# $bigbrotr\_data\_overview$

July 4, 2025

# 1 Bigbrotr Database Data Overview

### 1.1 Database Schema

'Events'

column_name	data_type
:	- :
id	character
pubkey	character
created_at	bigint
kind	integer
tags	jsonb
content	text
sig	character

## 'Events\_relays'

column_n	ame	data_type
:		:
event_id	. 1	character
relay_ur	1	text
seen_at	1	bigint

### 'Relay\_metadata'

column_name	data_type
:	- :
relay_url	text
generated_at	bigint
connection_success	boolean
nip11_success	boolean
openable	boolean
readable	boolean
writable	boolean
rtt_open	integer
rtt_read	integer

rtt_write	integer	
name	text	
description	text	
banner	text	
icon	text	
pubkey	text	
contact	text	
supported_nips	jsonb	
software	text	
version	text	
privacy_policy	text	
<pre>  terms_of_service</pre>	text	
limitation	jsonb	
extra_fields	jsonb	

## 'Relays'

column_name	data_type
:	:
url	text
network	text
inserted_at	bigint

# 1.2 Row Counts per Table

Analisi dello spazio per tabella:

### TABELLA: events

Numero righe: 172132336

Colonna	Avg (bytes)	Totale (GB)
id	65.00	10.42
pubkey	65.00	10.42
created_at	8.00	1.28
kind	4.00	0.64
tags	287.11	46.03
content	340.92	54.65
sig	132.00	21.16

Totale dati stimati: 144.61 GB

# Indici:

Indice	Size (GB)
events_pkey	20.00
idx_events_pubkey	3.63
idx_events_created_at	3.08
idx_events_kind	1.45

idx\_events\_kind\_created\_at 5.48

Totale indici: 33.65 GB

Totale complessivo stimato: 178.25 GB

TABELLA: relays
Numero righe: 8865

 Colonna
 Avg (bytes)
 Totale (GB)

 url
 30.61
 0.00

 network
 8.48
 0.00

 inserted\_at
 8.00
 0.00

Totale dati stimati: 0.00 GB

Indici:

Indice Size (GB) relays\_pkey 0.00

Totale indici: 0.00 GB

Totale complessivo stimato: 0.00 GB

TABELLA: events\_relays
Numero righe: 788099004

 Colonna
 Avg (bytes)
 Totale (GB)

 event\_id
 65.00
 47.71

 relay\_url
 25.09
 18.41

 seen\_at
 8.00
 5.87

Totale dati stimati: 71.99 GB

Indici:

Indice Size (GB)
events\_relays\_pkey 117.02
idx\_events\_relays\_event\_id 26.76
idx\_events\_relays\_relay\_url 4.94
idx\_events\_relays\_seen\_at 7.72

Totale indici: 156.44 GB

Totale complessivo stimato: 228.44 GB

TABELLA: relay\_metadata

Numero righe: 56179

Colonna Avg (bytes) Totale (GB) 34.32 0.00 relay\_url generated\_at 8.00 0.00 1.00 0.00 connection\_success nip11\_success 1.00 0.00 openable 1.00 0.00 readable 1.00 0.00 1.00 writable 0.00

rtt_open	4.00	0.00
rtt_read	4.00	0.00
rtt_write	4.00	0.00
name	21.00	0.00
description	46.44	0.00
banner	1.52	0.00
icon	52.65	0.00
pubkey	61.40	0.00
contact	21.28	0.00
supported_nips	14.06	0.00
software	42.00	0.00
version	7.35	0.00
privacy_policy	29.72	0.00
terms_of_service	25.00	0.00
limitation	118.24	0.01
extra_fields	54.31	0.00

Totale dati stimati: 0.03 GB

#### Indici:

Indice	Size (GB)
relay_metadata_pkey	0.00
idx_relay_metadata_relay_url	0.00
<pre>idx_relay_metadata_generated_at</pre>	0.00
idx_relay_metadata_connection_suc	cess 0.00
<pre>idx_relay_metadata_nip11_success</pre>	0.00

