VMware View Planner Test Report

August 12, 2019

1. Introduction

1.1 View Planner Background

VMware View Planner simulates a typical office user's activity by running several applications while measuring the latency of the operations. The applications include Microsoft Office, a browser, Windows Media Player, etc., and the operations are opening, modifying, saving, and closing files, browsing, playing a video, etc. Each View Planner run consists of these applications run in an iterative fashion in random order. The results of a run consist of the latencies of the operations collected over all iterations.

1.2 View Planner QoS Methodology

The View Planner Quality of Service (QoS) methodology splits these operations into the following groups.

Group A	Interactive/fast-running operations that are CPU bound, like browsing through a PDF file, modifying a Word document, etc.
Group B	Long-running slow operations that are I/O bound, like opening a large document, saving a PowerPoint file, etc.
Group C	Background operations and other operations that do not belong to group A, B, or X.
Group X	Advanced Workloads including Audio/Video Benchmark and Mouse-Drag&Scroll; Benchmark.

1.3 Dissemination of View Planner Results

View Planner results must not be published unless they comply with the Run and Reporting Rules document, which is available with your download.

2. Test Configuration

View Planner runs use one or more ESX hosts to run the desktop virtual machines and one or more other ESX hosts to run the View Planner controller appliance and the client virtual machines. Below is an example of the configuration settings for a test run.

2.1 Workload Profile

Work Profile Name	fileOperationsTestProfile

2.2 Run Profile

Run Profile Name	vplan
Number Of Vms	5
Ramp Up Time	60
Think Time	5
Number Of Iterations	5
Discarded Desktop Count	0
Display Protocol	
Type Of Desktop	

3. View Planner Score

Test Name	test1
Test Mode	local
Latency Data Mode	local
Test Start Time	2019-08-12 13:53:14
Test End Time	2019-08-12 14:05:26
Test Status	Completed

3.1 Workgroup - vplan: QoS Summary

Latency Group	95th Percentile Latency in Seconds (Lower is Better)	Threshold in Seconds

4. Operation Details

4.1 Workgroup - vplan: Executed Vs Expected Operation Ratio

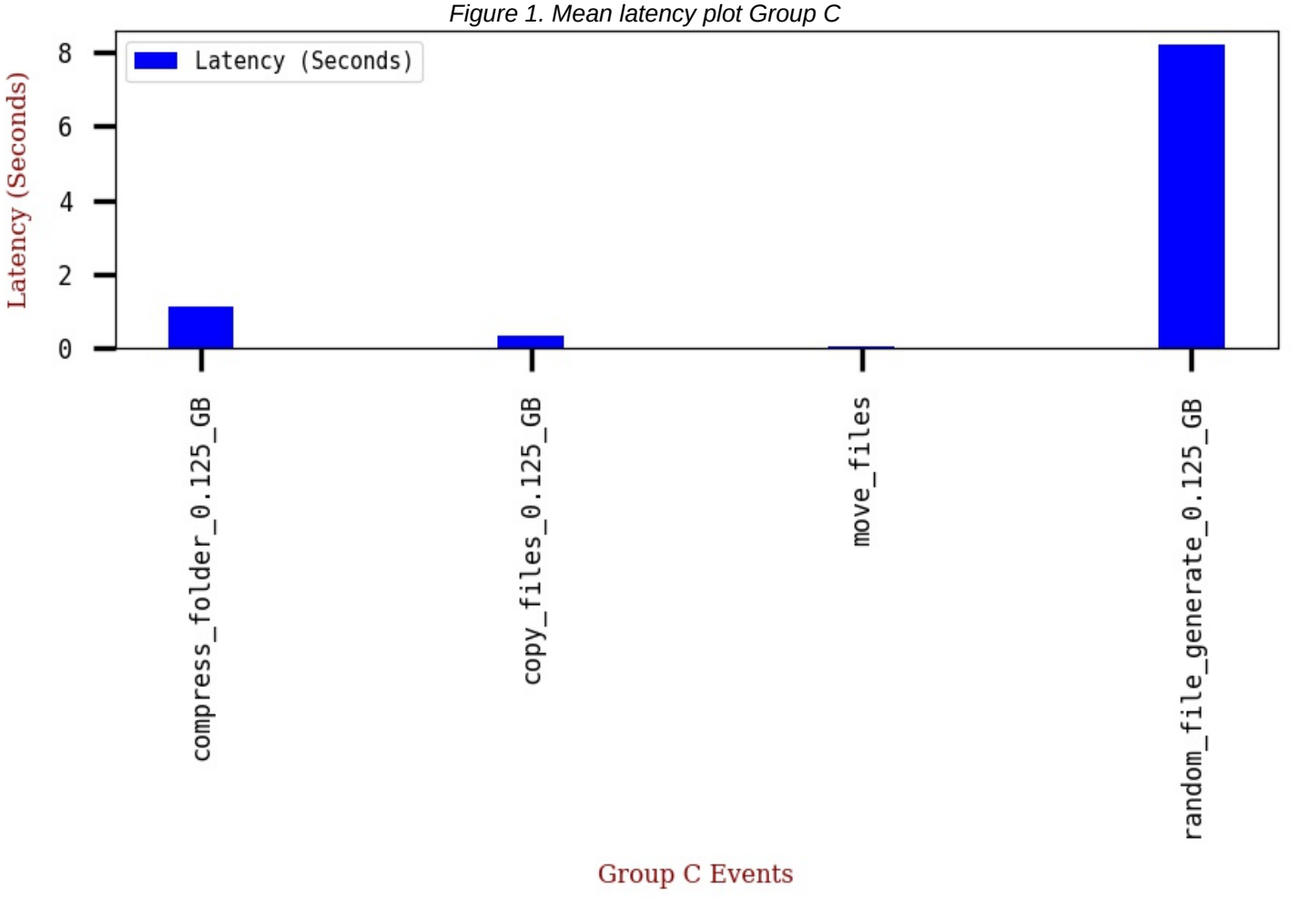
Ratio of Actual to Expected Operations (0.0 to 1.0)	1.0

4.2 Workgroup - vplan: Application Response Time

Table 1. Workload Event Latency Statistics

Operation	Group	Executed / Expected Count	Mean	Median	Variance
compress_folder_0.125_GB	Group C	15/15	1.1144	1.0972	0.003
copy_files_0.125_GB	Group C	15/15	0.3276	0.2977	0.0128
move_files	Group C	15/15	0.0583	0.0582	0.0
random_file_generate_0.125_GB	Group C	15/15	8.1945	8.1949	0.0082

Figure 1. Mean latency plot Group C



5. Resource Usage

Table 2. Resource Usage of e01esx13.dc01.ssc.lan

Measurement	Average	Min	Max
CPU usage (percent)	4.7	3.59	7.68
CPU Core Utilization (percent)	4.15	3.23	6.57
CPU Utilization(percent)	2.17	1.69	3.43
Memory usage (percent)	39.32	39.19	39.56
Active Memory (GB)	74.72	71.99	77.98
Consumed Memory (GB)	422.14	420.71	424.7
Memory Balloon (GB)	0.0	0.0	0.0

