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# squid

## selinux

```
# squid .
semanage port -l | grep -w -i squid_port_t
squid_port_t      tcp      3128, 3401, 4827
squid_port_t      udp      3401, 4827

# 10000 가
semanage port -a -t squid_port_t -p tcp 10000
```

```
cache_dir          /var/spool/squid/
selinux            .
```

```
$ chown squid:squid path_to_cache_directory
$ semanage fcontext -a -t squid_cache_t "path_to_cache_directory(/.*)?"
$ restorecon -Rv path_to_cache_directory
```

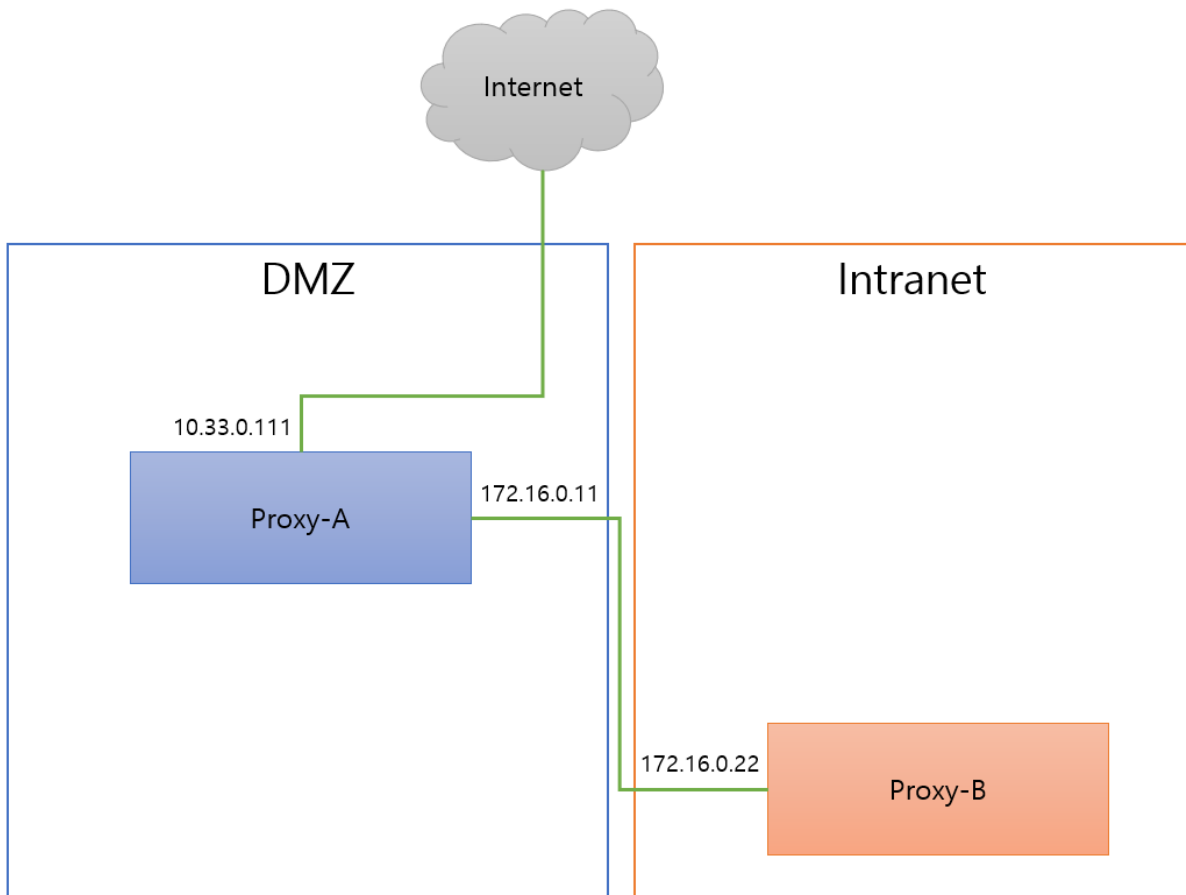
```
$ firewall-cmd --permanent --add-port=3128/tcp
$ firewall-cmd --reload
```

```
$ systemctl enable --now squid
```

```
$ curl -O -L "https://www.redhat.com/index.html" -x "proxy.example.com:3128"
```

