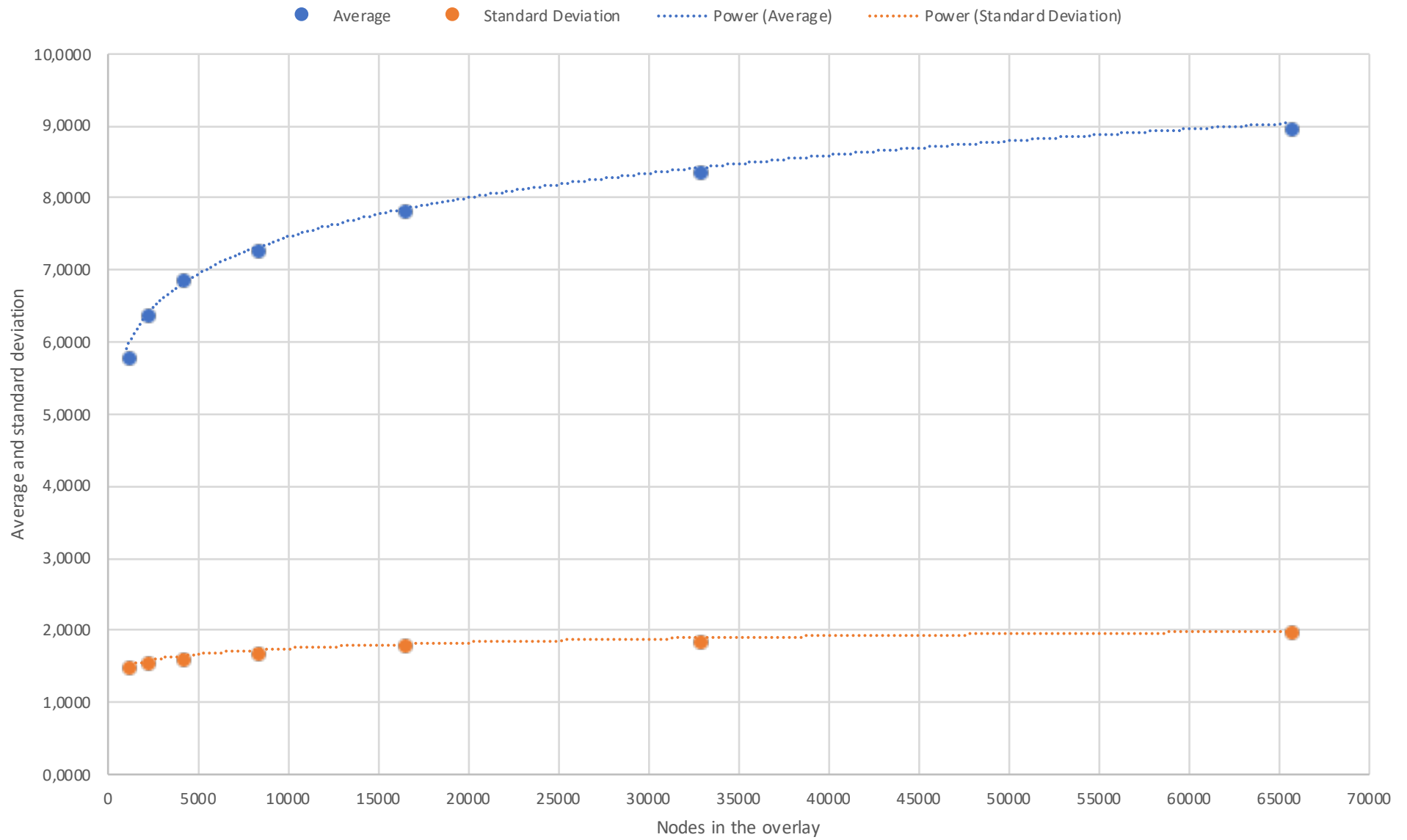
Number of nodes that are endnodes for at least one query, per number of nodes in the overlay