Figure 2. e01esx13.dc01.ssc.lan : CPU

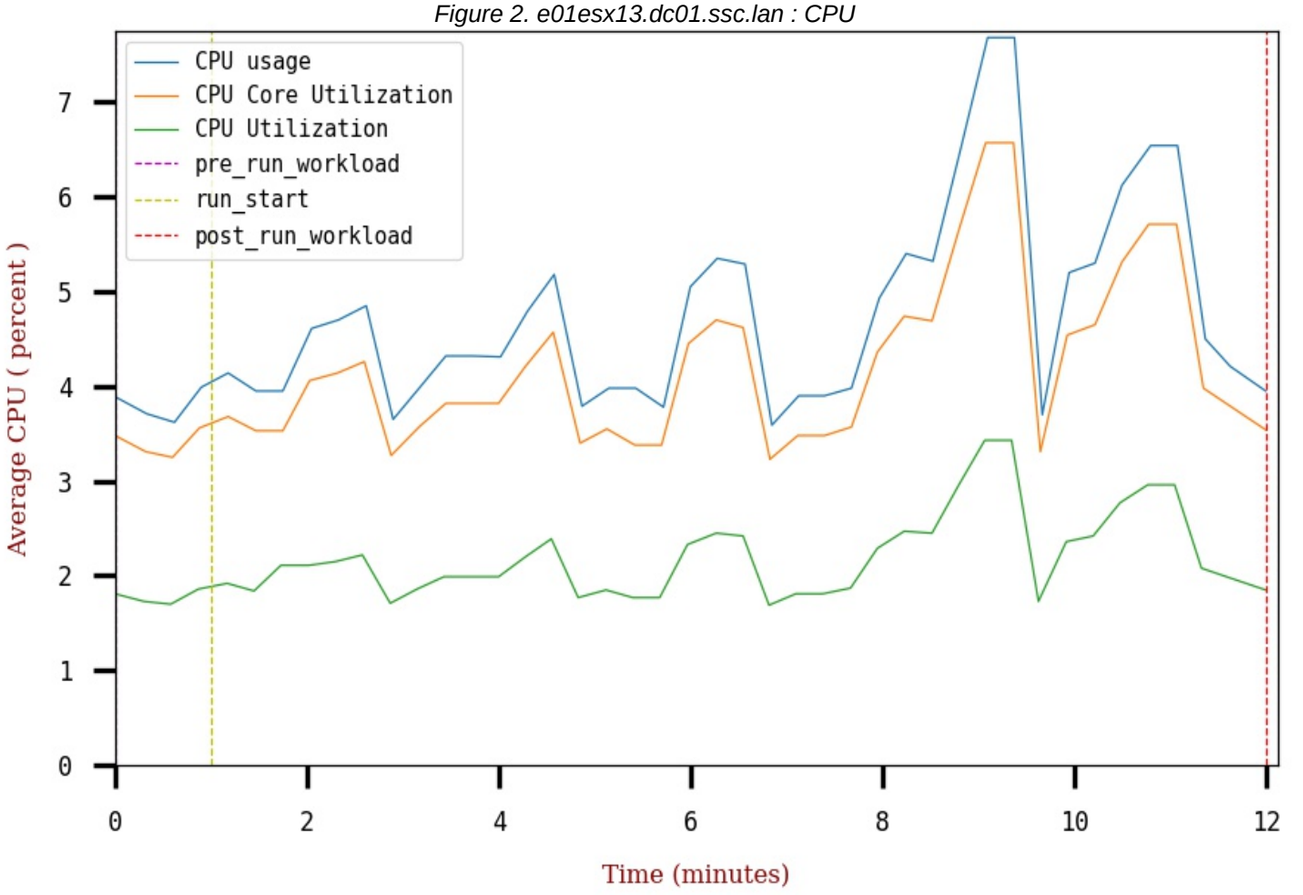


Figure 3. e01esx13.dc01.ssc.lan : Memory Usage

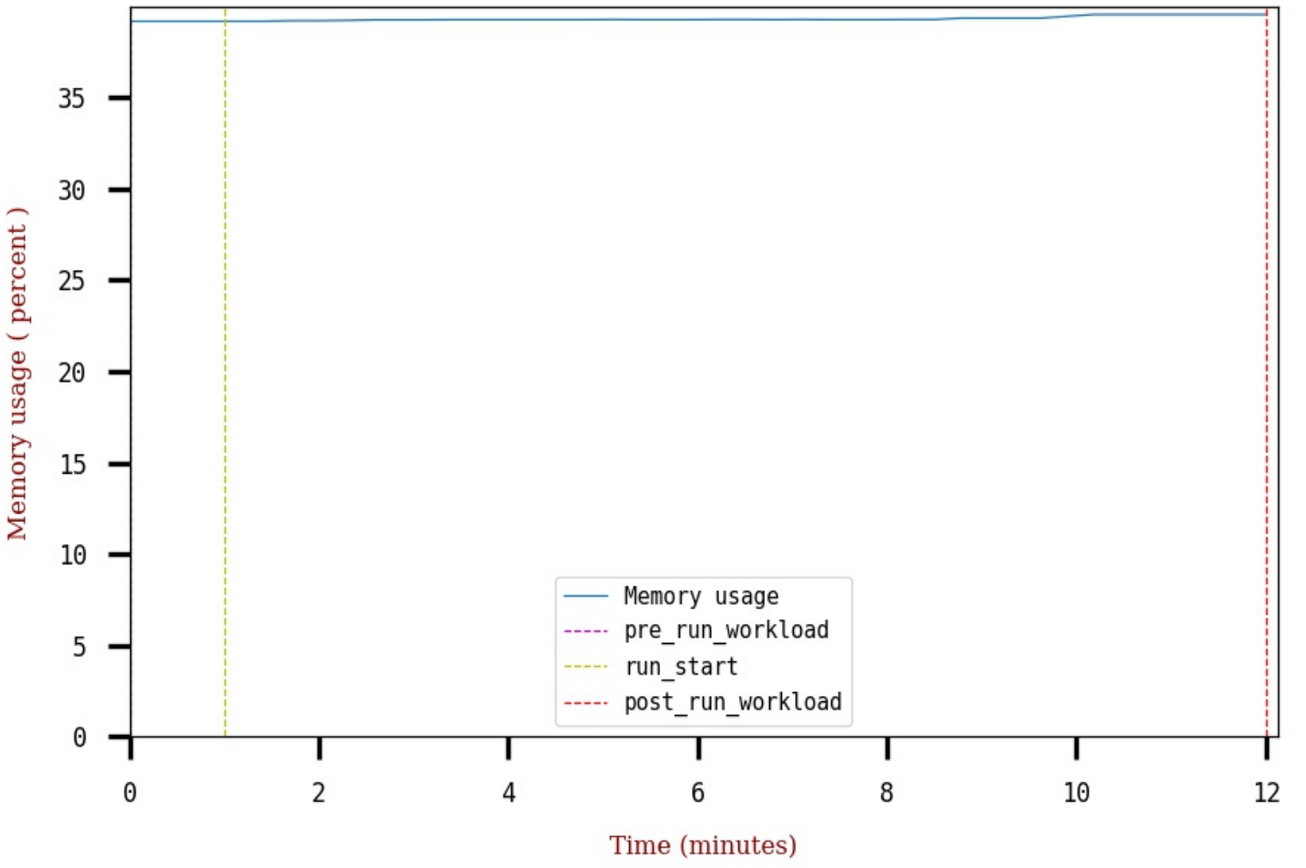


Figure 4. e01esx13.dc01.ssc.lan : Memory

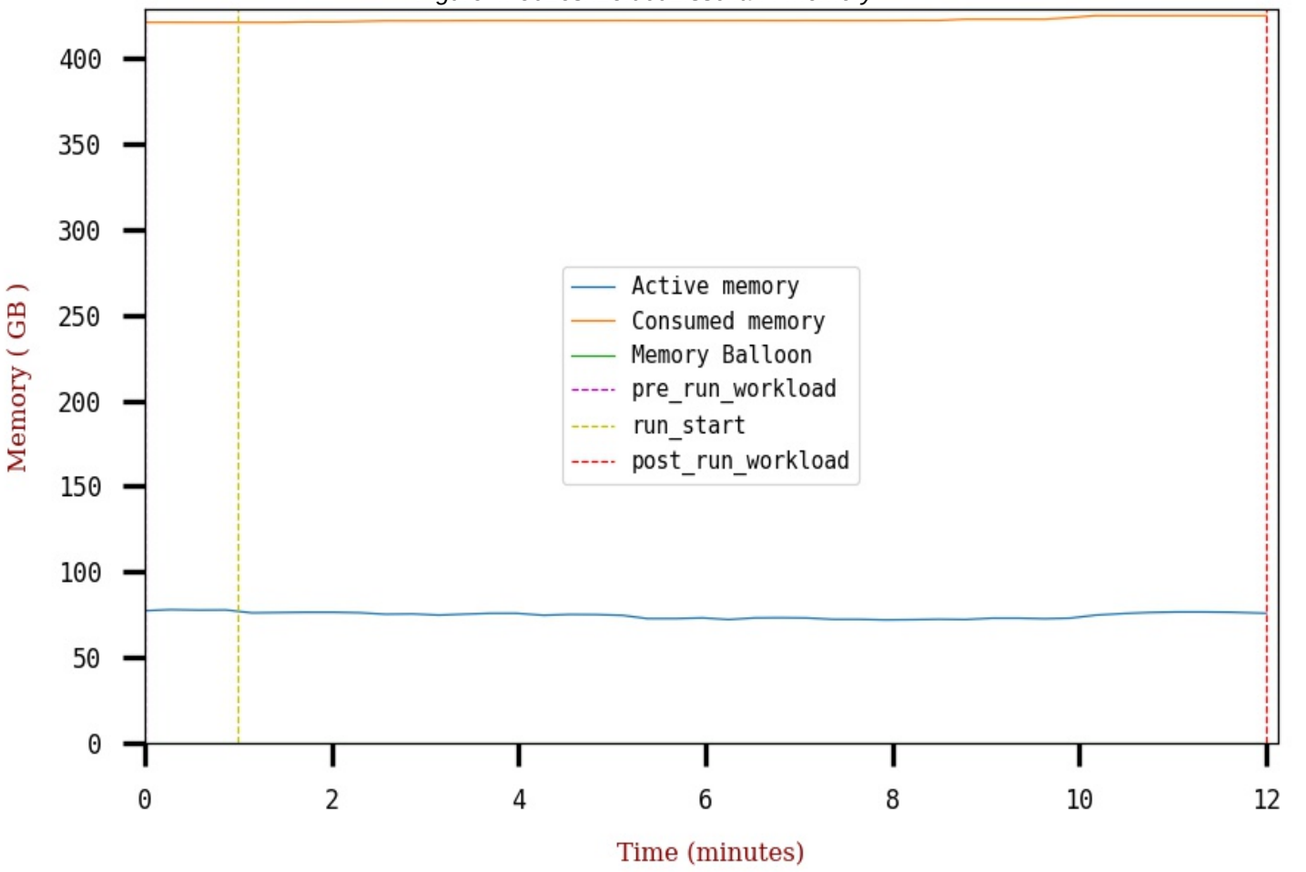


Figure 5. e01esx13.dc01.ssc.lan : Network Usage

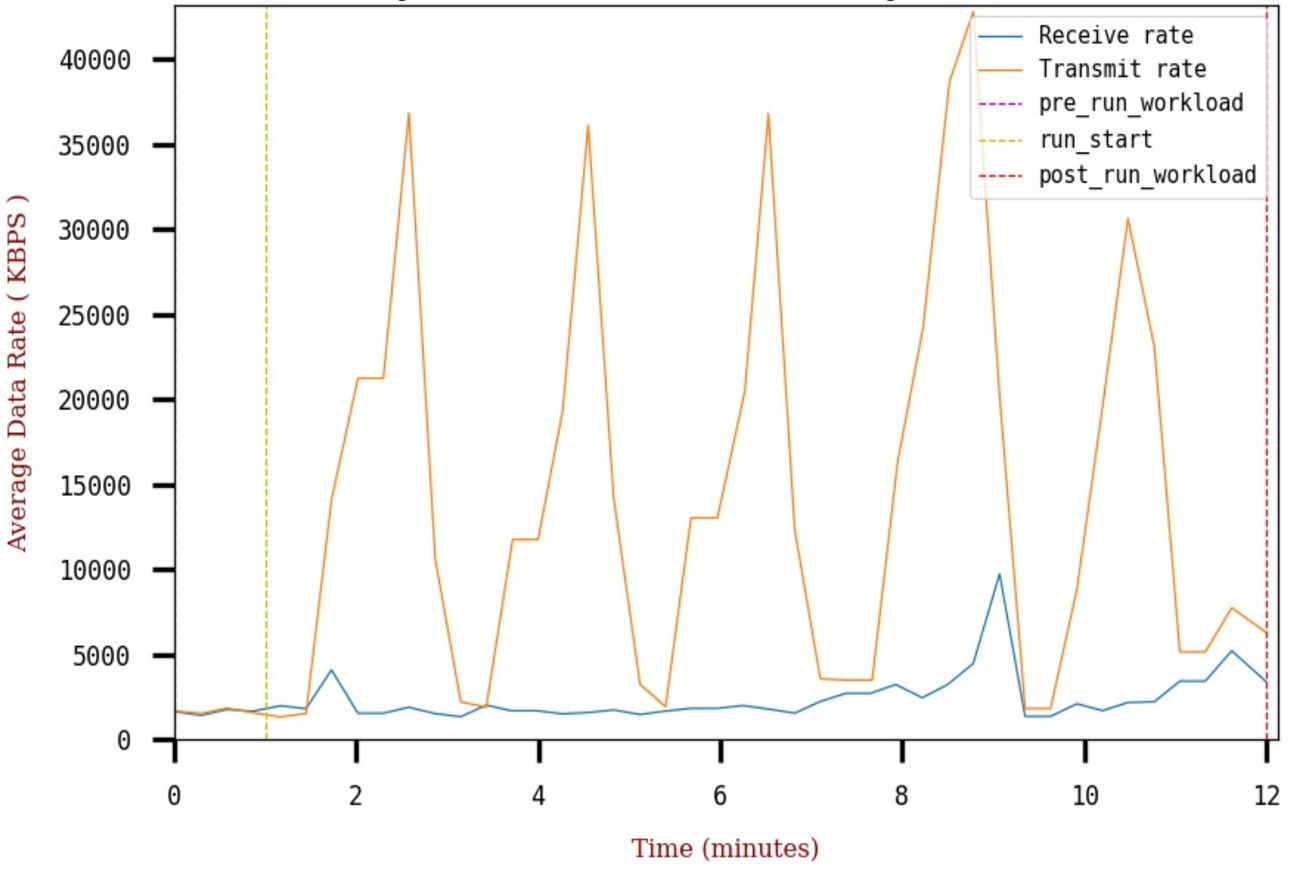


Figure 6. e01esx13.dc01.ssc.lan : Write Latency

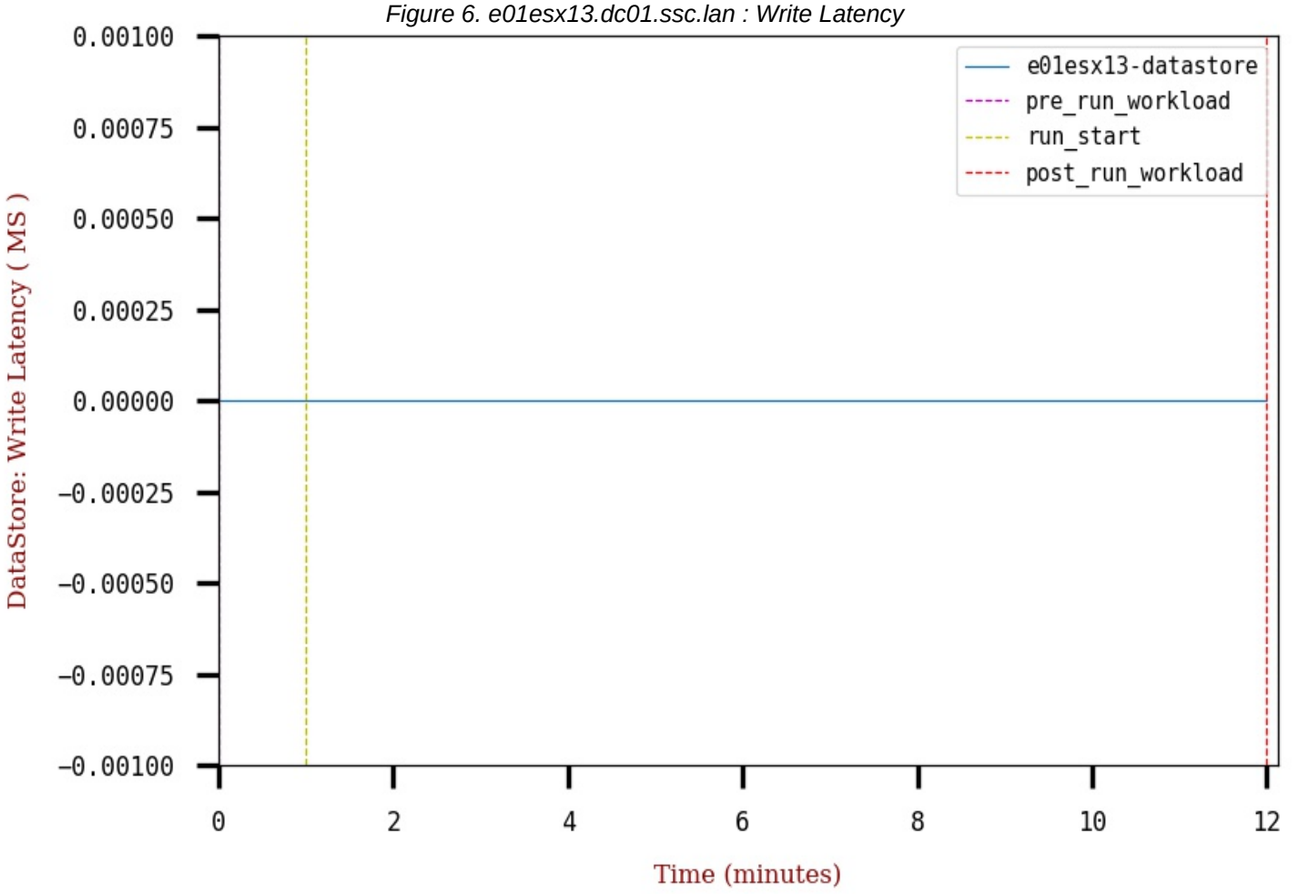


Figure 7. e01esx13.dc01.ssc.lan : Average write requests per second

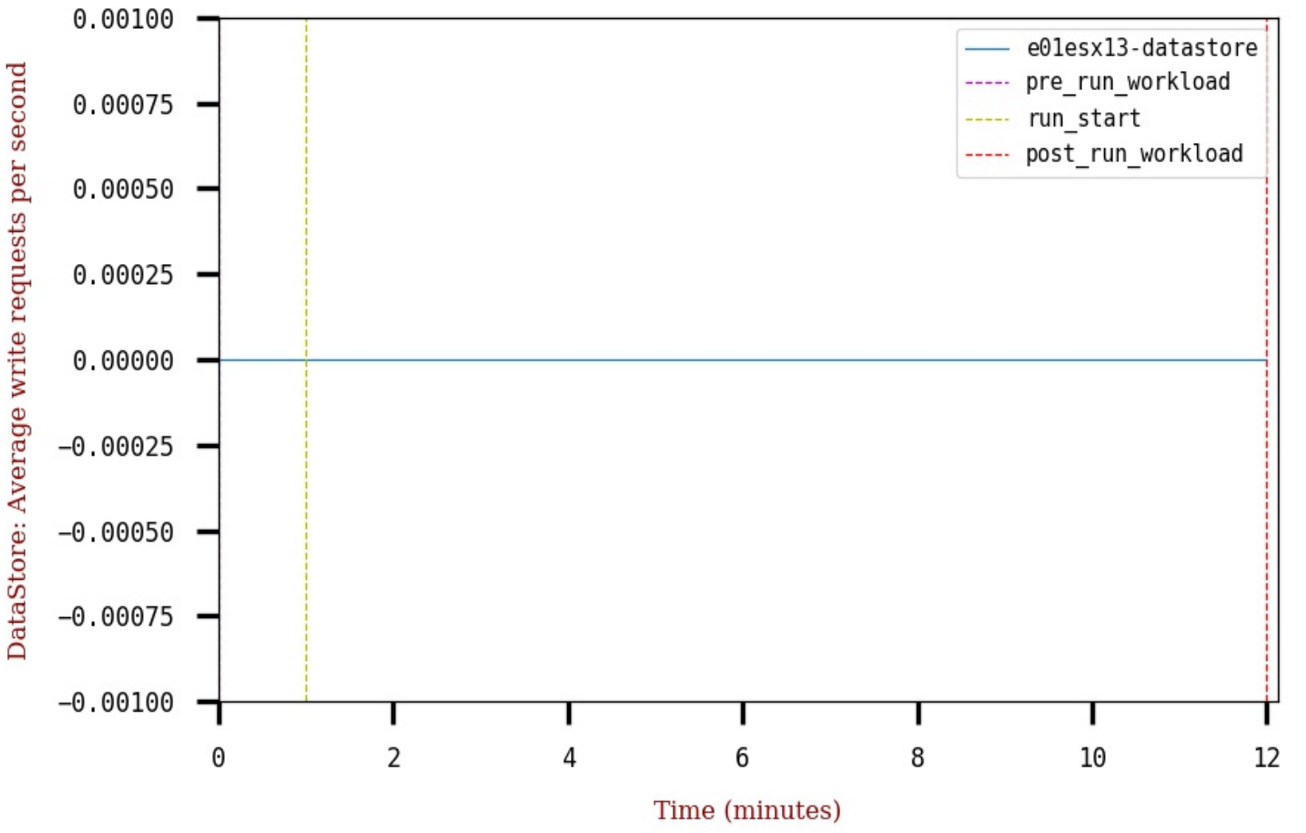


Figure 8. e01esx13.dc01.ssc.lan : Read Latency

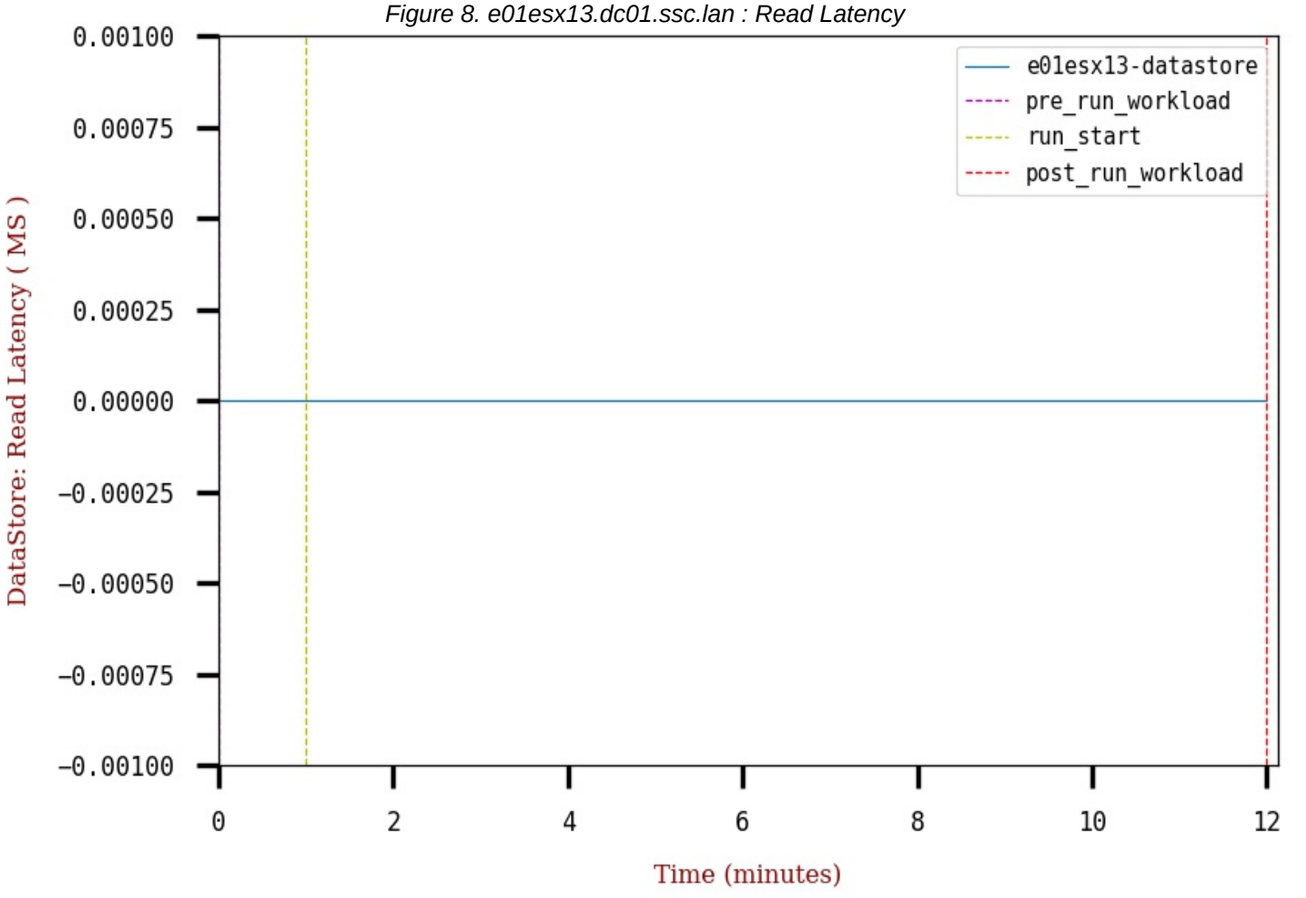


Figure 9. e01esx13.dc01.ssc.lan : Average read requests per second

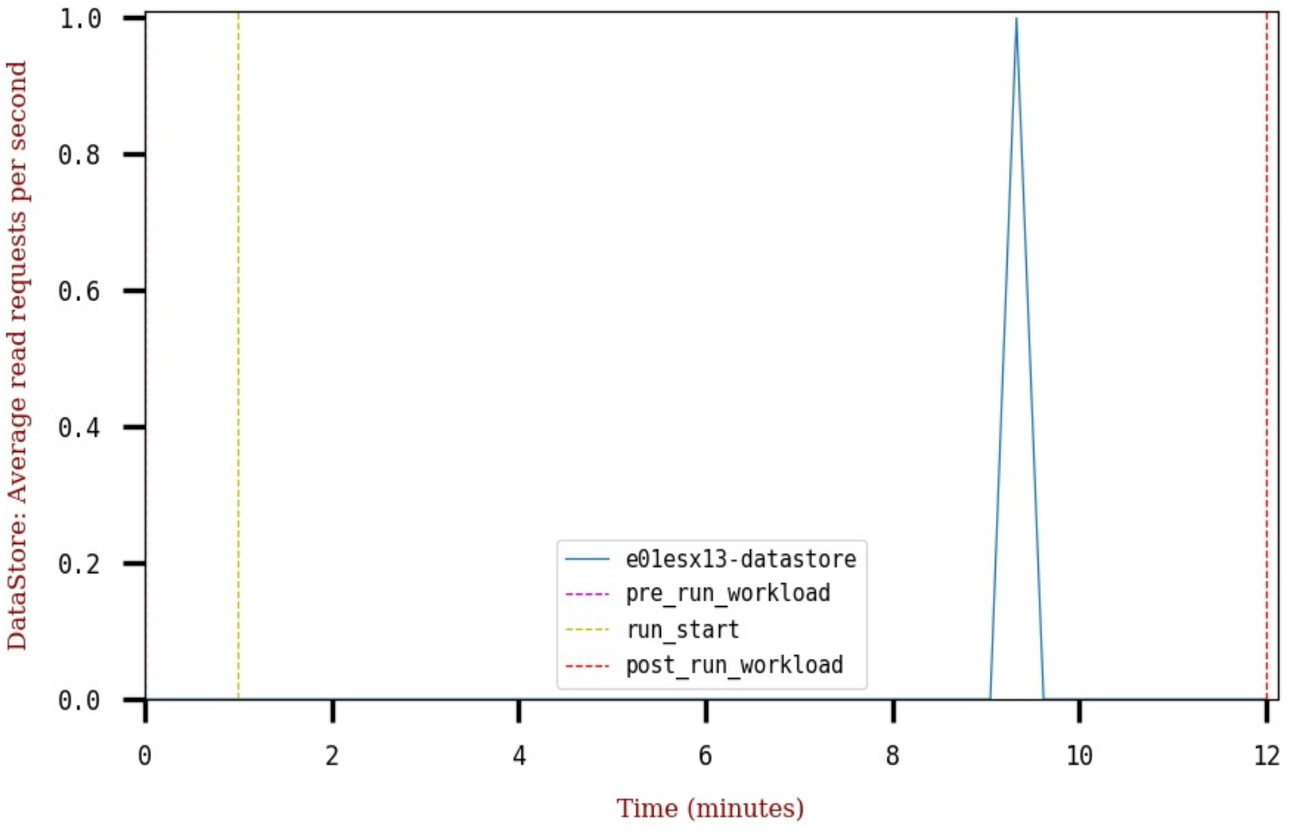


Table 3. Resource Usage of e01esx01.dc01.ssc.lan

Measurement	Average	Min	Max
CPU usage (percent)	6.81	4.5	11.04
CPU Core Utilization (percent)	6.91	4.68	10.51
CPU Utilization(percent)	3.59	2.42	5.56
Memory usage (percent)	39.85	39.8	40.09
Active Memory (GB)	74.68	72.42	77.95
Consumed Memory (GB)	427.81	427.29	430.38
Memory Balloon (GB)	0.0	0.0	0.0