## 2-teer hierachical proxy

```
squid.conf  cache_peer
```



/etc/squid/squid.conf

```
#  
# INSERT YOUR OWN RULE(S) HERE TO ALLOW ACCESS FROM YOUR CLIENTS  
#  
cache_peer 172.16.0.11 parent 3128 0 no-query no-digest  
never_direct allow all
```

- [https://docs.redhat.com/ko/documentation/red\\_hat\\_enterprise\\_linux/8/html/deploying\\_different\\_types\\_of\\_servers/configuring-the-squid-caching-proxy-server\\_deploying-different-types-of-servers](https://docs.redhat.com/ko/documentation/red_hat_enterprise_linux/8/html/deploying_different_types_of_servers/configuring-the-squid-caching-proxy-server_deploying-different-types-of-servers)

## squidclient

squidclient -p <port> mgr:menu

가

.

```
[root@proxy-a ~]# squidclient mgr:menu  
HTTP/1.1 200 OK
```

```

Server: squid/5.5
Mime-Version: 1.0
Date: Thu, 13 Feb 2025 05:23:36 GMT
Content-Type: text/plain;charset=utf-8
Expires: Thu, 13 Feb 2025 05:23:36 GMT
Last-Modified: Thu, 13 Feb 2025 05:23:36 GMT
X-Cache: MISS from proxy-a
X-Cache-Lookup: MISS from proxy-a:3128
Via: 1.1 proxy-a (squid/5.5)
Connection: close

```

index	Cache Manager Interface	public	
menu	Cache Manager Menu	public	
offline_toggle	Toggle offline_mode setting	hidden	
shutdown	Shut Down the Squid Process	hidden	
reconfigure	Reconfigure Squid	hidden	
rotate	Rotate Squid Logs	hidden	
cached_ssl_cert	Statistic of cached generated ssl certificates		
public			
pconn	Persistent Connection Utilization Histograms		
public			
mem	Memory Utilization	public	
squidaio_counts	Async IO Function Counters	public	
diskd	DISKD Stats	public	
config	Current Squid Configuration	hidden	
client_list	Cache Client List	public	
comm_epoll_incoming	comm_incoming() stats	public	
ipcache	IP Cache Stats and Contents	public	
fqdnocache	FQDN Cache Stats and Contents	public	
idns	Internal DNS Statistics	public	
redirector	URL Redirector Stats	public	
store_id	StoreId helper Stats	public	
external_acl	External ACL stats	public	
http_headers	HTTP Header Statistics	public	
info	General Runtime Information	public	
service_times	Service Times (Percentiles)	public	
filedescriptors	Process Filedescriptor Allocation	public	
objects	All Cache Objects	public	
vm_objects	In-Memory and In-Transit Objects	public	
io	Server-side network read() size histograms		public
counters	Traffic and Resource Counters	public	
peer_select	Peer Selection Algorithms	public	
digest_stats	Cache Digest and ICP blob	public	
5min	5 Minute Average of Counters	public	
60min	60 Minute Average of Counters	public	
utilization	Cache Utilization	public	
histograms	Full Histogram Counts	public	
active_requests	Client-side Active Requests	public	
username_cache	Active Cached Usernames	public	
openfd_objects	Objects with Swapout files open	public	
store_digest	Store Digest	public	

store_log_tags	Histogram of store.log tags	public
storedir	Store Directory Stats	public
store_io	Store IO Interface Stats	public
store_check_cachable_stats	storeCheckCachable() Stats	public
refresh	Refresh Algorithm Statistics	public
delay	Delay Pool Levels	public
forward	Request Forwarding Statistics	public
cbdata	Callback Data Registry Contents	public
sbuf	String-Buffer statistics	public
events	Event Queue	public
asndb	AS Number Database	public
carp	CARP information	public
userhash	peer userhash information	public
sourcehash	peer sourcehash information	public
server_list	Peer Cache Statistics	public