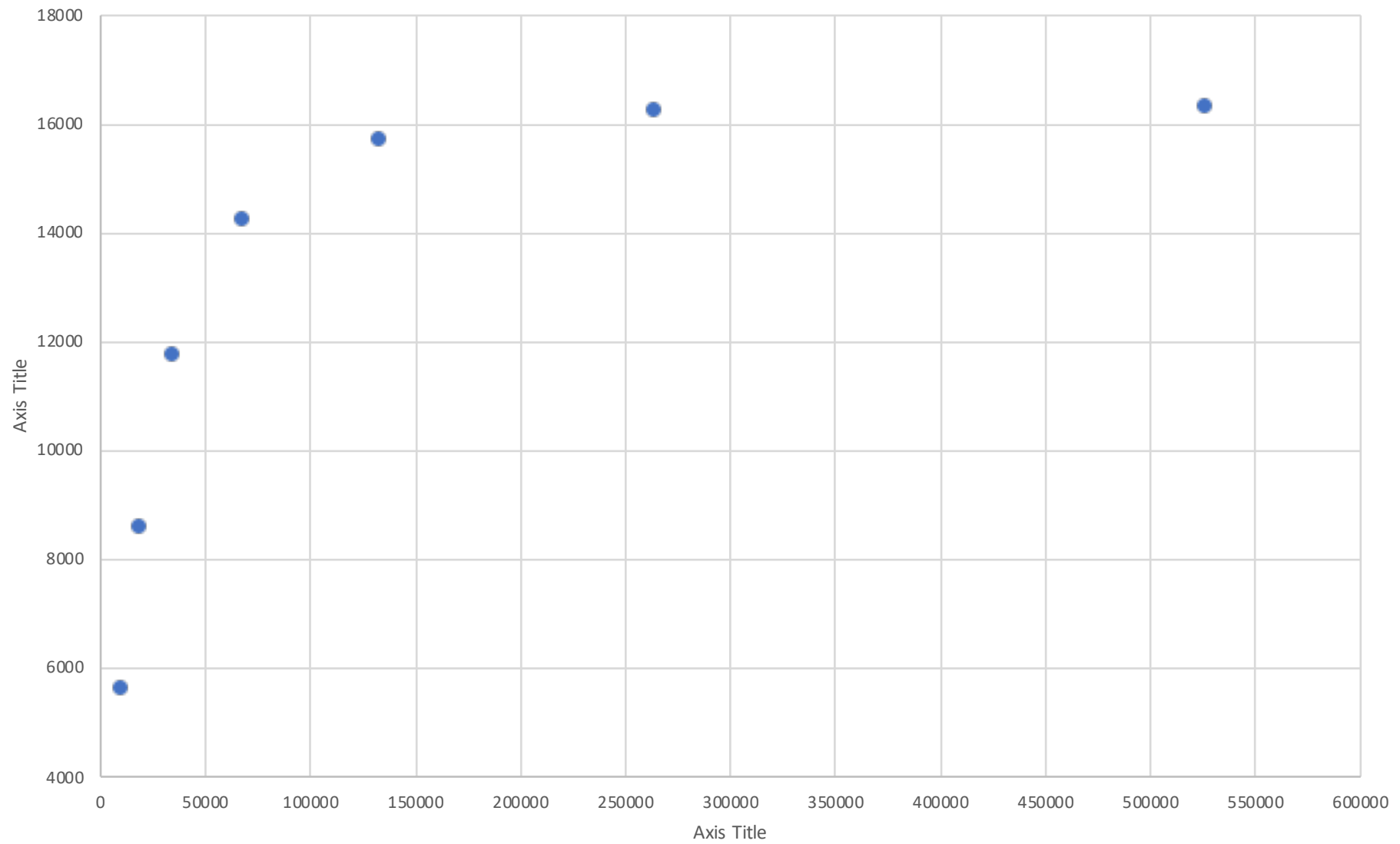
Average and standard deviation of distance between consecutive nodes