Figure 10. e01esx01.dc01.ssc.lan : CPU

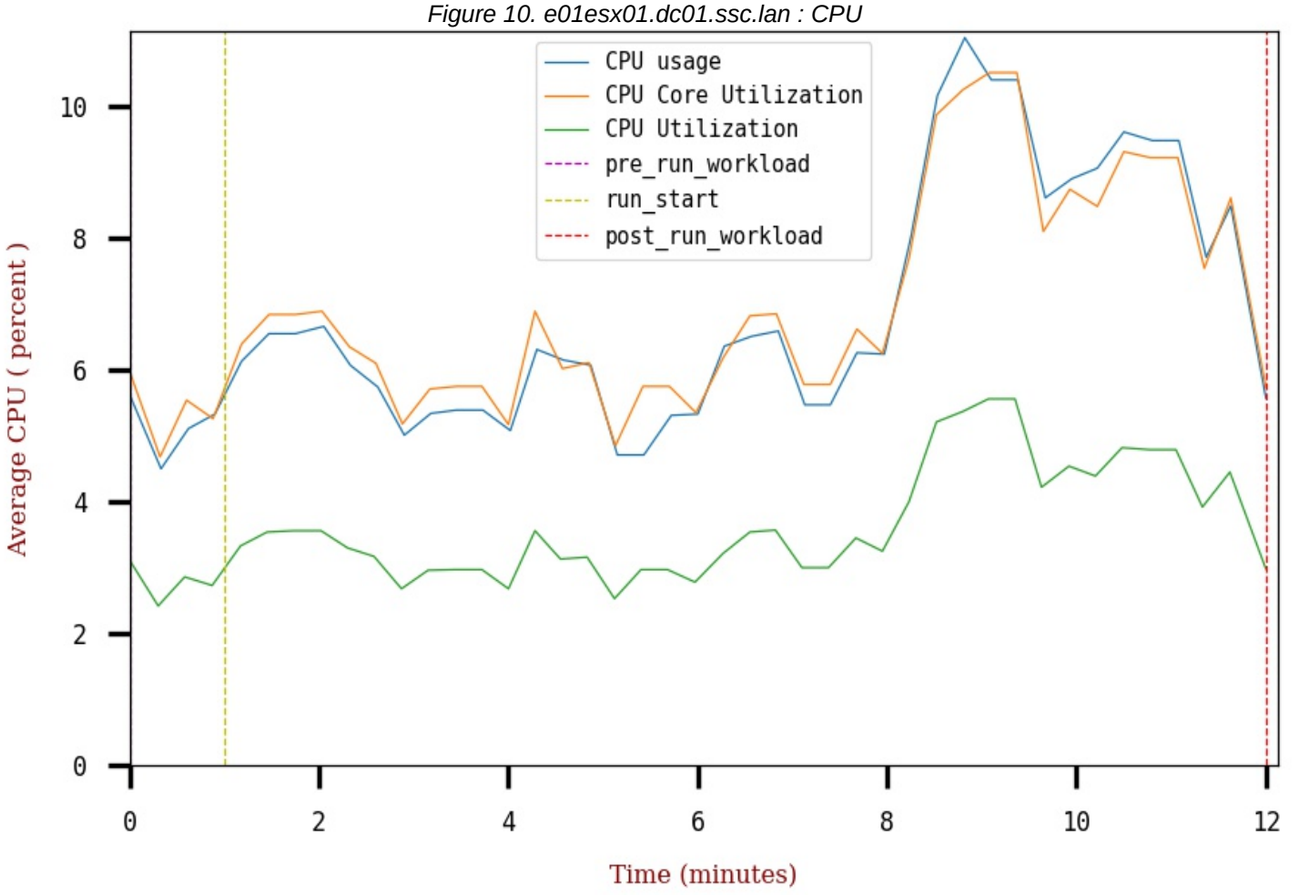


Figure 11. e01esx01.dc01.ssc.lan : Memory Usage

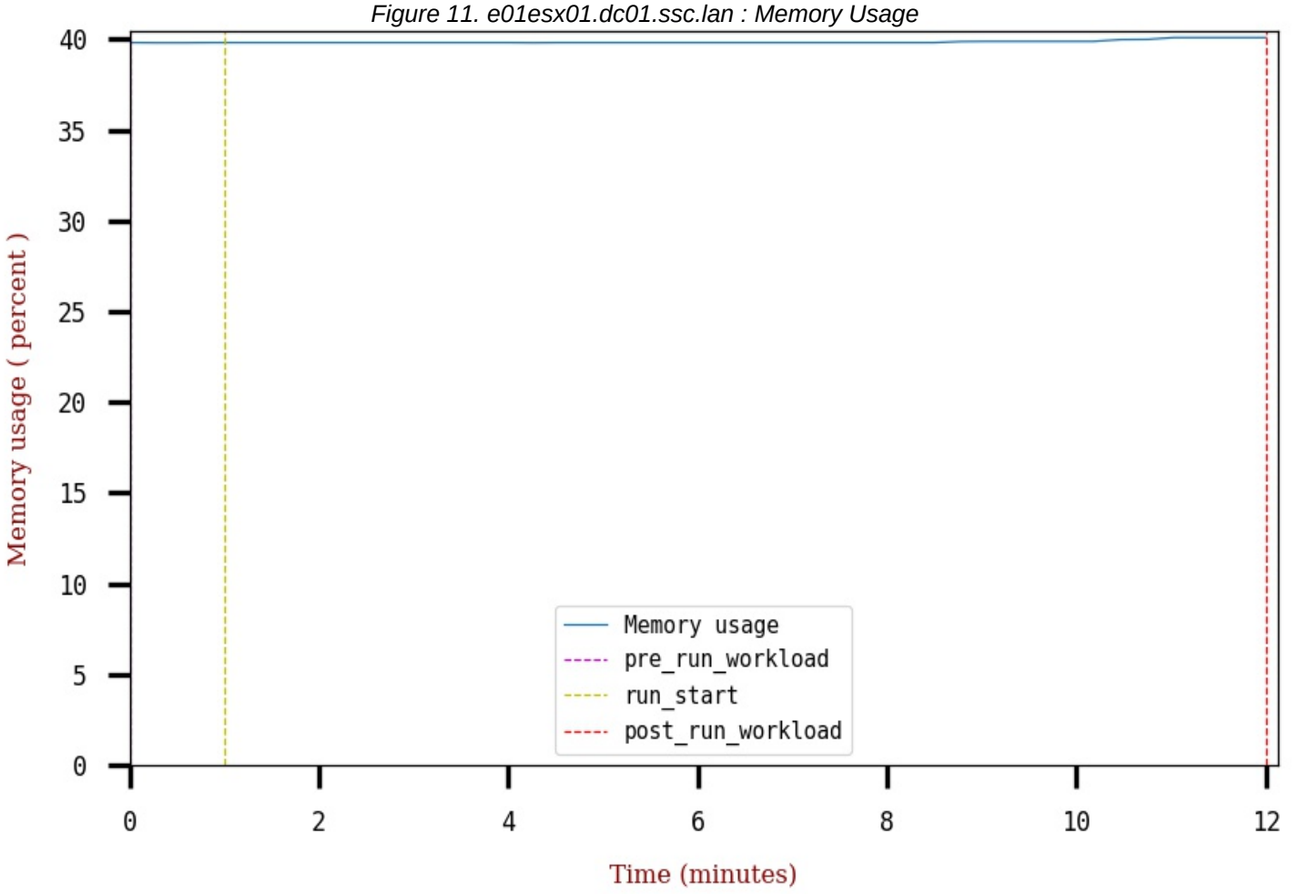


Figure 12. e01esx01.dc01.ssc.lan : Memory

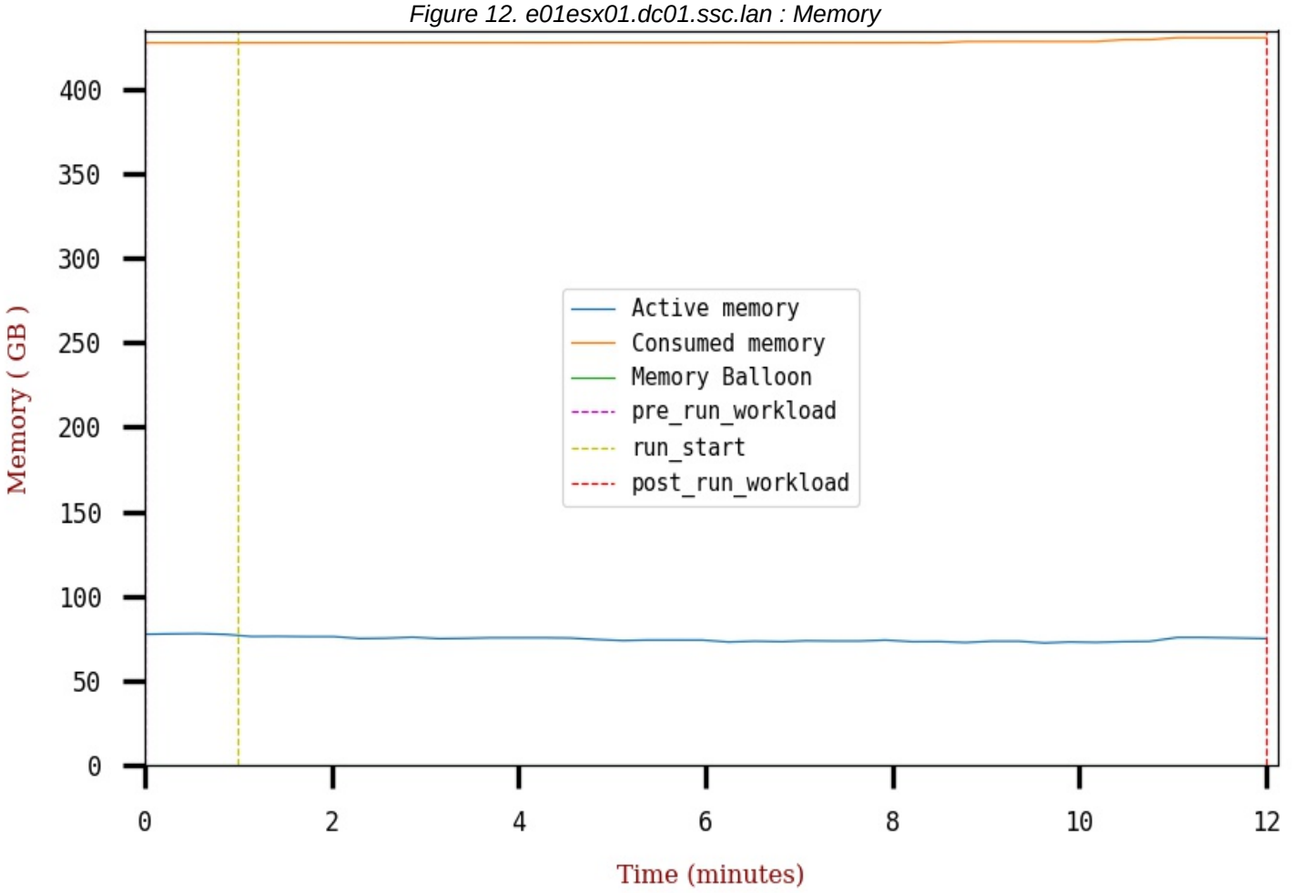


Figure 13. e01esx01.dc01.ssc.lan : Network Usage

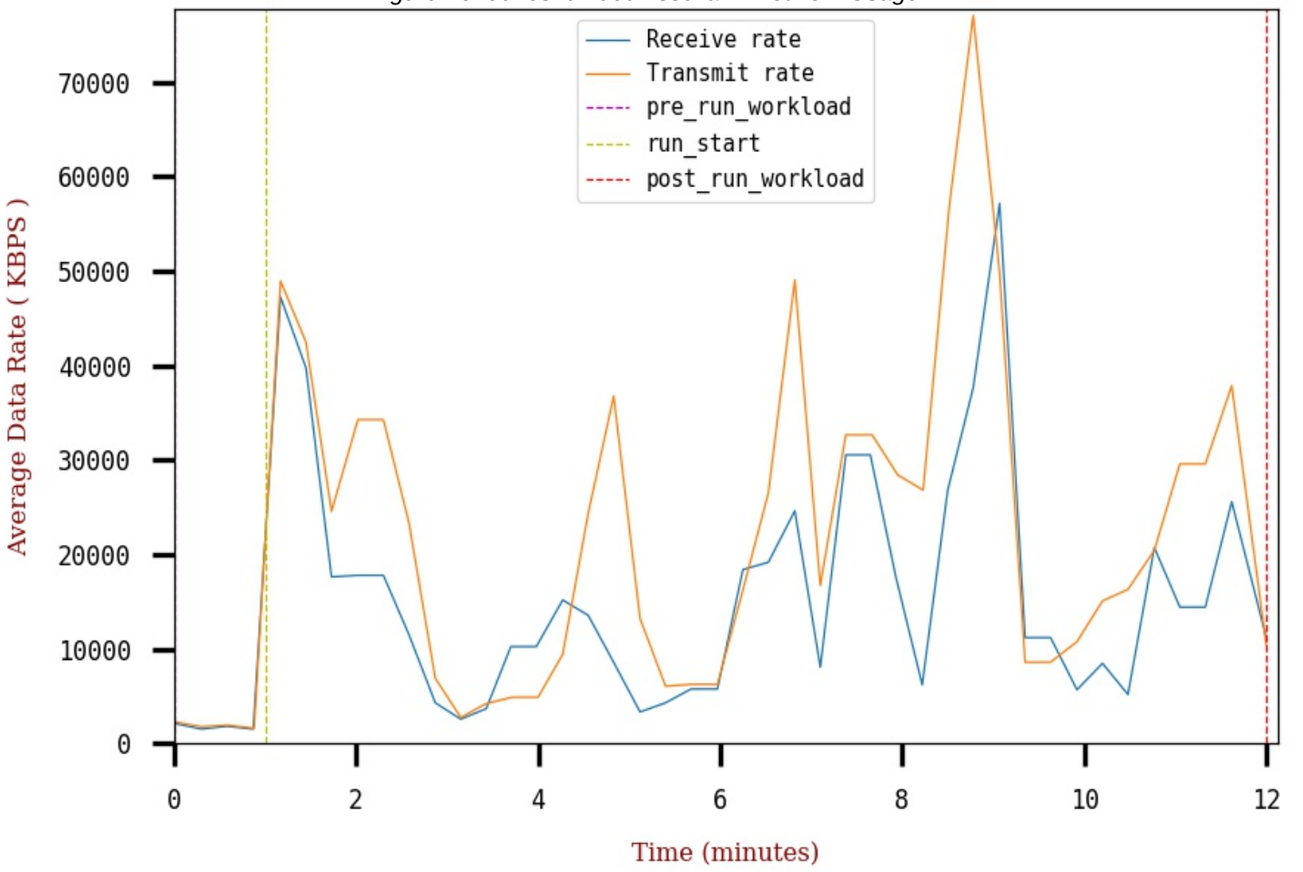


Figure 14. e01esx01.dc01.ssc.lan : Write Latency

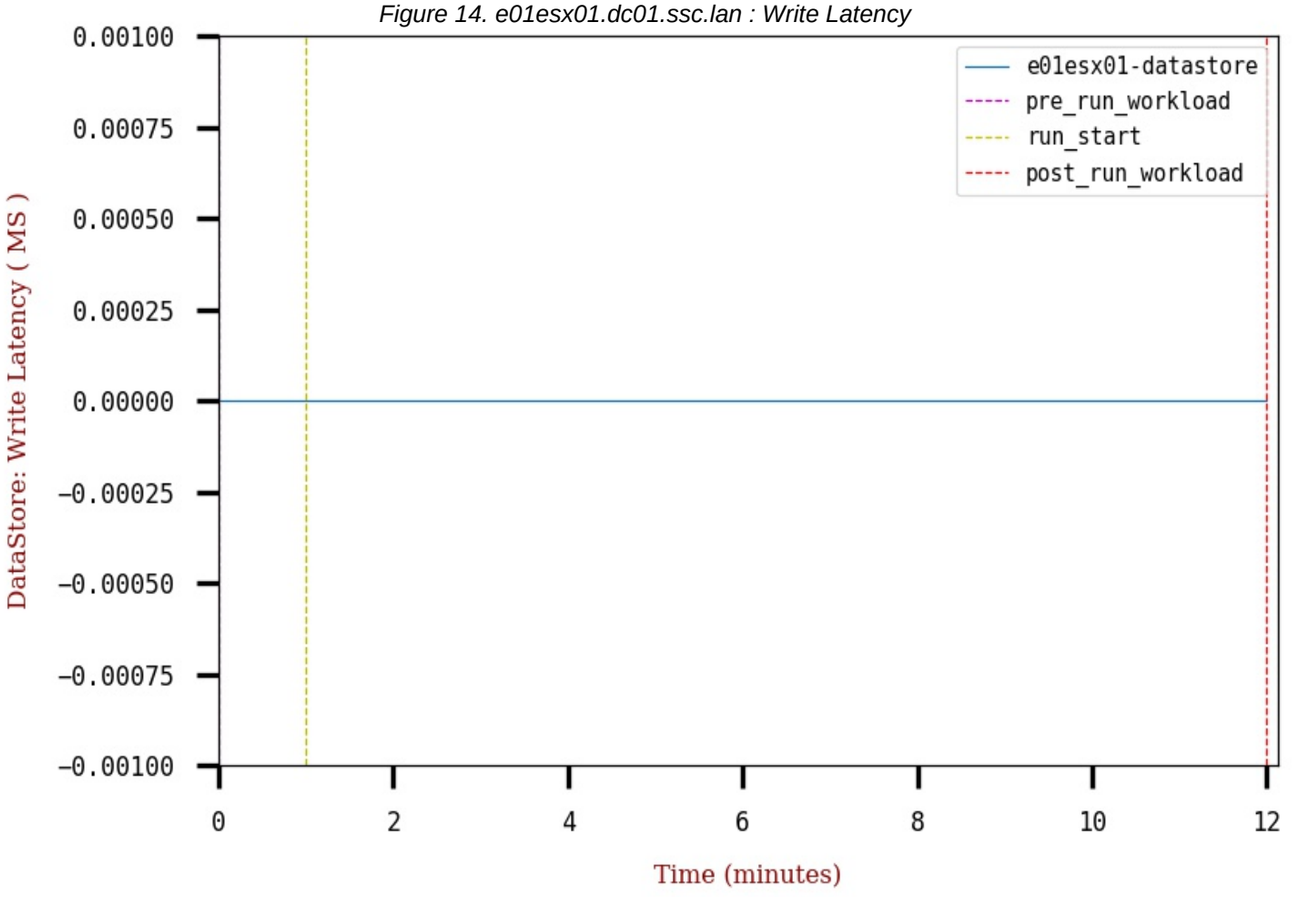


Figure 15. e01esx01.dc01.ssc.lan : Average write requests per second

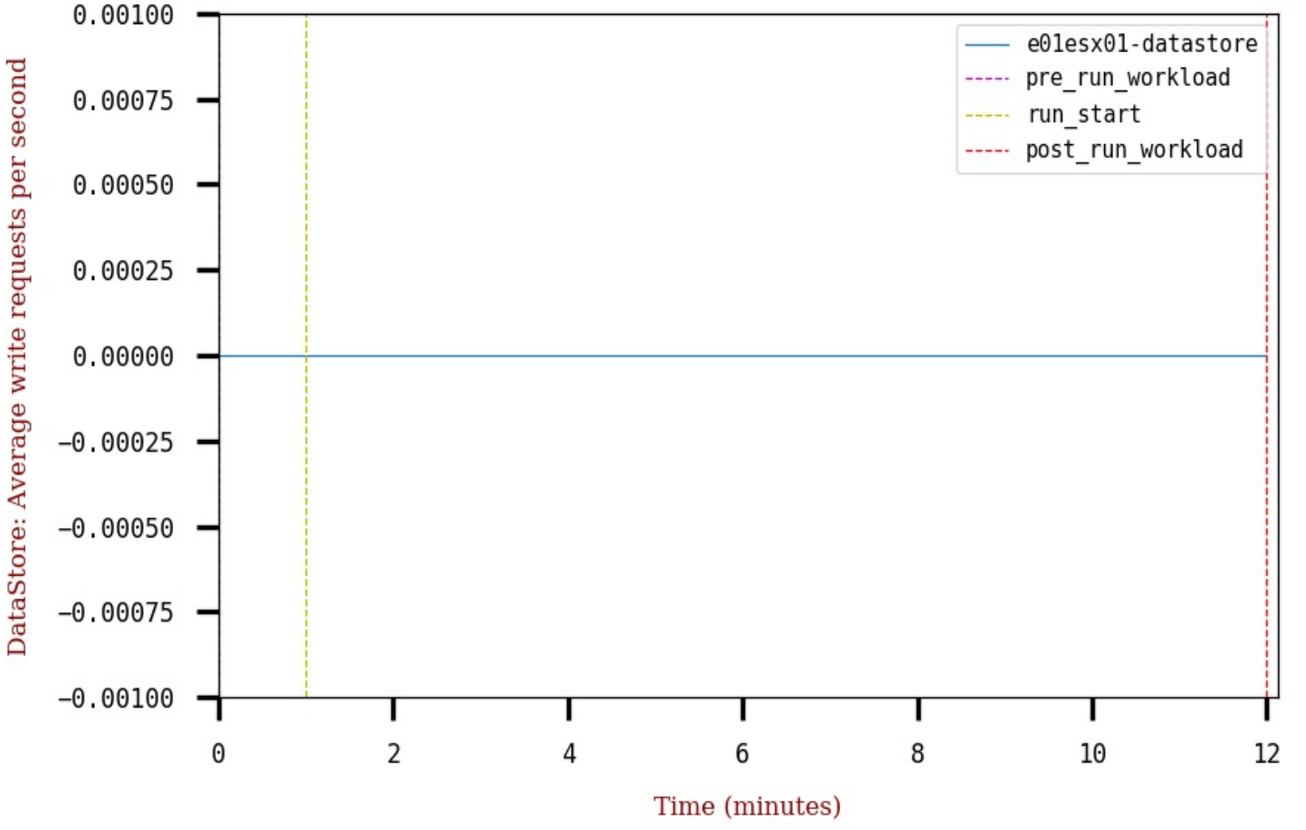