Totale indici: 0.01 GB

Totale complessivo stimato: 0.04 GB

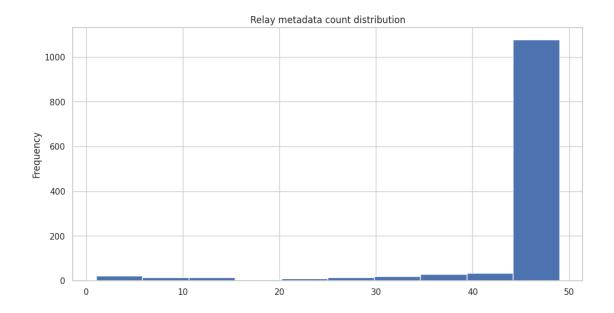
# 1.3 Relays Overview

Total relays: 8865, with metadata: 1238 (13.97%) Network distribution for relays with metadata:

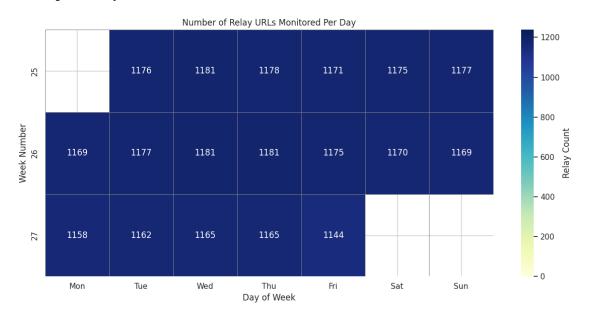
- clearnet: 990 (79.97%) - tor: 248 (20.03%)

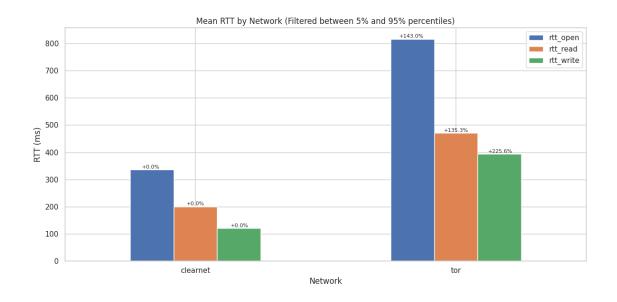
 $\verb| <Axes: title={"center": "Relay metadata count distribution"|}, \\$ 