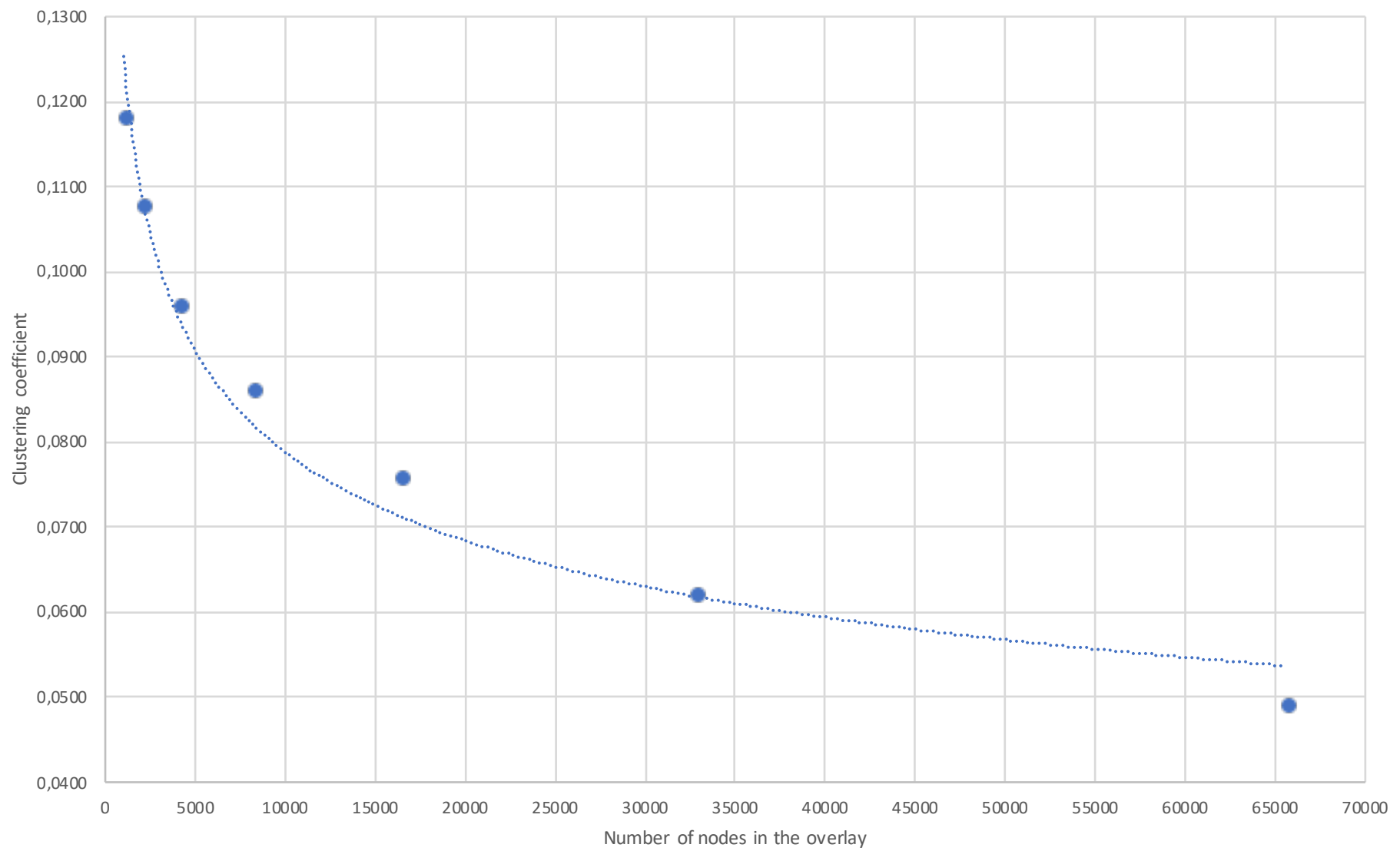
## Average and standard deviation of number of hops per query