Figure 16. e01esx01.dc01.ssc.lan : Read Latency

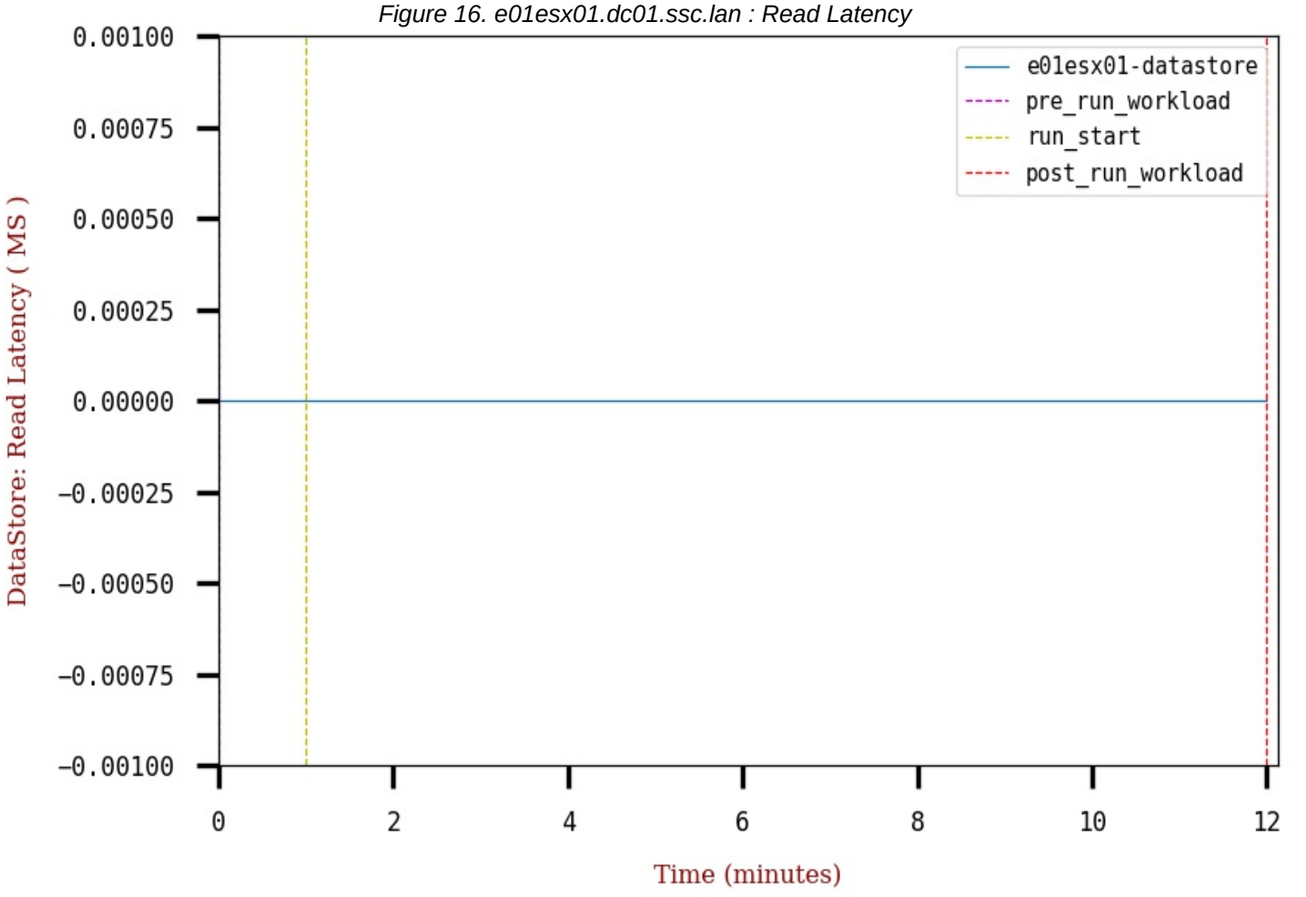


Figure 17. e01esx01.dc01.ssc.lan : Average read requests per second

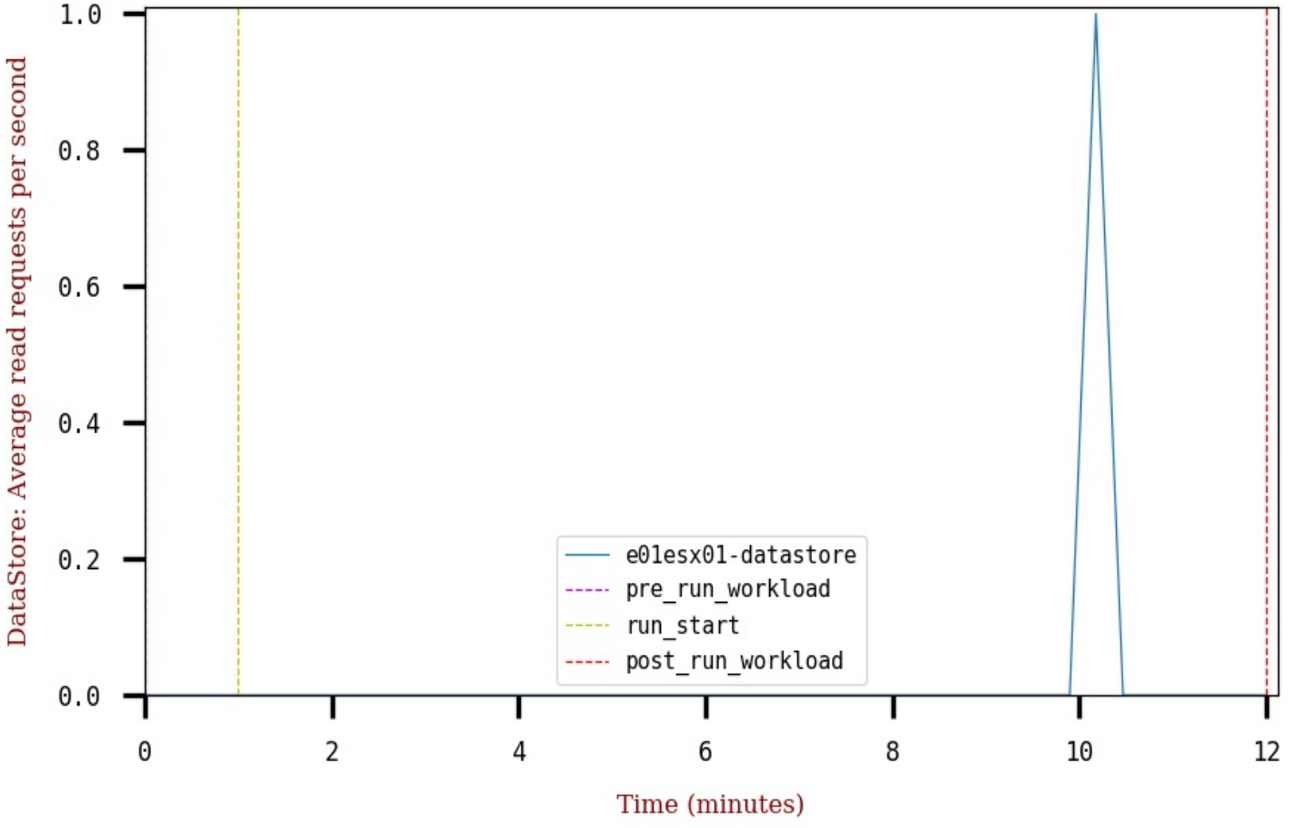


Table 4. Resource Usage of e01esx11.dc01.ssc.lan

Measurement	Average	Min	Max
CPU usage (percent)	6.32	4.7	10.17
CPU Core Utilization (percent)	6.41	4.88	9.62
CPU Utilization(percent)	3.34	2.53	5.01
Memory usage (percent)	38.46	38.36	38.62
Active Memory (GB)	75.14	73.18	80.08
Consumed Memory (GB)	412.92	411.77	414.62
Memory Balloon (GB)	0.0	0.0	0.0