## squid

squid

squidclient -p <port> mgr:mem

```
[root@proxy-a ~]# squidclient mgr:mem
HTTP/1.1 200 OK
Server: squid/5.5
Mime-Version: 1.0
Date: Thu, 13 Feb 2025 05:24:42 GMT
Content-Type: text/plain;charset=utf-8
Expires: Thu, 13 Feb 2025 05:24:42 GMT
Last-Modified: Thu, 13 Feb 2025 05:24:42 GMT
X-Cache: MISS from proxy-a
X-Cache-Lookup: MISS from proxy-a:3128
Via: 1.1 proxy-a (squid/5.5)
Connection: close

Current memory usage:
Pool      Obj Size    Chunks
In Use   (bytes)   KB/ch    Idle
          (#)      high (KB)  obj/ch  (#)
          (KB)    high (hrs) %alloc  high (hrs)
%vol     (#)/sec
mem_node                4136                                431
1741    2093    70.19    37.370    315    1273    2093    70.19
73.086    116    469    1192    2190    0.285    11.758    0.013
16KB Strings                16384                                39
624     624    70.19    13.395    1     16     624    70.19    2.564
38     608    624    242    0.031    5.147    0.009
cbdata clientReplyContext (10) 4360
```

76	324	324	70.13	6.947	9	39	324	70.13	
11.842	67	286	290	484	0.063	2.739	0.009		
4KB Strings			4096						80
320	320	70.19	6.869	1	4	320	70.19	1.250	
79	316	320	619	0.081	3.291	0.009			
Stream			4224						68
281	281	70.19	6.021	1	5	281	70.19	1.471	
67	277	281	492	0.064	2.698	0.009			
HttpRequest			1872						136
249	249	70.19	5.337	52	96	249	70.19	38.235	
84	154	156	546	0.071	1.327	0.009			
Long Strings			512						356
178	178	70.13	3.821	198	99	178	70.13	55.618	
158	79	80	2363	0.307	1.571	0.037			
Short Strings			40						3393
133	204	70.18	2.845	3253	128	204	70.18		
95.874	140	6	47	55577	7.231	2.886	0.741		
MemBlob			48						1661
78	118	70.18	1.671	1488	70	118	70.18	89.585	
173	9	30	45025	5.858	2.805	0.372			
cbdata idns_query (16)			8704						9
77	77	70.06	1.642	0	0	77	70.06	0.000	9
77	77	502	0.065	5.672	0.000				
HttpReply			296						221
64	64	70.13	1.371	143	42	64	70.13	64.706	
78	23	23	1044	0.136	0.401	0.028			
cbdata Server (8)			776						80
61	61	70.19	1.301	1	1	61	70.19	1.250	79
60	61	344	0.045	0.347	0.009				
HTTPHeaderEntry			56						1101
61	98	70.18	1.293	1079	60	98	70.18	98.002	
22	2	34	9374	1.220	0.681	0.194			
Medium Strings			128						440
55	55	70.13	1.181	315	40	55	70.13	71.591	
125	16	19	11984	1.559	1.991	0.000			
MemObject			328						144
47	47	70.05	0.990	143	46	47	70.05	99.306	
1	1	2	216	0.028	0.092	0.009			
2K Buffer			2048						20
40	40	70.21	0.859	3	6	40	70.21	15.000	17
34	34	2211	0.288	5.878	0.037				
cbdata IdleConnList (25)			4168						9
37	37	70.05	0.786	0	0	37	70.05	0.000	9
37	37	64	0.008	0.346	0.000				
cbdata TunnelStateData (14)			496						66
32	32	70.14	0.686	0	0	32	70.14	0.000	66
32	32	285	0.037	0.183	0.000				
cbdata ipcache_entry (3)			200						160
32	32	69.72	0.671	160	32	32	69.72	100.000	
0	0	2	123	0.016	0.032	0.000			
cbdata ClientHttpRequest (9)			408						