Number of nodes that are endnodes for at least one query, per number of queries

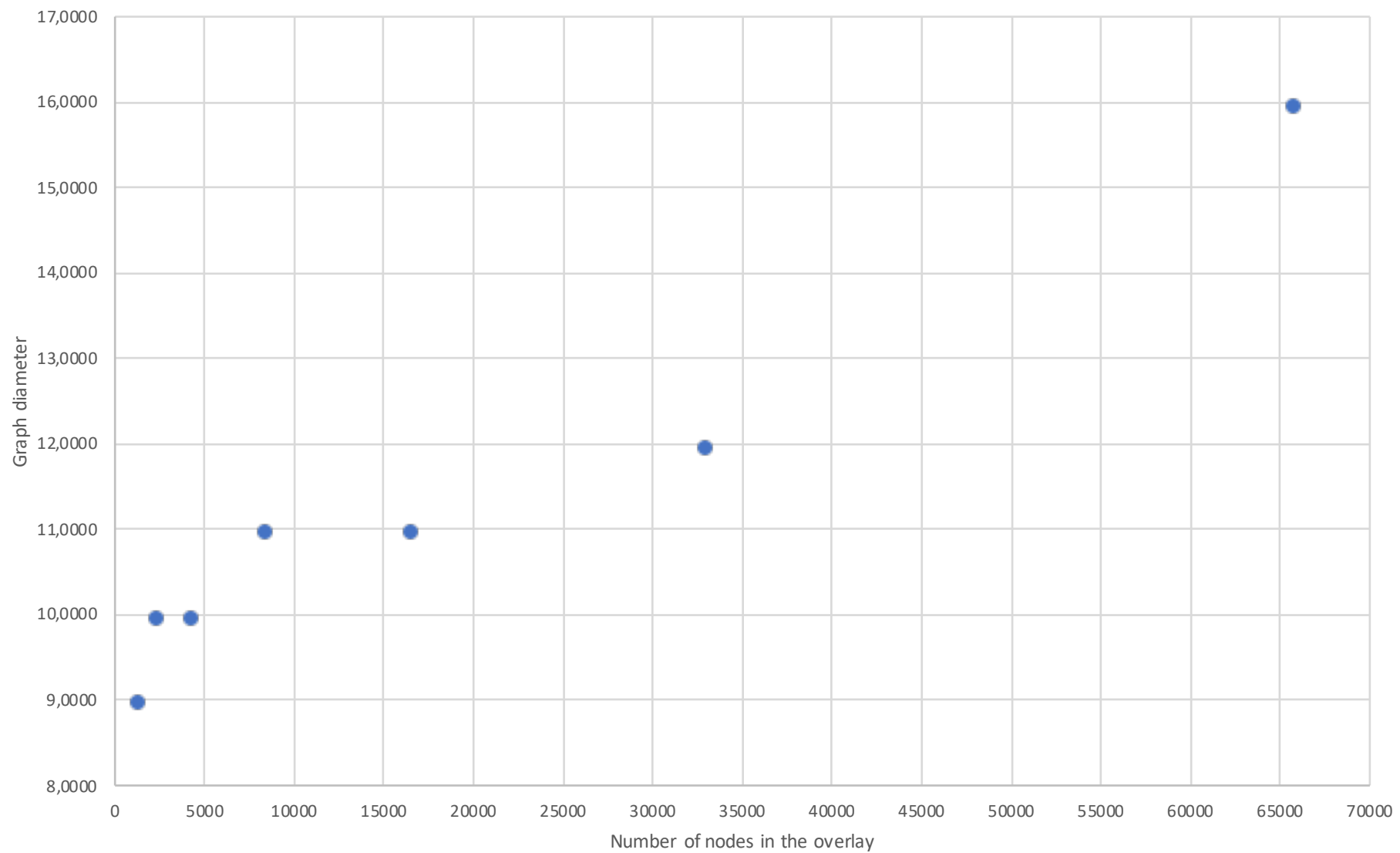


Clustering coefficient per number of nodes in the overlay