Figure 18. e01esx11.dc01.ssc.lan : CPU

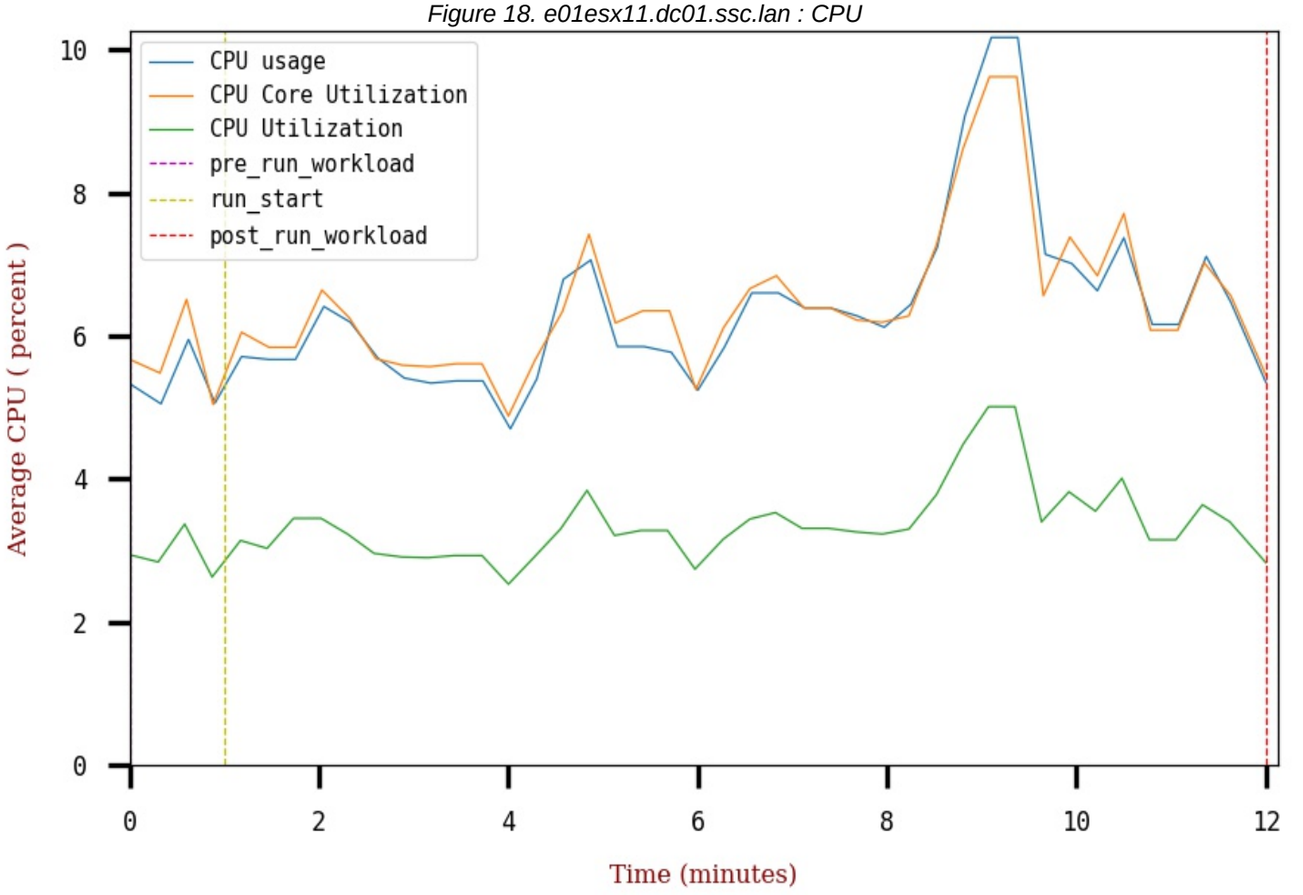


Figure 19. e01esx11.dc01.ssc.lan : Memory Usage

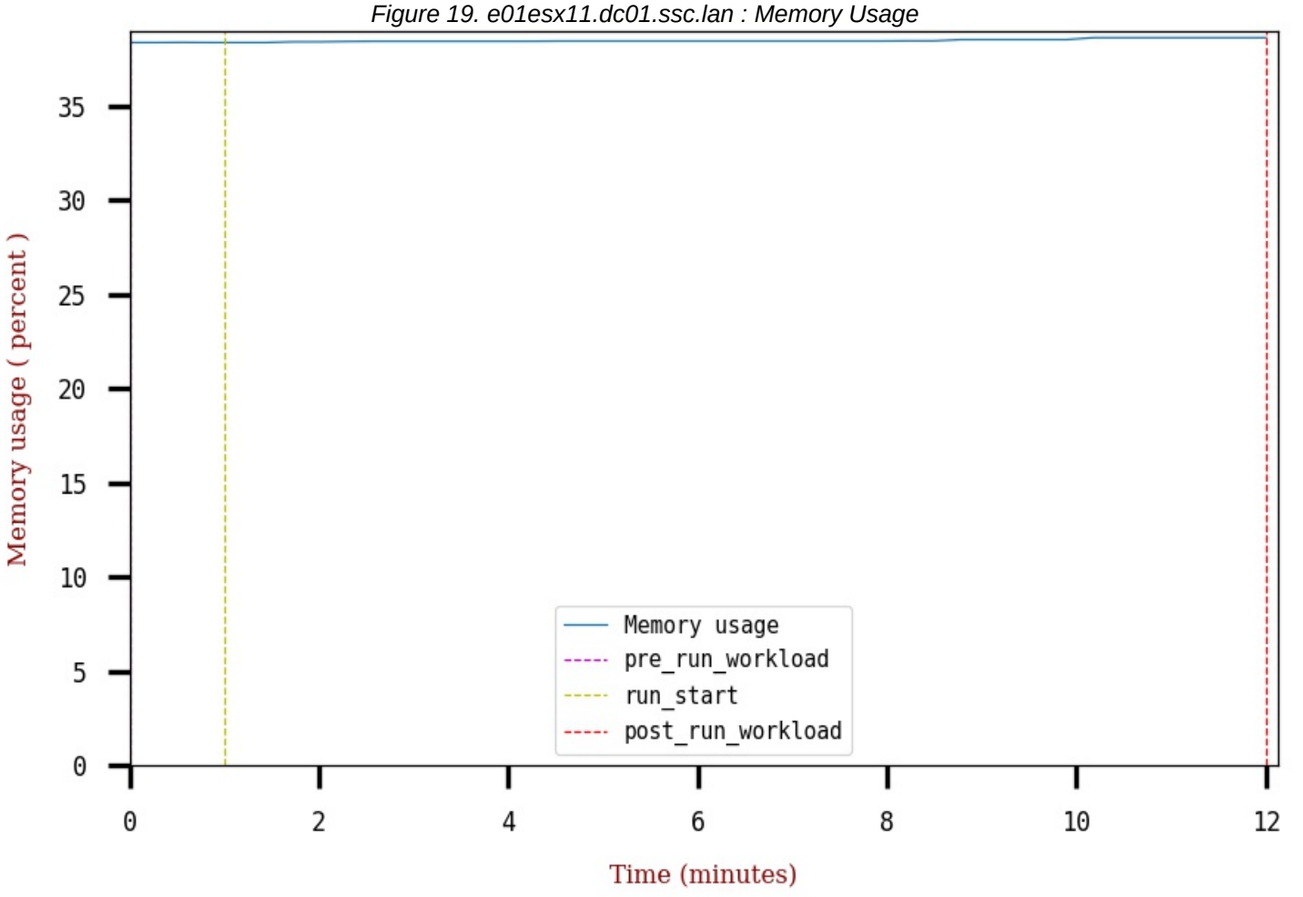


Figure 20. e01esx11.dc01.ssc.lan : Memory

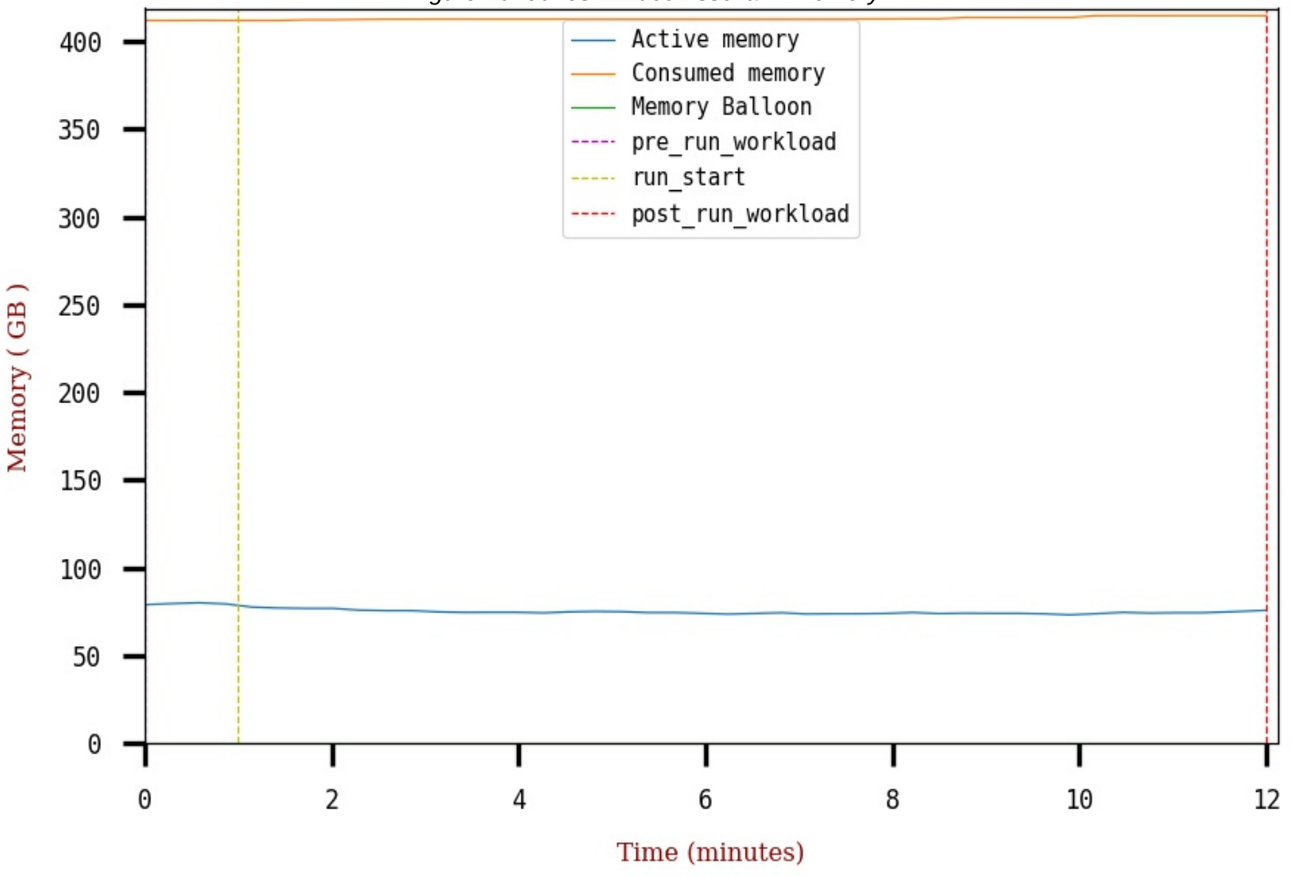


Figure 21. e01esx11.dc01.ssc.lan : Network Usage

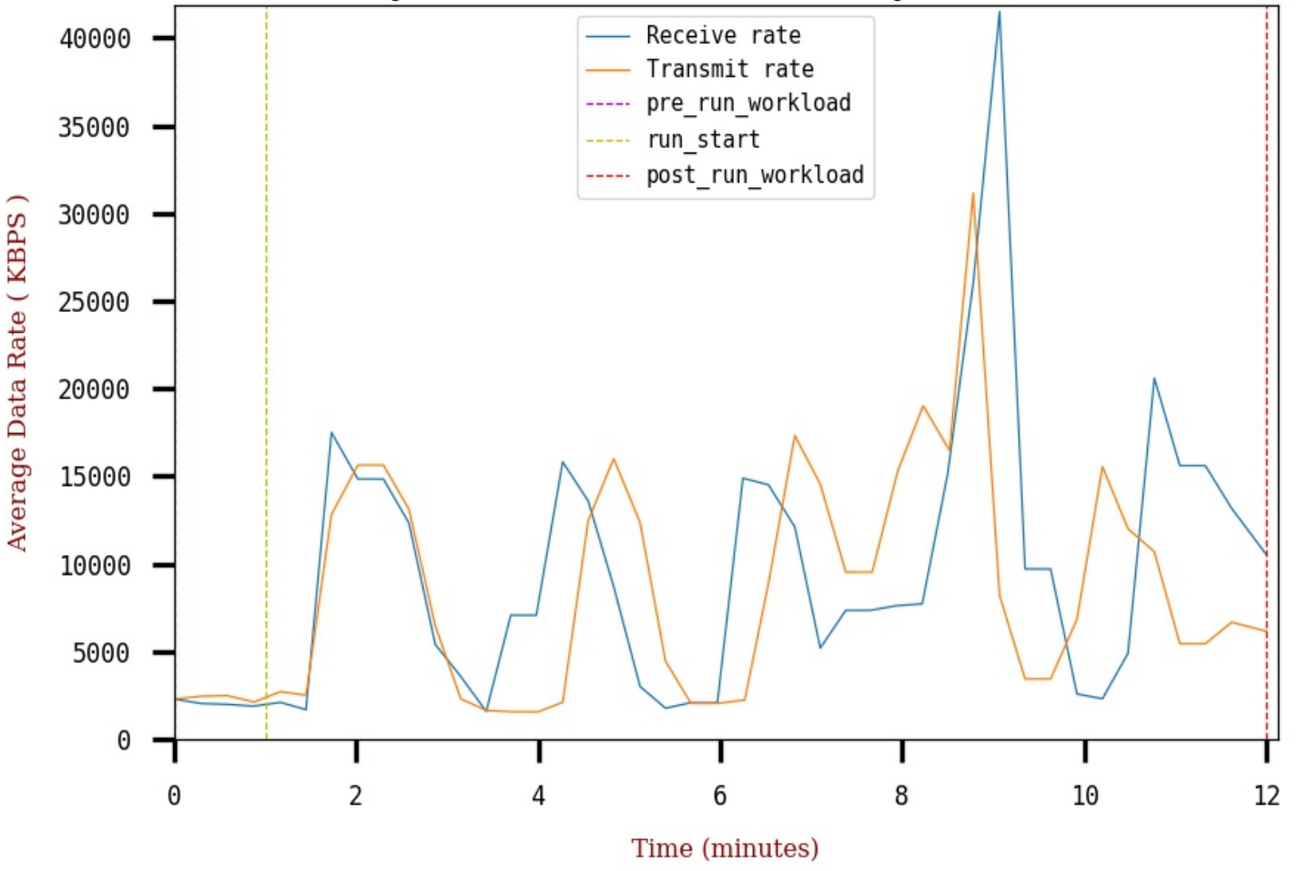


Figure 22. e01esx11.dc01.ssc.lan : Write Latency

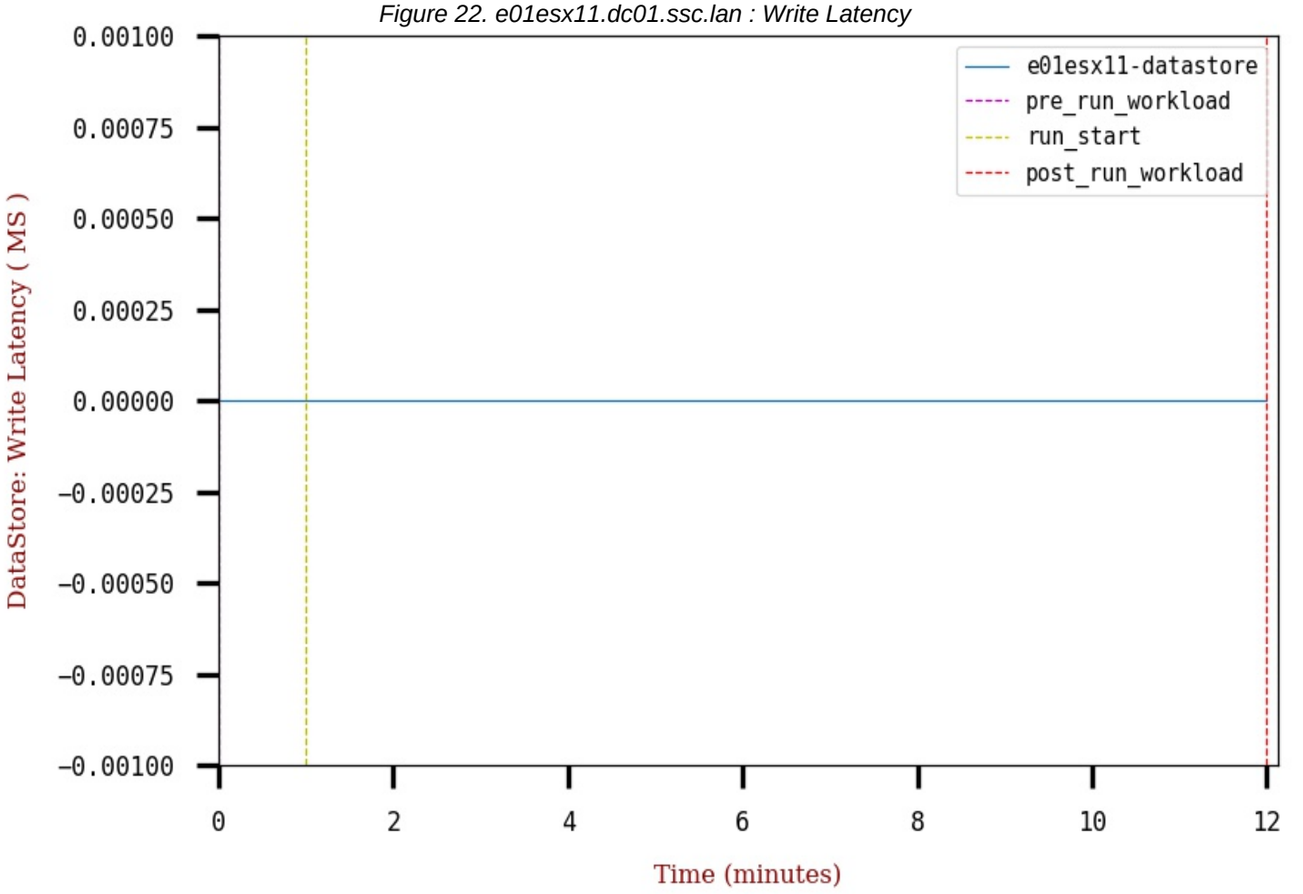


Figure 23. e01esx11.dc01.ssc.lan : Average write requests per second

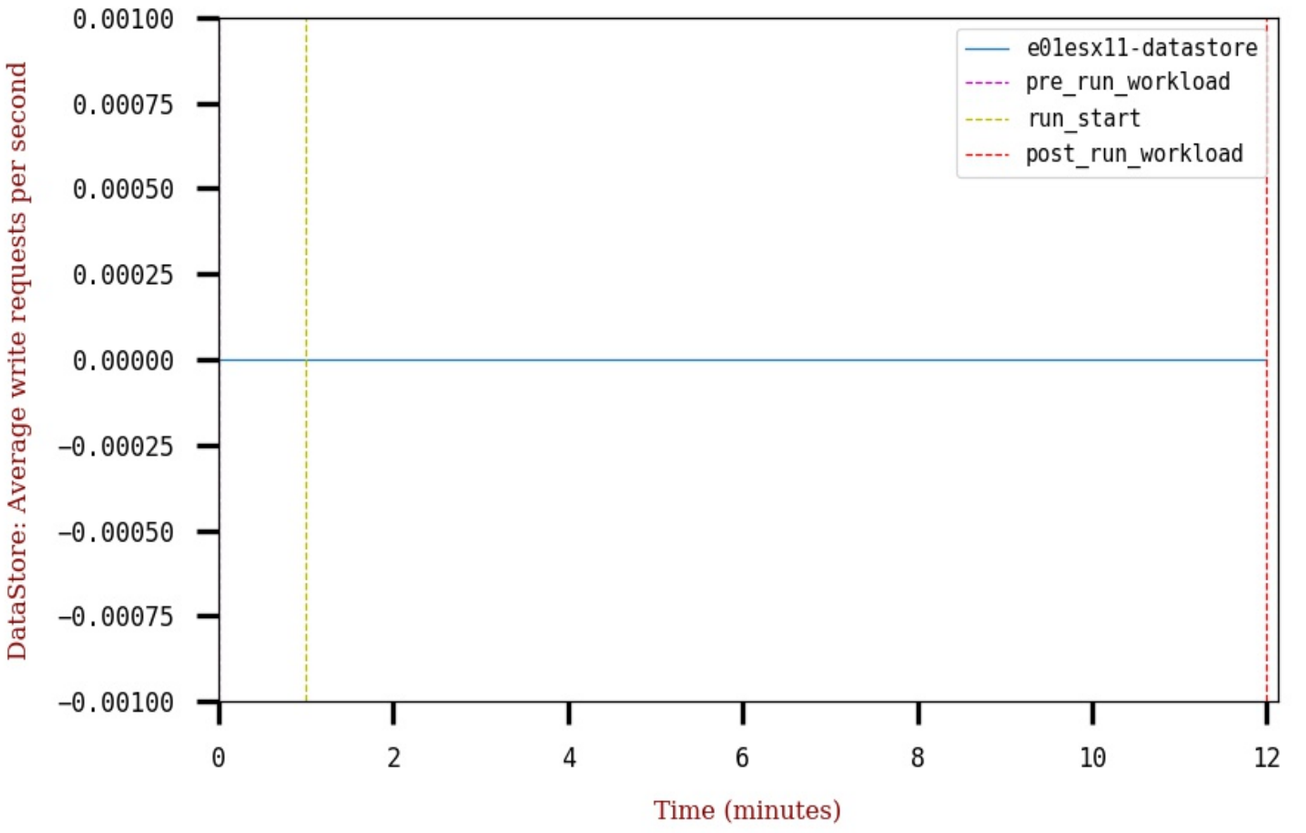