68	28	28	70.19	0.582	1	1	28	70.19	1.471	
67	27	28	492	0.064	0.261	0.009				
cbdata HappyConnOpener (17)				376					68	
25	25	70.13	0.536	0	0	25	70.13	0.000	68	
25	25	476	0.062	0.232	0.000					
MimeEntry				144					177	
25	25	70.26	0.534	177	25	25	70.26	100.000		
0	0	0	0	0.000	0.000	0.000				
StoreEntry				120					157	
19	19	70.05	0.395	156	19	19	70.05	99.363		
1	1	1	210	0.027	0.033	0.009				
cbdata clientStreamNode (11)				128						
136	17	17	70.19	0.365	2	1	17	70.19	1.471	
134	17	17	984	0.128	0.163	0.018				
8K Buffer				8192					2	
16	16	70.19	0.343	0	0	16	70.19	0.000	2	
16	16	55	0.007	0.585	0.000					
16K Buffer				16384					1	
16	16	70.13	0.343	0	0	16	70.13	0.000	1	
16	16	1	0.000	0.021	0.000					
Comm::Connection				216					64	
14	86	70.19	0.290	2	1	86	70.19	3.125	62	
14	65	3021	0.393	0.847	0.009					
HttpHdrCc				96					90	
9	9	70.21	0.181	58	6	9	70.21	64.444	32	
3	4	375	0.049	0.047	0.000					
cbdata HttpStateData (24)				368					23	
9	9	70.19	0.177	0	0	9	70.19	0.000	23	
9	9	165	0.021	0.079	0.000					
cbdata store_client (22)				296					25	
8	8	70.19	0.155	1	1	8	70.19	4.000	24	
7	8	242	0.031	0.093	0.009					
cbdata FwdState (23)				304					24	
8	8	70.19	0.153	0	0	8	70.19	0.000	24	
8	8	169	0.022	0.067	0.000					
ResolvedPeers				72					68	
5	5	70.13	0.103	0	0	5	70.13	0.000	68	
5	5	476	0.062	0.044	0.000					
LRU policy node				24					194	
5	5	70.13	0.098	193	5	5	70.13	99.485	1	
1	1	64	0.008	0.002	0.000					
4K Buffer				4096					1	4
4	70.19	0.086	0	0	4	70.19	0.000	1	4	
4	62	0.008	0.330	0.000						
cbdata ConnOpener (18)				144					25	
4	4	70.19	0.075	0	0	4	70.19	0.000	25	
4	4	617	0.080	0.115	0.000					
MD5 digest				16					157	
3	3	70.05	0.053	156	3	3	70.05	99.363	1	
1	1	509	0.066	0.011	0.009					
BodyPipe				136					16	



3	3	70.21	0.046	0	0	3	70.21	0.000	16	
3	3	44	0.006	0.008	0.000					
cbdata PeerSelector (15)				296						7
3	3	70.22	0.043	0	0	3	70.22	0.000	7	
3	3	537	0.070	0.206	0.000					
1KB Strings				1024					2	2
2	70.26	0.043	0	0	2	70.26	0.000	2	2	
2	56	0.007	0.074	0.000						
cbdata UFSStoreState (26)				328						5
2	2	70.19	0.034	0	0	2	70.19	0.000	5	
2	2	125	0.016	0.053	0.000					
cbdata ErrorState (20)				272					6	2
2	70.22	0.034	0	0	2	70.22	0.000	6	2	
2	279	0.036	0.099	0.000						
AndNode				120						13
2	2	70.26	0.033	13	2	2	70.26	100.000	0	
0	0	0	0.000	0.000	0.000					
acl_ip_data				96						15
2	2	70.26	0.030	15	2	2	70.26	100.000	0	
0	1	2	0.000	0.000	0.000					
cbdata Tree (1)				176					7	2
2	70.26	0.026	7	2	2	70.26	100.000	0	0	
0	0	0.000	0.000	0.000						
ClientInfo				464					2	1
1	70.22	0.019	2	1	1	70.22	100.000	0	0	
0	0	0.000	0.000	0.000						
cbdata RebuildState (5)				920					1	1
1	70.26	0.019	0	0	1	70.26	0.000	1	1	
1	0	0.000	0.000	0.000						
fqdn_cache_entry				160					5	1
1	70.22	0.017	3	1	1	70.22	60.000	2	1	
1	14	0.002	0.003	0.000						
ACLStrategised				120					5	1
1	70.26	0.013	5	1	1	70.26	100.000	0	0	
0	0	0.000	0.000	0.000						
ev_entry				48						12
1	1	70.25	0.012	10	1	1	70.25	83.333	2	
1	1	595617	77.498	37.112	2.350					
cbdata ACLFilledChecklist (13)				504						
1	1	1	70.25	0.011	1	1	1	70.25	100.000	
0	0	1	559	0.073	0.366	0.009				
cbdata BlockingFile (27)				88						5
1	1	70.19	0.009	0	0	1	70.19	0.000	5	
1	1	125	0.016	0.014	0.000					
RefreshPattern				144					3	1
1	70.26	0.009	3	1	1	70.26	100.000	0	0	
0	0	0.000	0.000	0.000						
cbdata Logfile (4)				352					1	1
1	70.26	0.007	1	1	1	70.26	100.000	0	0	
0	0	0.000	0.000	0.000						
ACLSSLerrorData				64					5	1