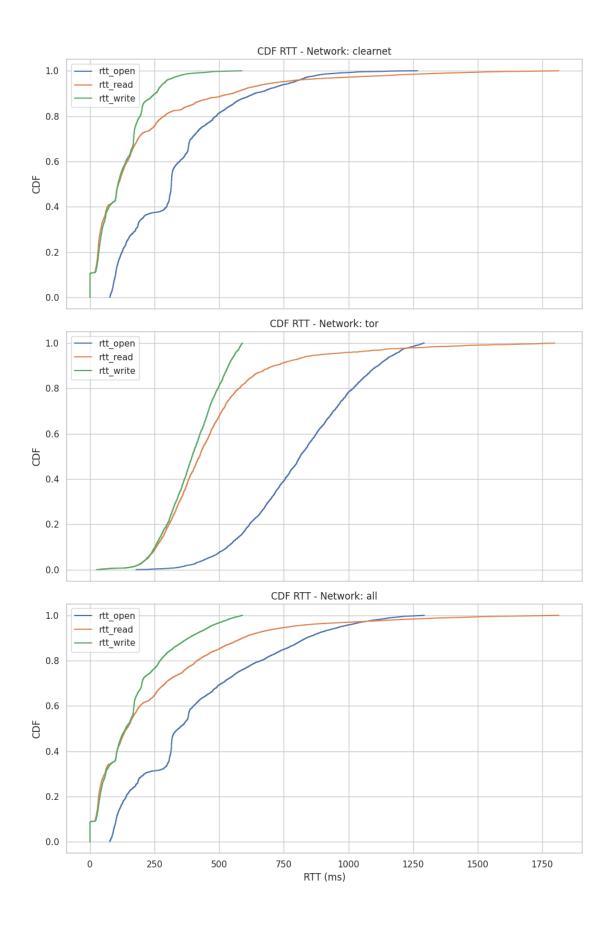
ylabel='Frequency'>



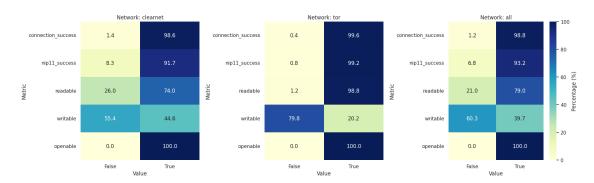
### Total unique relays with metadata: 1238







#### Percentage of Relays per Metric



#### Network: clearnet

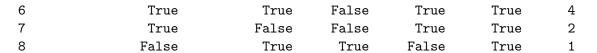
	connection_success	nip11_success	readable	writable	openable	count
0	True	True	True	True	True	418
1	True	True	True	False	True	273
2	True	True	False	False	True	199
3	True	False	False	False	True	49
4	True	False	True	False	True	19
5	True	False	True	True	True	12
6	True	True	False	True	True	4
7	True	False	False	True	True	2
8	False	True	True	False	True	1

### Network: tor

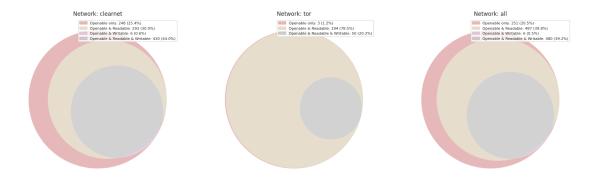
	connection_success	nip11_success	readable	writable	openable	count
0	True	True	True	False	True	192
1	True	True	True	True	True	50
2	True	True	False	False	True	3
3	True	False	True	False	True	2

### Network: all

	connection_success	nip11_success	readable	writable	openable	count
0	True	True	True	True	True	468
1	True	True	True	False	True	465
2	True	True	False	False	True	202
3	True	False	False	False	True	49
4	True	False	True	False	True	21
5	True	False	True	True	True	12



Relay Status Combinations



Percentage of Relays per NIP-11 Column and Network (Sorted by Clearnet-Tor Gap)							
	description	88.4	20.6	74.8			
	pubkey	73.7	9.7	60.9			
	contact	62.8	8.1	51.9		- 80	
	icon	41.1	5.2	33.9			
	extra_fields	56.5	85.9	62.4			
Column	limitation	63.1	84.7	67.4		- 60 🛞	
NIP-11 Col	software	91.3	99.6	93.0		- 6 Bercentage (%)	
	name	91.4	99.6	93.1		- 40 Đ	
	version	91.1	99.2	92.7		<u> </u>	
	banner	5.6	0.0	4.4			
	supported_nips	84.5	87.9	85.2		- 20	
	terms_of_service	0.7	0.8	0.7			
	privacy_policy	0.4	0.4	0.4			
clearnet			tor Network	all		<del>-</del> 0	

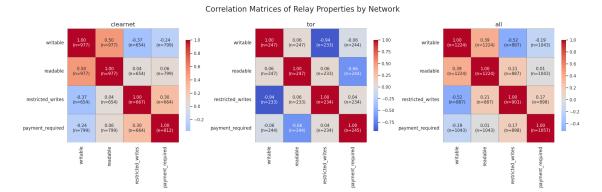
	Percentage of Relays per Limitation Type and Network (Ordered by Clearnet-Tor Gap)						
	restricted_writes	30.5	79.0	40.2	- 80		
	payment_required	45.2	83.5	52.8			
	max_limit	31.8	2.0	25.8	70		
	max_message_length	32.0	2.4	26.1	<del>-</del> 70		
	max_subscriptions	31.5	2.4	25.7			
	auth_required	18.7	1.2	15.2	- 60		
	max_event_tags	15.1	1.2	12.3			
Φ	max_filters	14.1	0.4	11.4	- 50 🙃		
Тур	min_pow_difficulty	13.6	0.8	11.1	е (%		
Limitation Type	max_content_length	12.8	0.4	10.3	- 00 00 00 00 00 00 00 00 00 00 00 00 00		
mita	max_subid_length	10.4	0.8	8.5	erce!		
:=	min_prefix	8.8	0.4	7.1			
	created_at_lower_limit	6.6	0.4	5.3	- 30		
	created_at_upper_limit	6.6	0.4	5.3			
max	x_event_time_older_than_now	1.1	0.0	0.9	- 20		
max	_event_time_newer_than_now	1.1	0.0	0.9			
	max_subscription	0.6	0.0	0.5	- 10		
	max_file_size	0.1	0.0	0.1			
	default_limit	0.1	0.0	0.1	- 0		
		clearnet	tor Network	all	-0		