Figure 24. e01esx11.dc01.ssc.lan : Read Latency

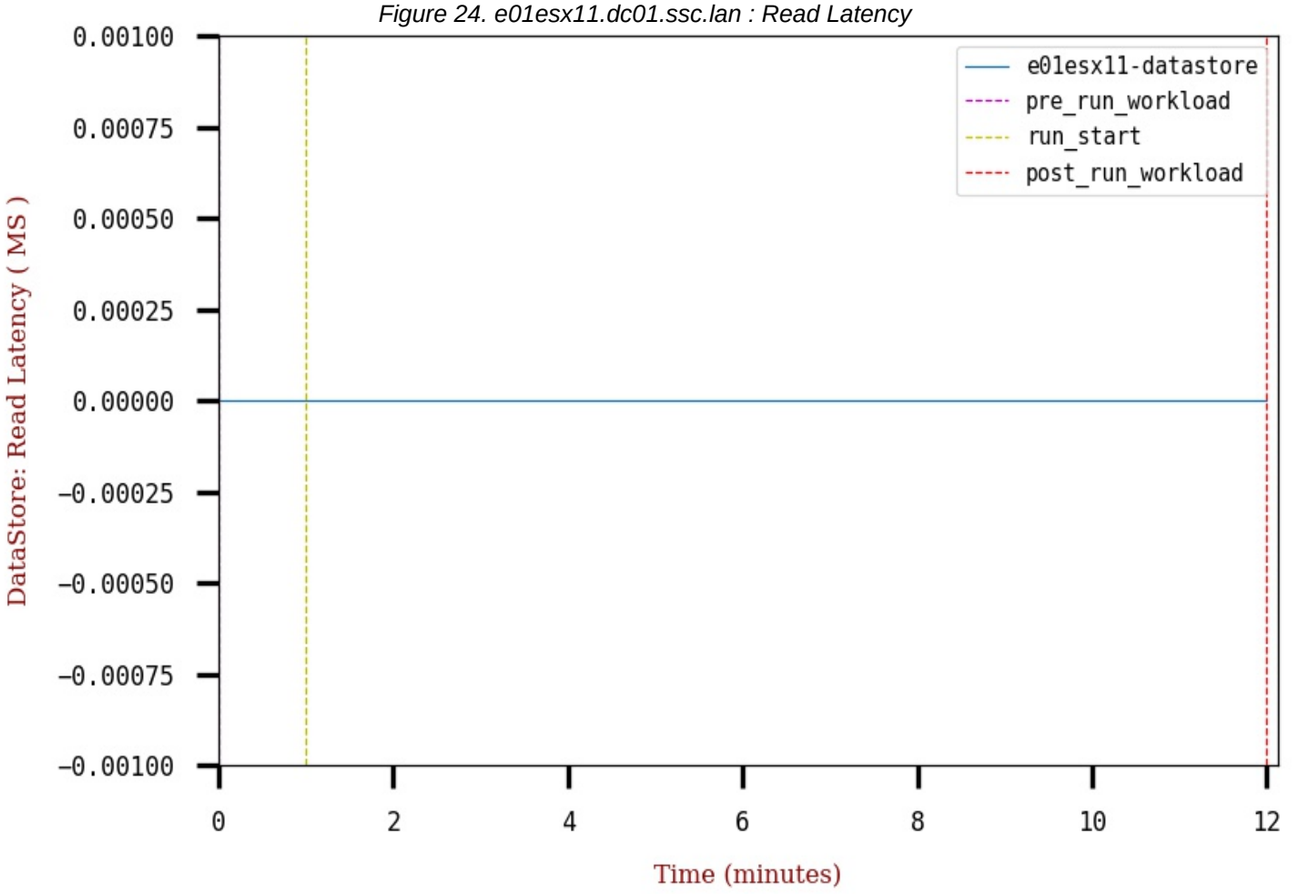


Figure 25. e01esx11.dc01.ssc.lan : Average read requests per second

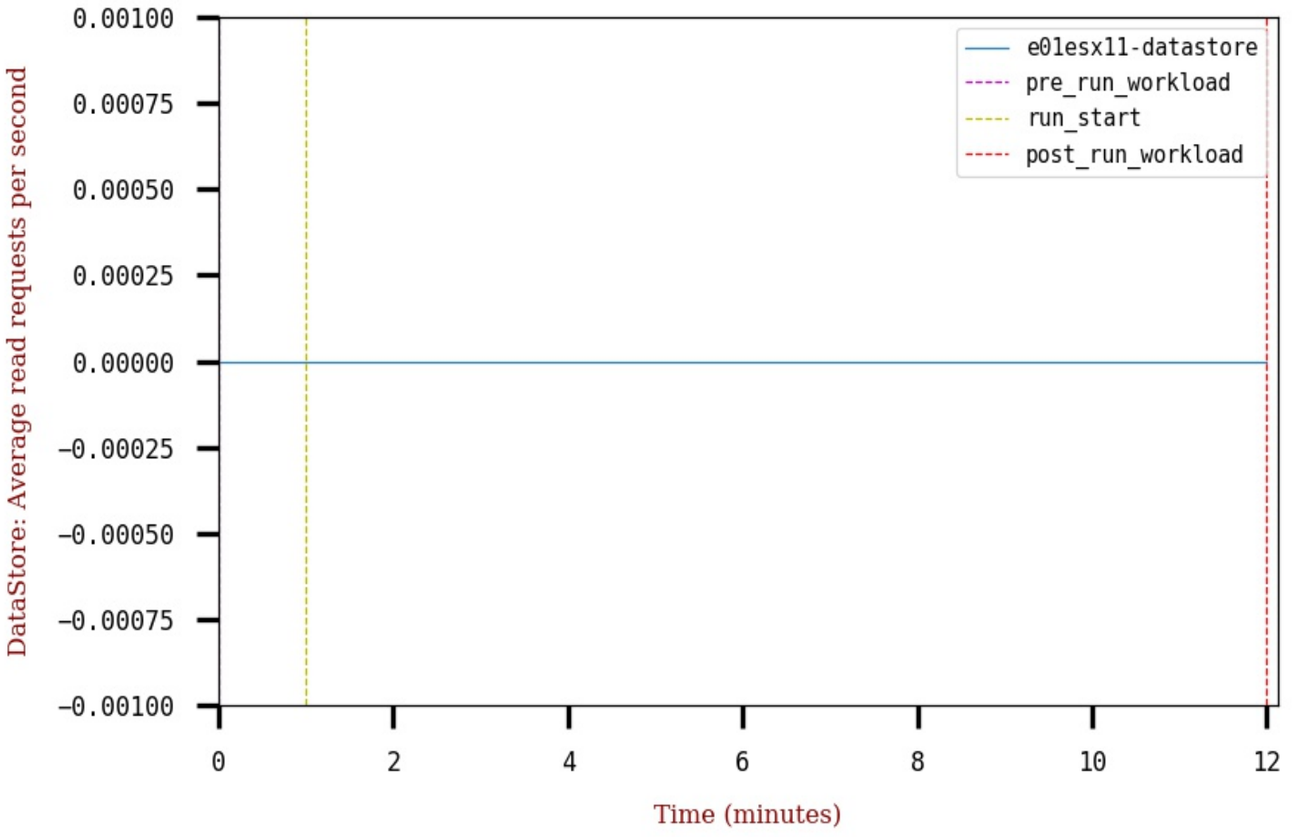


Table 5. Resource Usage of e01esx15.dc01.ssc.lan

Measurement	Average	Min	Max
CPU usage (percent)	6.65	4.84	11.09
CPU Core Utilization (percent)	6.7	4.7	10.2
CPU Utilization(percent)	3.49	2.45	5.28
Memory usage (percent)	39.24	39.04	39.44
Active Memory (GB)	76.37	73.77	80.36
Consumed Memory (GB)	421.26	419.12	423.39
Memory Balloon (GB)	0.0	0.0	0.0