1	70.26	0.007	5	1	1	70.26	100.000	0	0
0	0	0.000	0.000	0.000					
ACLSourceIP			104					3	1
1	70.26	0.007	3	1	1	70.26	100.000	0	0
0	0	0.000	0.000	0.000					
ACLStrategised			120					2	1
1	70.26	0.005	2	1	1	70.26	100.000	0	0
0	0	0.000	0.000	0.000					
NotNode			120					2	1
1	70.26	0.005	2	1	1	70.26	100.000	0	0
0	0	0.000	0.000	0.000					
FwdServer			32					7	1
1	70.22	0.005	0	0	1	70.22	0.000	7	1
1	537	0.070	0.022	0.000					
cbdata RemovalPolicy (2)			104						2
1	1	70.26	0.004	2	1	1	70.26	100.000	0
0	0	0	0.000	0.000	0.000				
cbdata LocalSearch (7)			80					2	1
1	70.26	0.003	1	1	1	70.26	50.000	1	1
1	70	0.009	0.007	0.000					
cbdata generic_cbdata (21)			32						5
1	1	70.19	0.003	0	0	1	70.19	0.000	5
1	1	142	0.018	0.006	0.000				
ACLStrategised			120					1	1
1	70.26	0.003	1	1	1	70.26	100.000	0	0
0	0	0.000	0.000	0.000					
ACLStrategised			120					1	1
1	70.26	0.003	1	1	1	70.26	100.000	0	0
0	0	0.000	0.000	0.000					
ACLDestinationIP			112					1	1
1	70.26	0.002	1	1	1	70.26	100.000	0	0
0	0	0.000	0.000	0.000					
cbdata ClientRequestContext (12)			112						
1	1	1	70.25	0.002	0	0	1	70.25	0.000
1	1	1	559	0.073	0.081	0.009			
cbdata TcpAcceptor (6)			104					1	1
1	70.26	0.002	1	1	1	70.26	100.000	0	0
0	0	0.000	0.000	0.000					
cbdata CbDataList (29)			96					1	1
1	70.19	0.002	0	0	1	70.19	0.000	1	1
1	215	0.028	0.027	0.000					
cbdata WriteRequest (28)			80						1
1	1	70.21	0.002	0	0	1	70.21	0.000	1
1	1	2810	0.366	0.292	0.000				
StoreSwapLogData			72					1	1
1	70.26	0.002	0	0	1	70.26	0.000	1	1
1	170	0.022	0.016	0.000					
cbdata MemBuf (19)			72					1	1
1	70.25	0.002	0	0	1	70.25	0.000	1	1
1	551	0.072	0.051	0.009					
cbdata RemovalPolicyWalker (30)			56						

1	1	1	62.40	0.001	0	0	1	62.40	0.000		
1	1	1	0	0.000	0.000	0.000					
dwrite_q											
				48						1	1
1	70.26	0.001	0	0	1	70.26	0.000	1	1		
1	2982	0.388	0.186	0.000							
CacheDigest											
				40						1	1
1	70.26	0.001	1	1	1	70.26	100.000	0	0		
0	0	0.000	0.000	0.000							
ACLRegexData											
				32						1	1
1	70.26	0.001	1	1	1	70.26	100.000	0	0		
0	0	0.000	0.000	0.000							
ACLMethodData											
				32						1	1
1	70.26	0.001	1	1	1	70.26	100.000	0	0		
0	0	0.000	0.000	0.000							
StoreMetaMD5											
				32						1	1
1	70.21	0.001	0	0	1	70.21	0.000	1	1		
1	129	0.017	0.005	0.000							
StoreMetaSTDLFS											
				32						1	1
1	70.21	0.001	0	0	1	70.21	0.000	1	1		
1	129	0.017	0.005	0.000							
StoreMetaURL											
				32						1	1
1	70.21	0.001	0	0	1	70.21	0.000	1	1		
1	129	0.017	0.005	0.000							
StoreMetaObjSize											
				32						1	1
1	70.21	0.001	0	0	1	70.21	0.000	1	1		
1	104	0.014	0.004	0.000							
StoreMetaVary											
				32						1	1
1	70.19	0.001	0	0	1	70.19	0.000	1	1		
1	50	0.007	0.002	0.000							
SysErrorDetail											
				32						1	1
1	70.15	0.001	0	0	1	70.15	0.000	1	1		
1	0	0.000	0.000	0.000							