Percentage of Relays per Extra Field and Network (Ordered by Clearnet-Tor Gap)							
	id	26.7	83.9	38.1		- 80	
	negentropy	14.1	0.8	11.5		- 70	
	fees	10.5	1.2	8.6			
	payments_url	10.1	1.2	8.3		70	
SI	upported_nip_extensions	7.5	0.4	6.1			
	posting_policy	4.6	0.0	3.7		00 - 09 - Percentage (%)	
	retention	1.8	0.0	1.5			
-	services	1.0	0.0	0.8			
Field	config	0.6	0.0	0.5			
Extra Field	canonical_url	0.9	0.4	0.8	- 40		
نت	icon_url	0.3	0.0	0.2		Perc	
	tags	0.3	0.0	0.2	- 30		
	language_tags	0.6	0.4	0.6			
	git_commit_sha	0.2	0.0	0.2		- 20	
	payment_url	0.2	0.0	0.2			
	nip50	0.1	0.0	0.1	- 10		
	pub_key	0.1	0.0	0.1			
	relay_countries	0.4	0.4	0.4		- 0	
		clearnet	tor Network	all		- 0	

Number of relays in cleanet and tor: 1238

Number of relays in cleanet: 990

## Number of relays in tor: 248



#### Network: clearnet

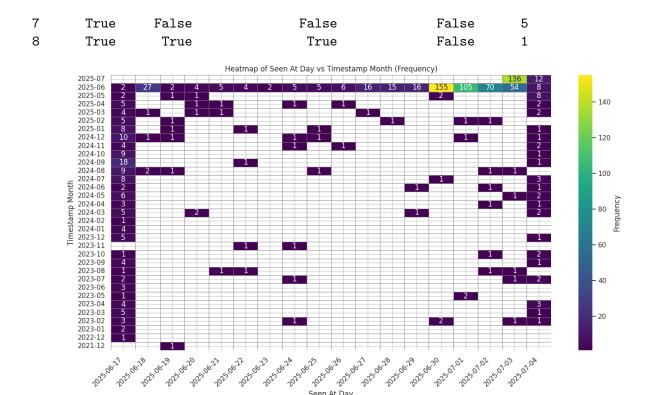
	writable	readable	restricted_writes	<pre>payment_required</pre>	count
0	True	True	False	False	273
1	False	False	False	False	175
2	False	True	False	False	95
3	False	True	True	False	67
4	False	False	True	False	24
5	False	True	True	True	7
6	True	False	False	False	5
7	False	False	True	True	4
8	True	True	True	False	1

#### Network: tor

	writable	readable	restricted_writes	<pre>payment_required</pre>	count
0	False	True	True	False	180
1	True	True	False	False	47
2	False	True	False	False	4
3	False	False	False	False	1
4	False	False	True	True	1

#### Network: all

	writable	readable	restricted_writes	<pre>payment_required</pre>	count
0	True	True	False	False	320
1	False	True	True	False	247
2	False	False	False	False	176
3	False	True	False	False	99
4	False	False	True	False	24
5	False	True	True	True	7
6	False	False	True	True	5



Seen At Day

Top 3 relays with most events in clearnet:

