

# Report

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## Basic (Client-Server Topology)

The following table shows the time taken for each “GET” request in the client-server topology.

Request	Key1 (μs)	Key2 (μs)	Key3 (μs)	Key4 (μs)	Key5 (μs)	Key6 (μs)	Average Time (μs)
Req1	197.86	66.30	70.91	167.35	92.27	151.99	124.45
Req2	233.47	78.87	71.65	104.64	341.23	75.65	150.92
Req3	224.74	56.59	82.25	147.60	82.12	80.22	112.25
Average	218.69	67.25	74.94	139.86	171.88	102.62	129.21

**Observations:** The average time taken to retrieve each key is approximately the same across all requests, indicating that all “GET” requests are fetched directly from the server.

**PCAP Traces:** PCAP trace for H1 is located in the `basic/pcaps` folder, labeled as “H1.pcap.”

## Star (Client-Cache-Server Topology)

The table below shows the time taken for each “GET” request in the client-cache-server topology.

Request	Key1 (μs)	Key2 (μs)	Key3 (μs)	Key4 (μs)	Key5 (μs)	Key6 (μs)	Average Time (μs)
Req1	504.72	583.58	513.21	369.85	217.50	322.80	418.61
Req2	183.35	161.14	58.39	174.48	77.19	253.95	151.42
Req3	213.62	165.66	73.39	68.27	68.34	212.32	133.60
Average	300.56	303.46	214.99	204.20	121.01	263.02	234.54

**Observations:** The difference in time between “GET” Request-1 and Request-2 is significantly high (about 2-3 times). This difference occurs because, for Request-1, the key is not present in the cache and must reach the server. In subsequent requests, the key is already available in the cache, leading to shorter retrieval times.

**PCAP Traces:** PCAP traces for H1, H2, and H3 are available in the `star/pcaps` folder, labeled as “H1.pcap,” “H2.pcap,” and “H3.pcap.”