Total 1 9924  
4659 5096 70.19 100.000 7990 2016 3583 70.13  
43.274 1934 2643 2749 747538 97.265 91.422  
1012.782

Cumulative allocated volume: 77.04 MB  
Current overhead: 26284 bytes (1.273%)  
Idle pool limit: 5.00 MB  
Total Pools created: 84  
Pools ever used: 81 (shown above)  
Currently in use: 48

String Pool Impact	
(%strings)	(%volume)
Short Strings	86 45
Medium Strings	8 14
Long Strings	5 35
1KB Strings	0 0
4KB Strings	0 1
16KB Strings	0 6
Other Strings	0 0

Large buffers: 0 (0 KB)

squidclient -p <port> mgr:info

```
[root@proxy-a ~]# squidclient mgr:info
HTTP/1.1 200 OK
Server: squid/5.5
Mime-Version: 1.0
Date: Thu, 13 Feb 2025 05:25:01 GMT
Content-Type: text/plain;charset=utf-8
Expires: Thu, 13 Feb 2025 05:25:01 GMT
Last-Modified: Thu, 13 Feb 2025 05:25:01 GMT
X-Cache: MISS from proxy-a
X-Cache-Lookup: MISS from proxy-a:3128
Via: 1.1 proxy-a (squid/5.5)
Connection: close

Squid Object Cache: Version 5.5
Build Info:
Service Name: squid
Start Time: Mon, 10 Feb 2025 07:08:49 GMT
Current Time: Thu, 13 Feb 2025 05:25:01 GMT
Connection information for squid:
  Number of clients accessing cache:      2
  Number of HTTP requests received:      560
  Number of ICP messages received:       0
  Number of ICP messages sent:           0
  Number of queued ICP replies:          0
  Number of HTCP messages received:      0
  Number of HTCP messages sent:          0
  Request failure ratio:                  0.00
  Average HTTP requests per minute since start:  0.1
  Average ICP messages per minute since start:  0.0
  Select loop called: 657258 times, 384.889 ms avg
Cache information for squid:
  Hits as % of all requests:      5min: 0.0%, 60min: 0.0%
  Hits as % of bytes sent:       5min: 100.0%, 60min: 100.0%
  Memory hits as % of hit requests:  5min: 0.0%, 60min: 0.0%
  Disk hits as % of hit requests:   5min: 0.0%, 60min: 0.0%
  Storage Swap size:              10544 KB
  Storage Swap capacity:          10.3% used, 89.7% free
  Storage Mem size:               1256 KB
  Storage Mem capacity:           0.5% used, 99.5% free
  Mean Object Size:               102.37 KB
  Requests given to unlinkd:      34
Median Service Times (seconds)  5 min    60 min:
  HTTP Requests (All):           0.00000  0.00000
```

```
Cache Misses:      0.00000  0.00000
Cache Hits:        0.00000  0.00000
Near Hits:         0.00000  0.00000
Not-Modified Replies: 0.00000  0.00000
DNS Lookups:       0.00000  0.00000
ICP Queries:       0.00000  0.00000
```

**Resource usage for squid:**

```
UP Time:      252971.655 seconds
CPU Time:     27.644 seconds
CPU Usage:    0.01%
CPU Usage, 5 minute avg:  0.01%
CPU Usage, 60 minute avg: 0.01%
Maximum Resident Size: 159744 KB
Page faults with physical i/o: 2
```

**Memory accounted for:**

```
Total accounted:      4658 KB
memPoolAlloc calls:   747712
memPoolFree calls:    760771
```

**File descriptor usage for squid:**

```
Maximum number of file descriptors: 16384
Largest file desc currently in use:  17
Number of file desc currently in use: 9
Files queued for open:                0
Available number of file descriptors: 16375
Reserved number of file descriptors:  100
Store Disk files open:                0
```

**Internal Data Structures:**

```
156 StoreEntries
143 StoreEntries with MemObjects
 90 Hot Object Cache Items
103 on-disk objects
```

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