Figure 26. e01esx15.dc01.ssc.lan : CPU

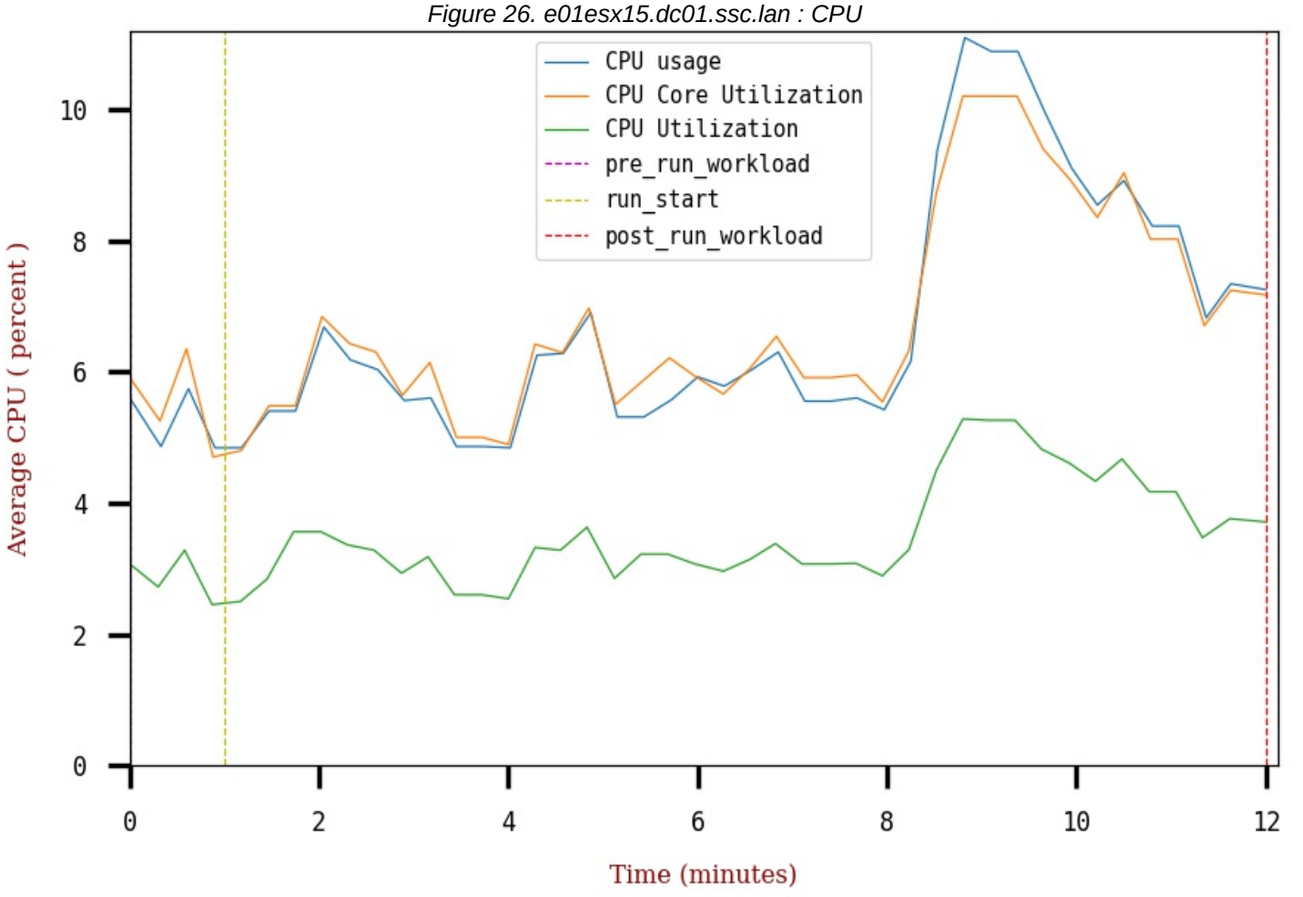


Figure 27. e01esx15.dc01.ssc.lan : Memory Usage

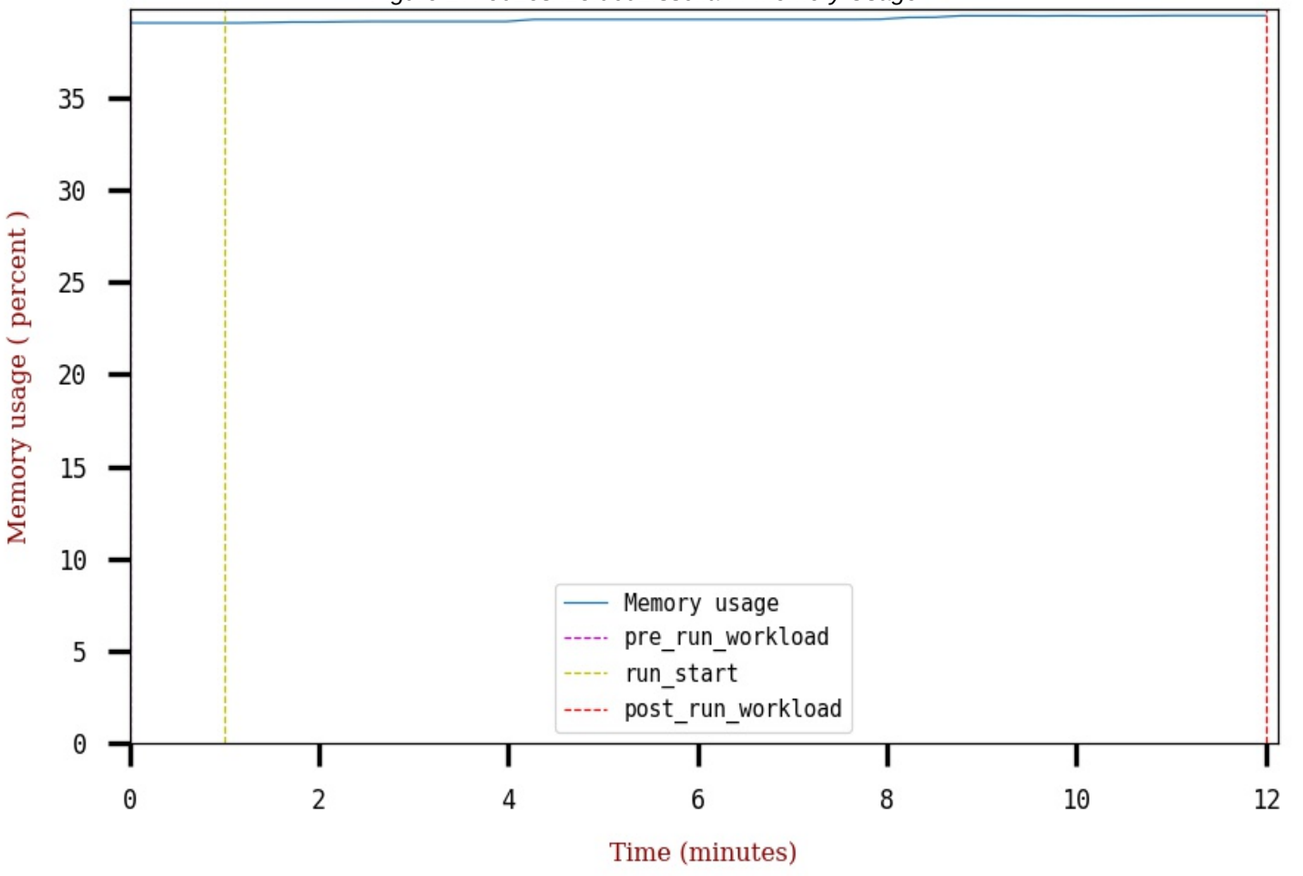


Figure 28. e01esx15.dc01.ssc.lan : Memory

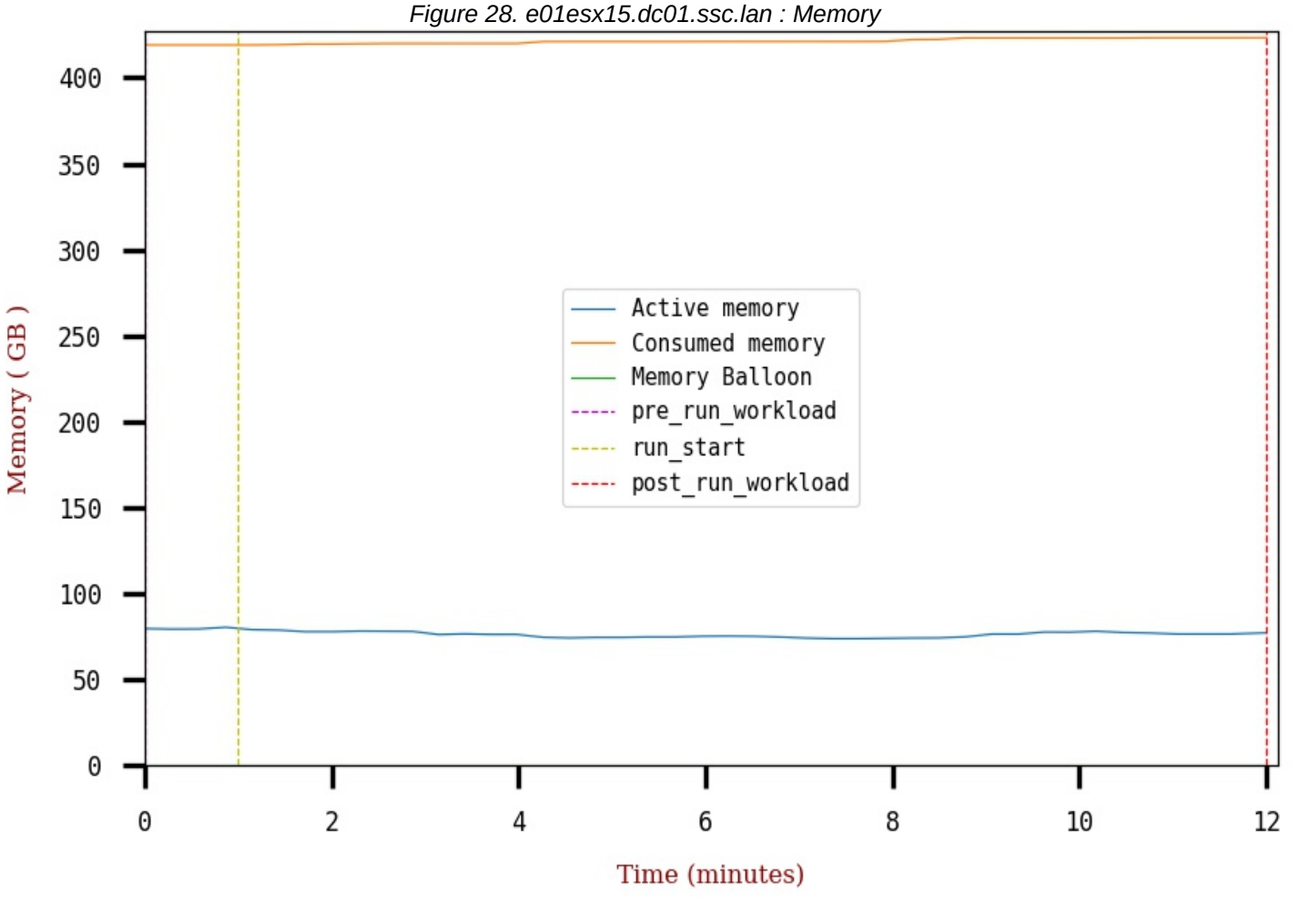


Figure 29. e01esx15.dc01.ssc.lan : Network Usage

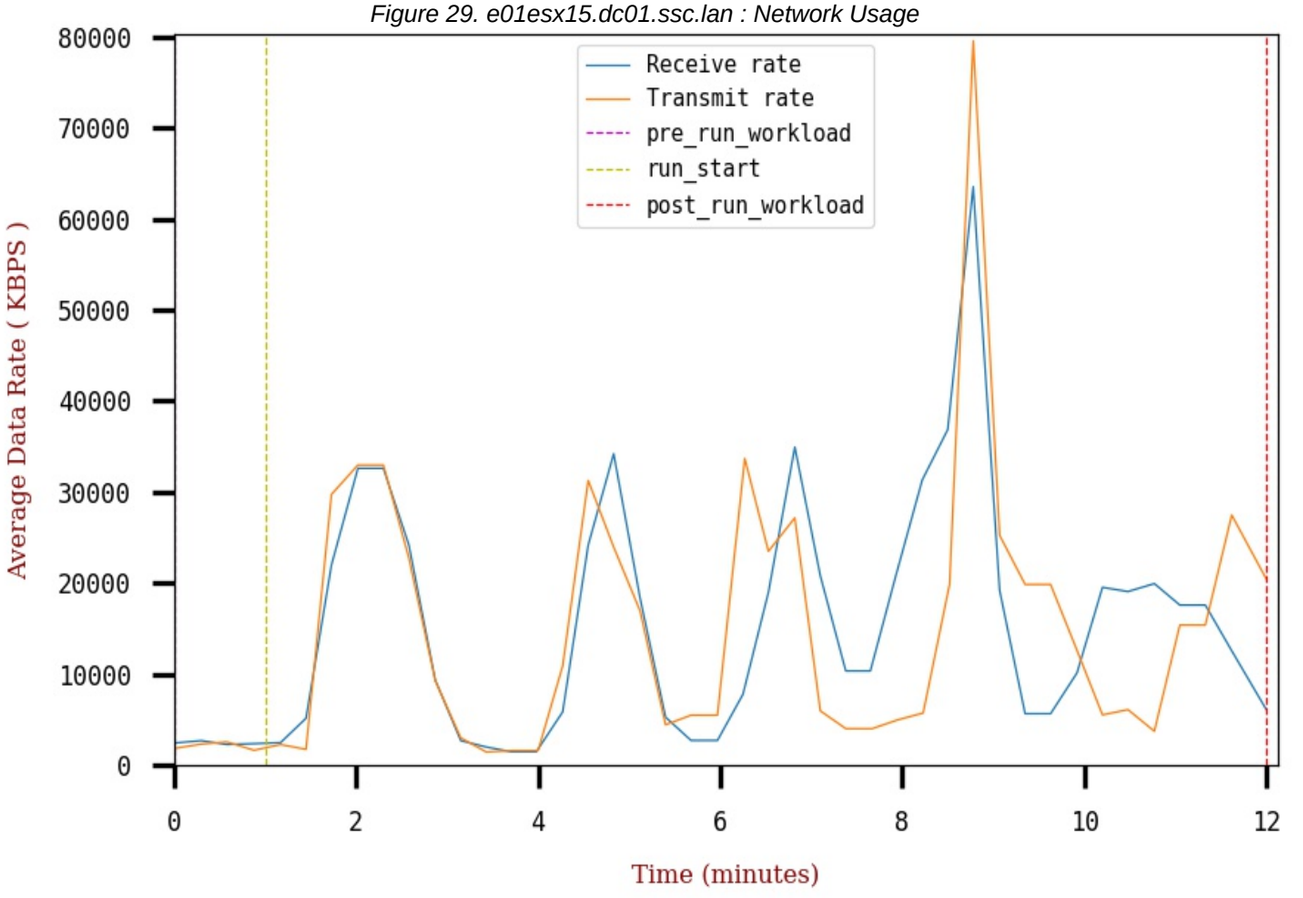


Figure 30. e01esx15.dc01.ssc.lan : Write Latency

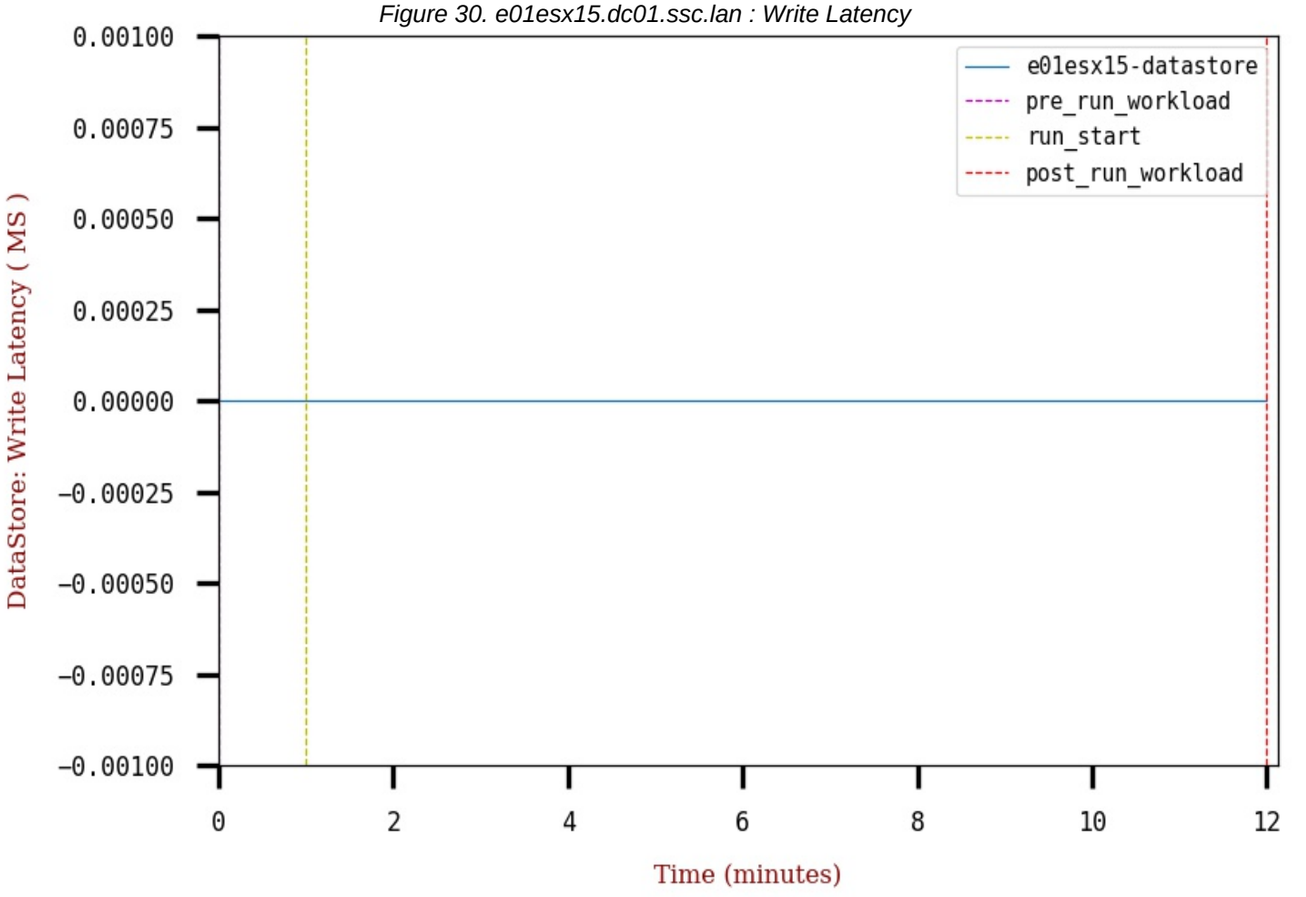


Figure 31. e01esx15.dc01.ssc.lan : Average write requests per second

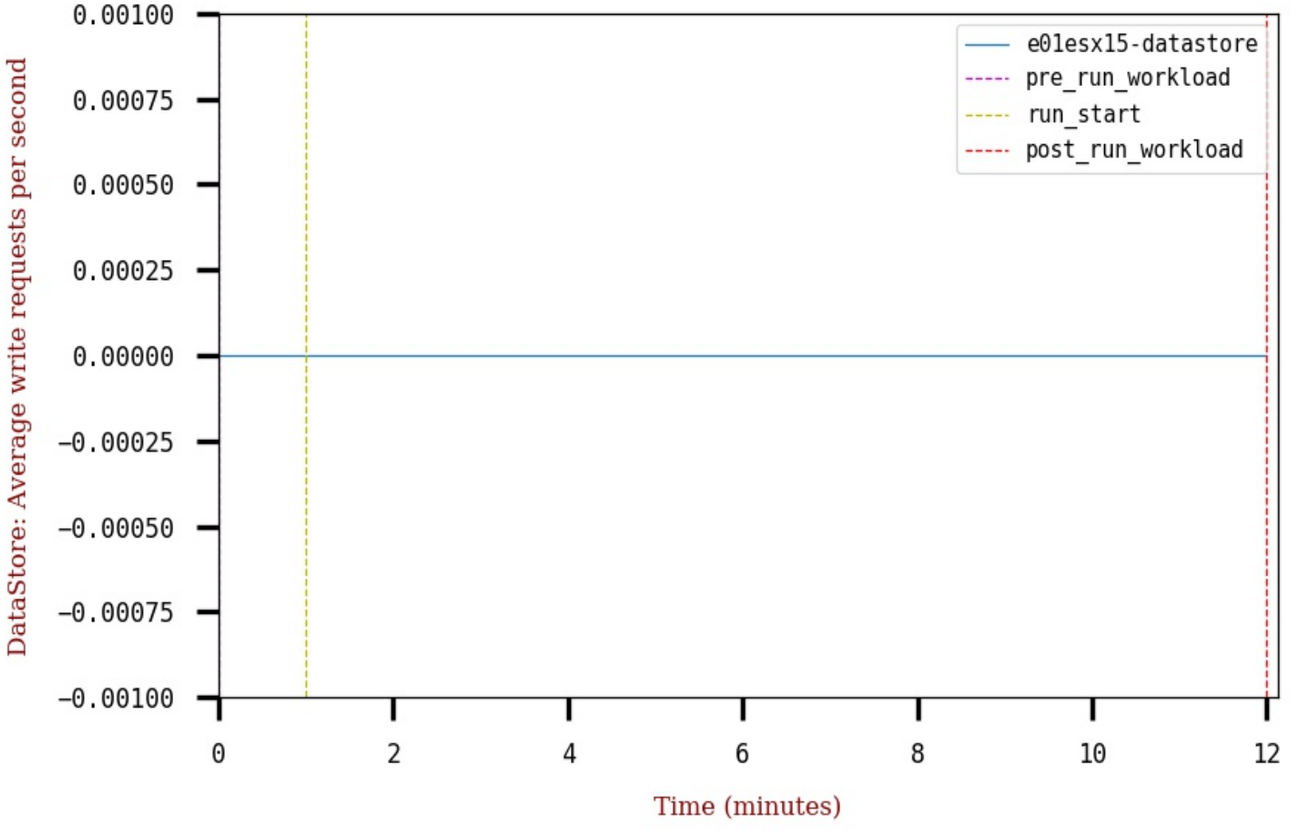


Figure 32. e01esx15.dc01.ssc.lan : Read Latency

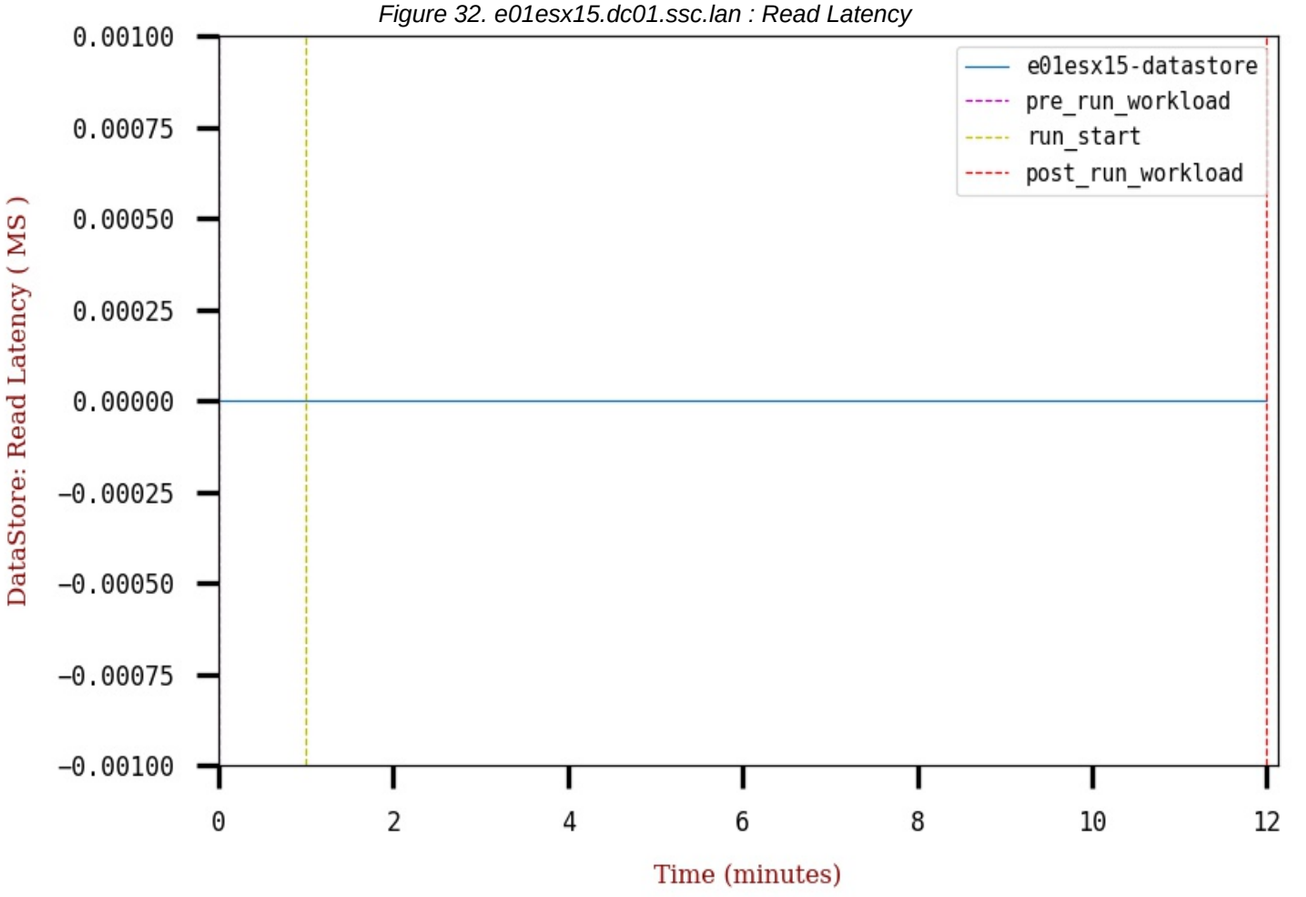


Figure 33. e01esx15.dc01.ssc.lan : Average read requests per second

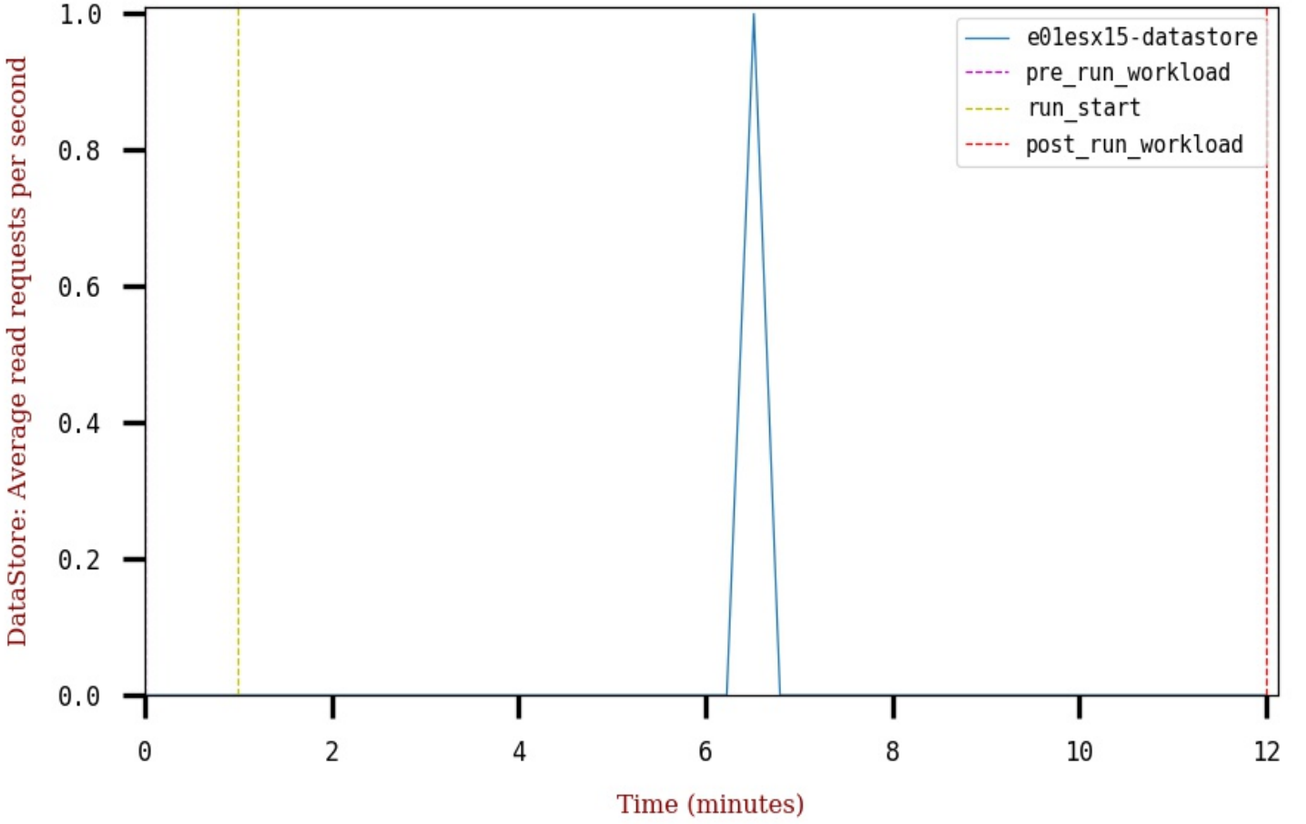