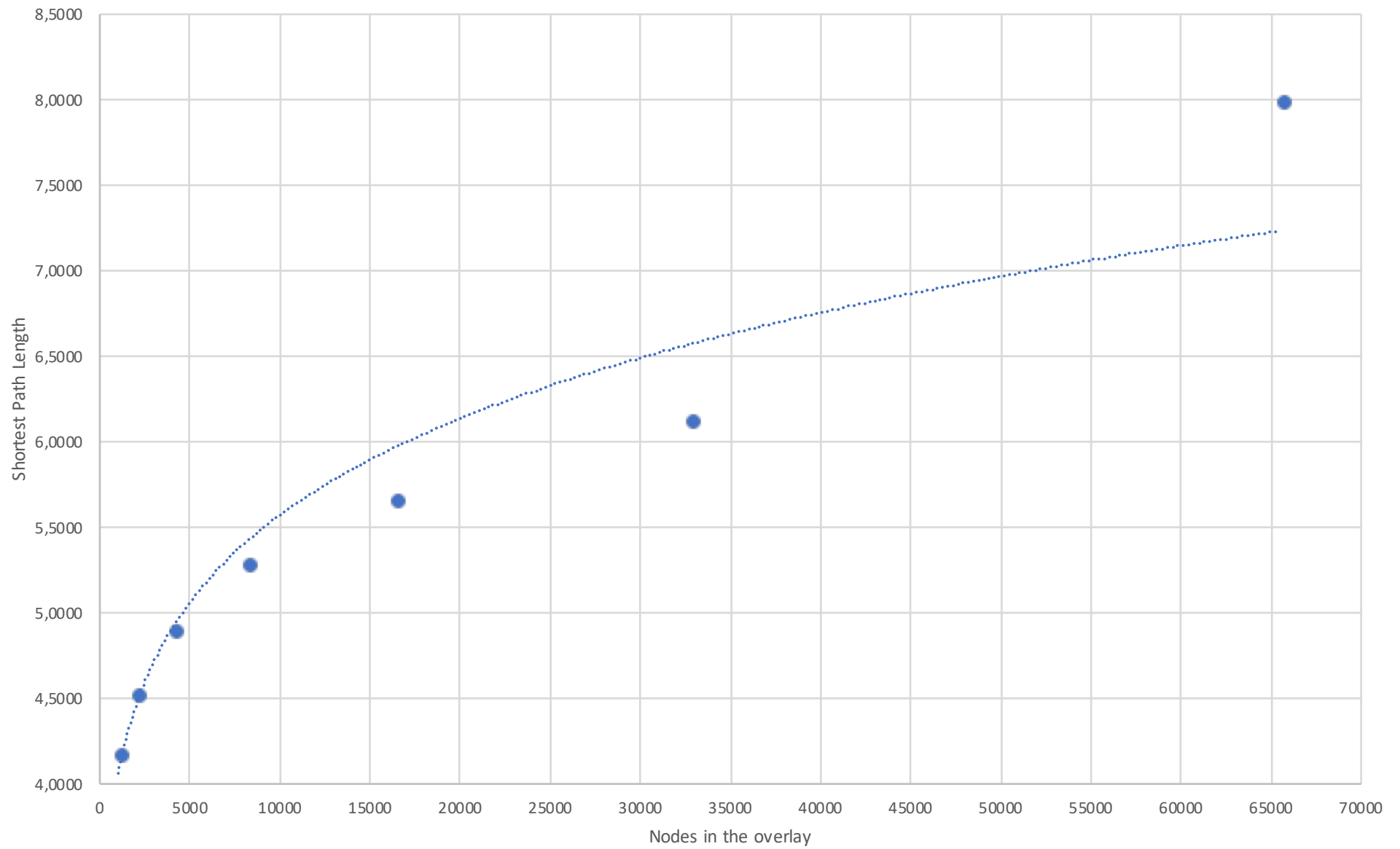




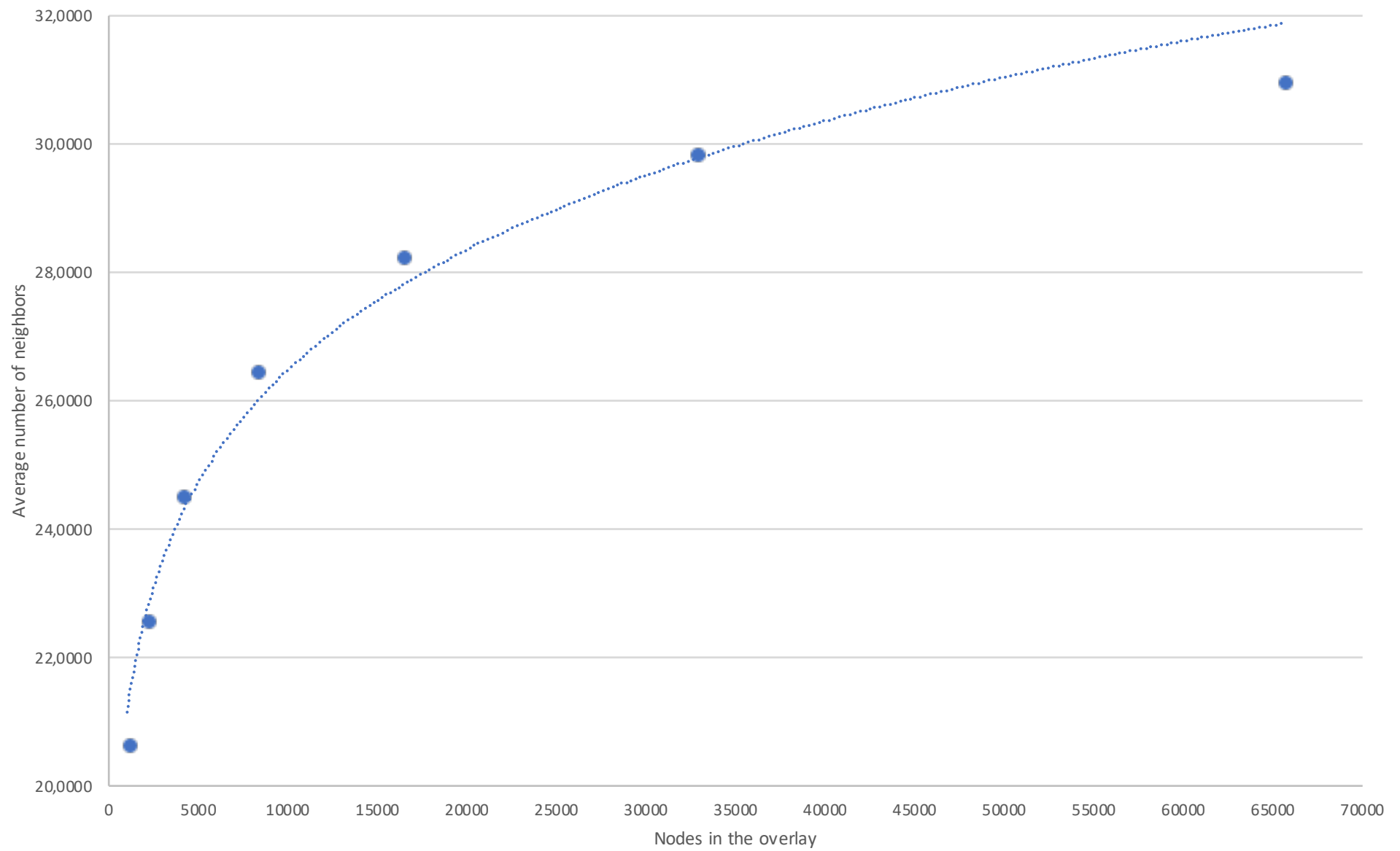
Graph diameter per number of nodes in the overlay