- wss://relay.nostr.band: 44635361 events

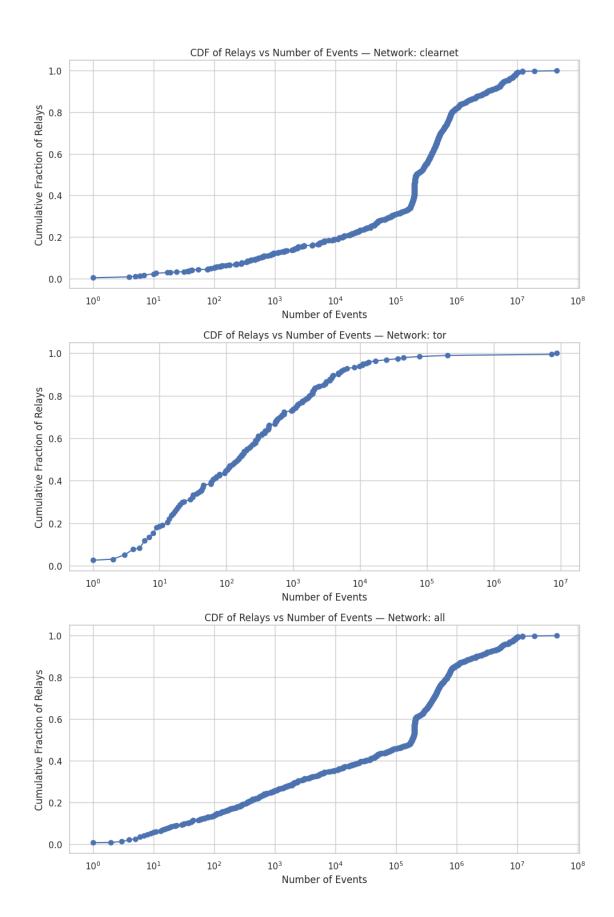
- wss://a.nos.lol: 19150103 events

- wss://nos.lol: 12103793 events

- wss://dave.st.germa.in/nostr: 12103598 events - wss://nostr-01.yakihonne.com: 10262997 events

Top 3 relays with most events in tor:

- wss://oxtrdevav64z64yb7x6rjg4ntzqjhedm5b5zjqulugknhzr46ny2qbad.onion: 8726537 events
- wss://sovbitm2enxfr5ot6qscwy5ermdffbqscy66wirkbsigvcshumyzbbqd.onion: 7390935
- wss://3rpykuwfpgjijym45svczvzpbur6t6x4b67lnvp6wxdre2cqoy6a4dyd.onion: 202968
- wss://sovbitgz5uqyh7jwcsudq4sspxlj4kbnurvd3xarkkx2use3k6rlibqd.onion: 78420
- wss://cmuqxreb6oma3x3iq3zh62im7w4266uo3txac6e75qtlfqs7scwqyqyd.onion: 45099 events



```
relay_url
                                                          network
                                                                    timestamp \
19
                                  wss://nostr.oxtr.dev clearnet
                                                                   1751188203
134
    wss://oxtrdevav64z64yb7x6rjg4ntzqjhedm5b5zjqul...
                                                                1751371575
                                                            tor
        seen_at timestamp_month seen_at_day
                                              event_count
                        2025-06
19
     1751417168
                                 2025-07-02
                                                  8576968
134
     1751588624
                        2025-07
                                 2025-07-04
                                                  8726537
                                             relay_url
                                                                    timestamp \
                                                          network
275
     wss://sovbitm2enxfr5ot6qscwy5ermdffbqscy66wirk...
                                                                1751473067
                                                            tor
358
     wss://sovbitgz5uqyh7jwcsudq4sspxlj4kbnurvd3xar...
                                                                 1751166521
                                                            tor
387
                             wss://freelay.sovbit.host clearnet
                                                                  1751473181
396
                               wss://nostr.sovbit.host clearnet
                                                                   1751056247
        seen_at timestamp_month seen_at_day
                                              event_count
    1751576506
                        2025-07
                                 2025-07-03
                                                  7390935
275
358
     1751289267
                        2025-06 2025-06-30
                                                    78420
                                                  7396293
387
     1751576877
                        2025-07 2025-07-03
                        2025-06 2025-07-02
```

78415

396

1751415488