Average Shortest Path Length per nodes in the overlay



Average number of neighbors per nodes in the overlay



<b>1024</b>	avg_queries_per_node	3,76757813
	end_nodes	347
	average_distance	64
	std_dev_distance	61,41661
	avg_hops_per_query	5,80664063
	std_dev_hops_per_query	1,51802801

<b>2048</b>	avg_queries_per_node	4,20898438
	end_nodes	665
	average_distance	32
	std_dev_distance	32,20248
	avg_hops_per_query	6,40332031
	std_dev_hops_per_query	1,56513176

<b>4096</b>	avg_queries_per_node	4,19873047
	end_nodes	1408
	average_distance	16
	std_dev_distance	15,49193
	avg_hops_per_query	6,91064453
	std_dev_hops_per_query	1,63886035

<b>8192</b>	avg_queries_per_node	4,38964844
	end_nodes	2760
	average_distance	8
	std_dev_distance	7,416198
	avg_hops_per_query	7,31835938
	std_dev_hops_per_query	1,71596787

<b>16384</b>	avg_queries_per_node	4,5045166
	end_nodes	5658
	average_distance	4

N. Nodes	Avg. queries	Endnodes	Avg. Distance	StDev Distance
1024	3,76757813	347	64	61,4166
2048	4,20898438	665	32	32,2025
4096	4,19873047	1408	16	15,4919
8192	4,38964844	2760	8	7,4162
16384	4,5045166	5658	4	3,4641
32768	4,26184082	11810	2	1,4142
65536	3,50311279	25754	1	0,0000

N. Queries	Endnodes
8192	5690
16384	8657
32768	11818
65536	14343
131072	15782
262144	16307
524288	16383

std_dev_distance	3,464102
avg_hops_per_query	7,85266113
std_dev_hops_per_query	1,81085465

<b>32768</b>	avg_queries_per_node	4,26184082
	end_nodes	11810
	average_distance	2
	std_dev_distance	1,414214
	avg_hops_per_query	8,387146
	std_dev_hops_per_query	1,88790049

<b>65536</b>	avg_queries_per_node	3,50311279
	end_nodes	25754
	average_distance	1
	std_dev_distance	0
	avg_hops_per_query	8,99945068
	std_dev_hops_per_query	2,00009148

Avg. Hops	StDev Hops	ClusteringCoeff	Diameter	Avg. SPL	Avg.Neighbors
5,8066	1,5180	0,1184	9,0000	4,1872	20,6680
6,4033	1,5651	0,1081	10,0000	4,5363	22,5986
6,9106	1,6389	0,0963	10,0000	4,9077	24,5601
7,3184	1,7160	0,0863	11,0000	5,2932	26,4954
7,8527	1,8109	0,0761	11,0000	5,6739	28,2715
8,3871	1,8879	0,0624	12,0000	6,1426	29,8745
8,9995	2,0001	0,0495	16,0000	8,0001	31,0000