Table 6. Resource Usage of e01esx05.dc01.ssc.lan

Measurement	Average	Min	Max
CPU usage (percent)	6.54	4.93	11.56
CPU Core Utilization (percent)	6.64	4.92	10.67
CPU Utilization(percent)	3.43	2.56	5.53
Memory usage (percent)	39.54	39.37	39.73
Active Memory (GB)	74.99	73.08	79.16
Consumed Memory (GB)	424.41	422.62	426.47
Memory Balloon (GB)	0.0	0.0	0.0

Figure 34. e01esx05.dc01.ssc.lan : CPU

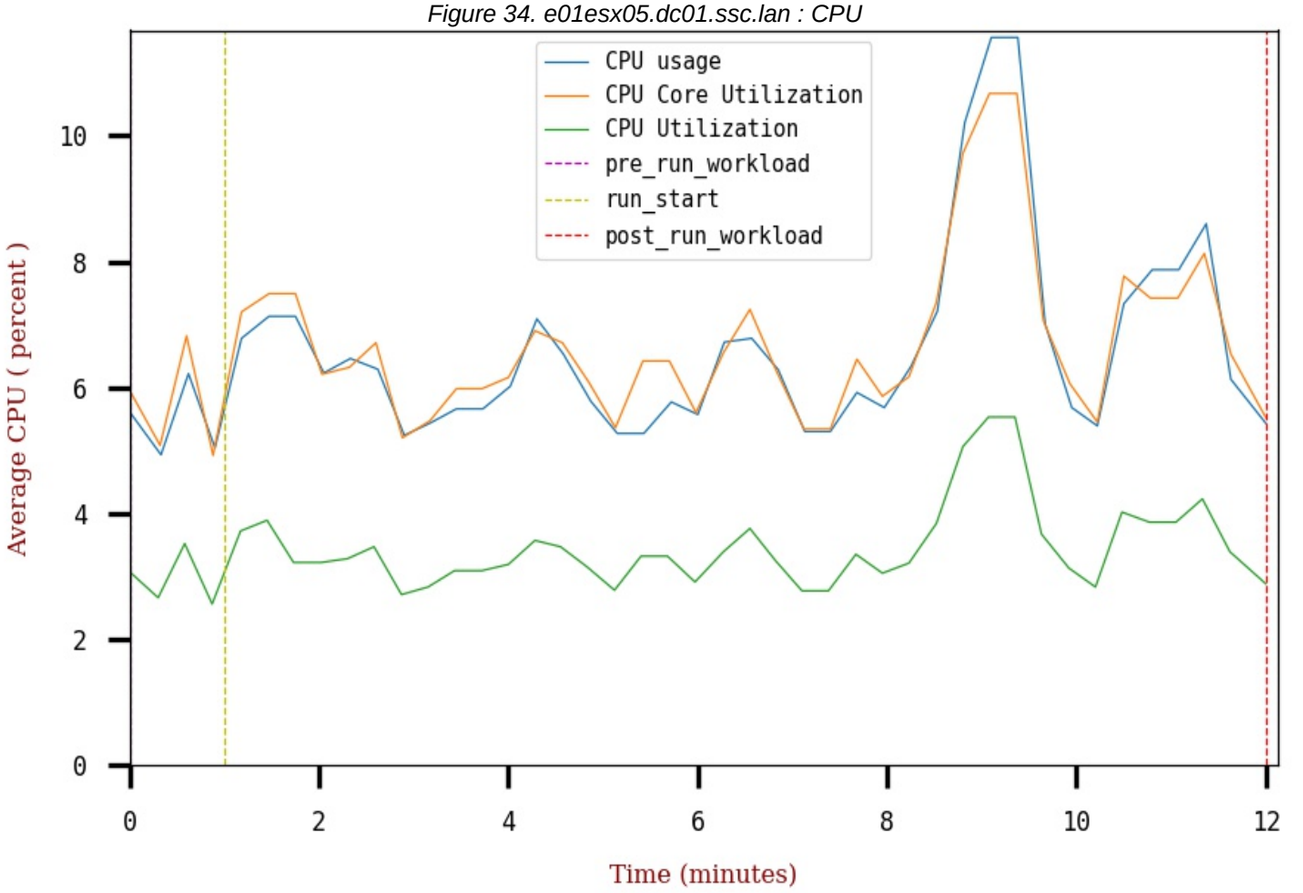


Figure 35. e01esx05.dc01.ssc.lan : Memory Usage

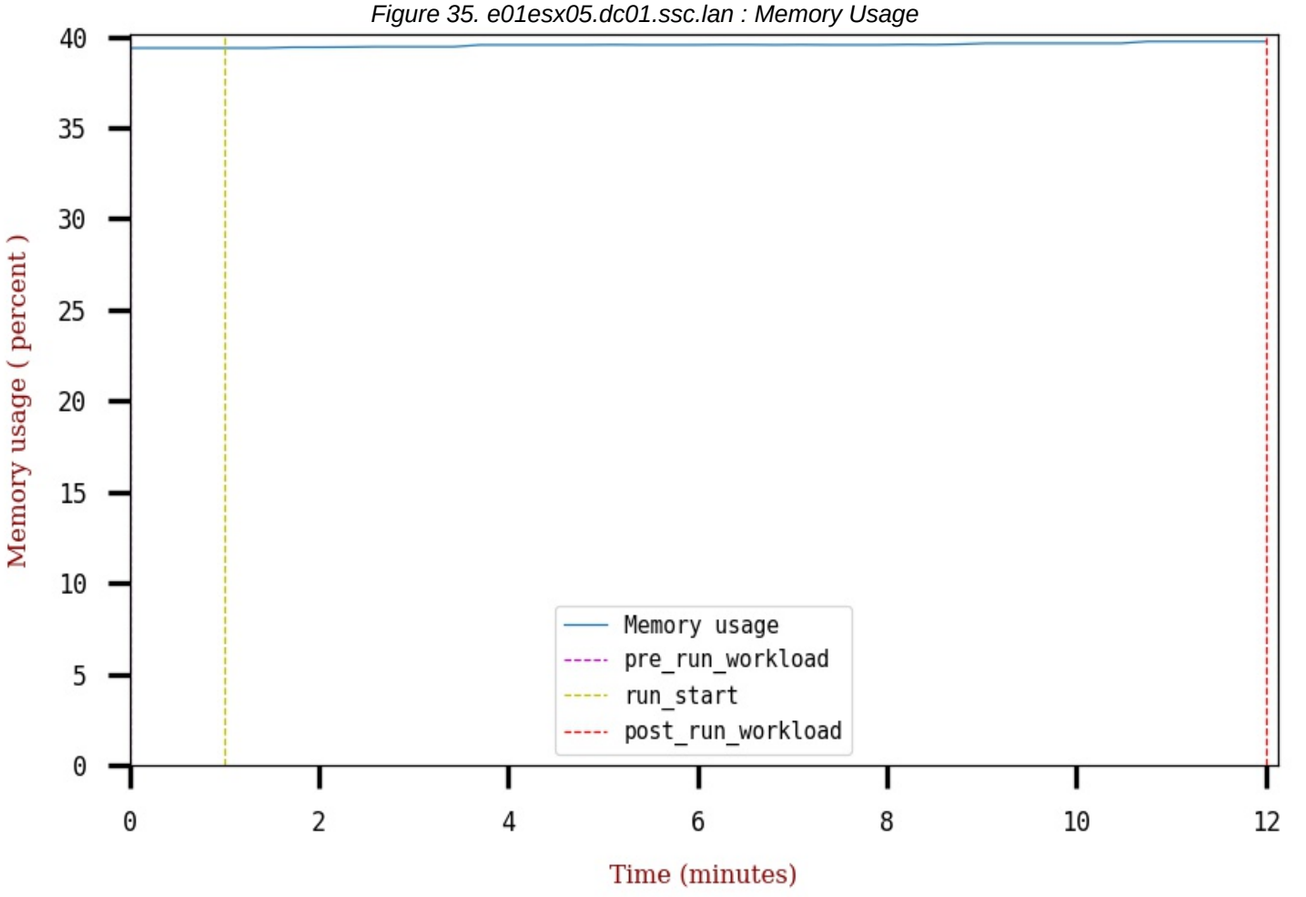


Figure 36. e01esx05.dc01.ssc.lan : Memory

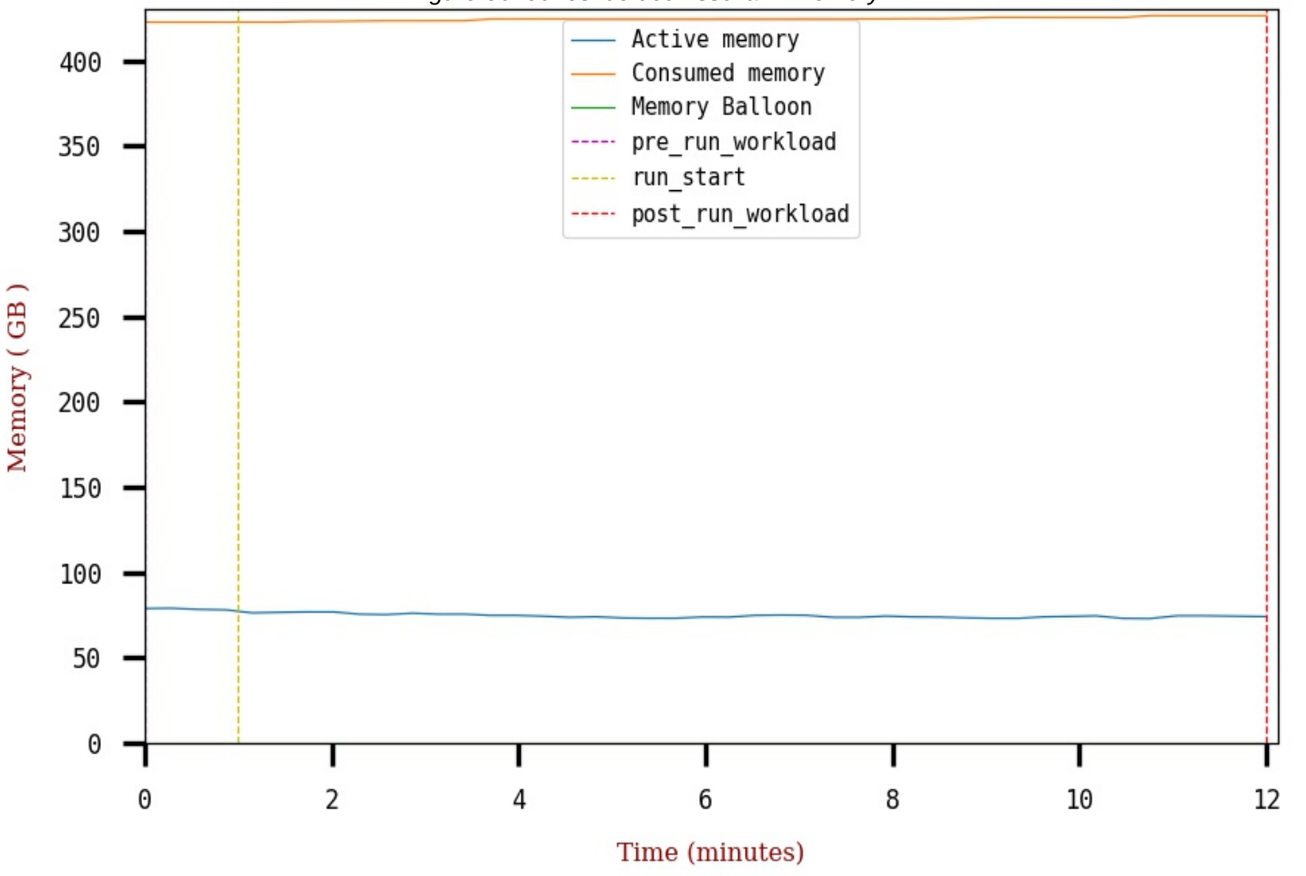


Figure 37. e01esx05.dc01.ssc.lan : Network Usage

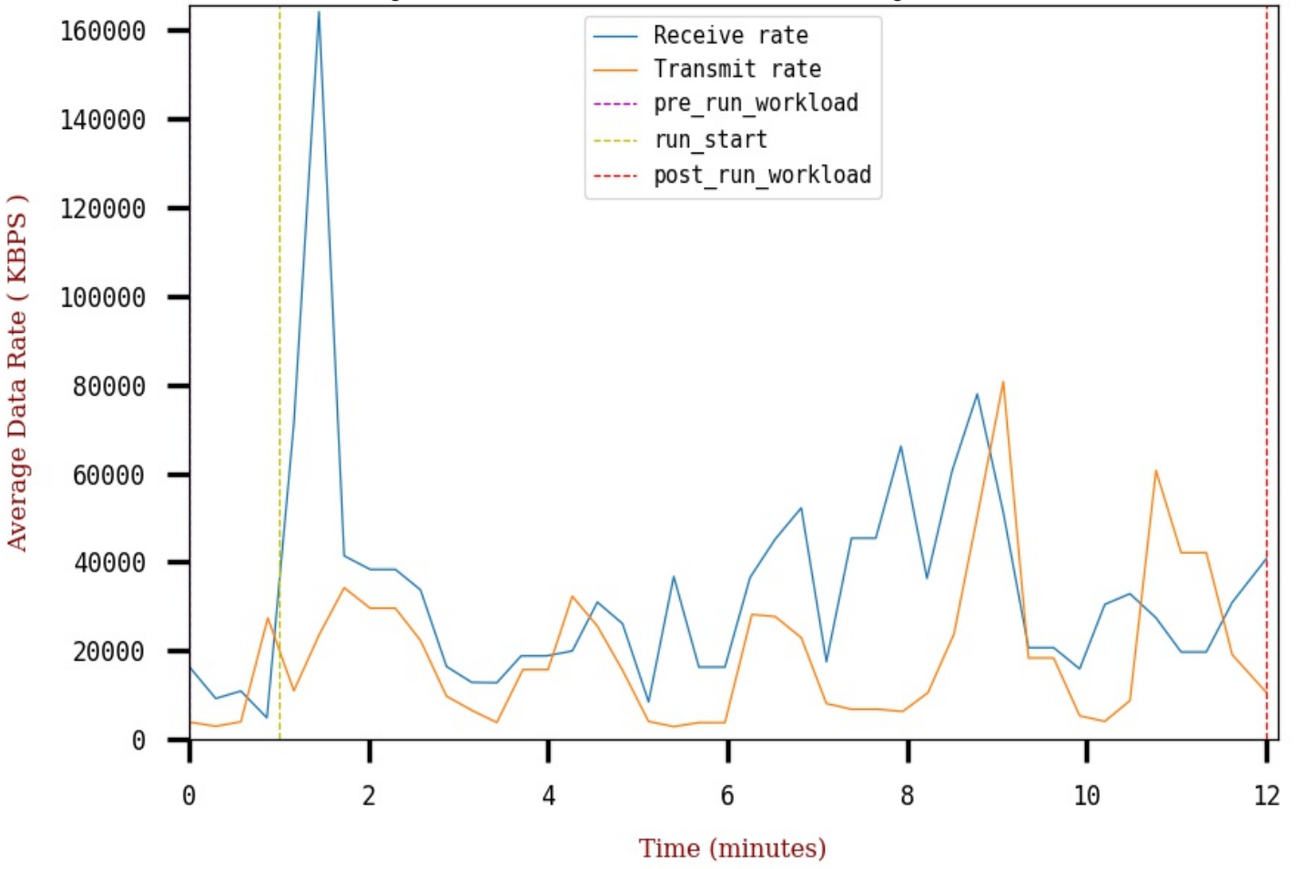


Figure 38. e01esx05.dc01.ssc.lan : Write Latency

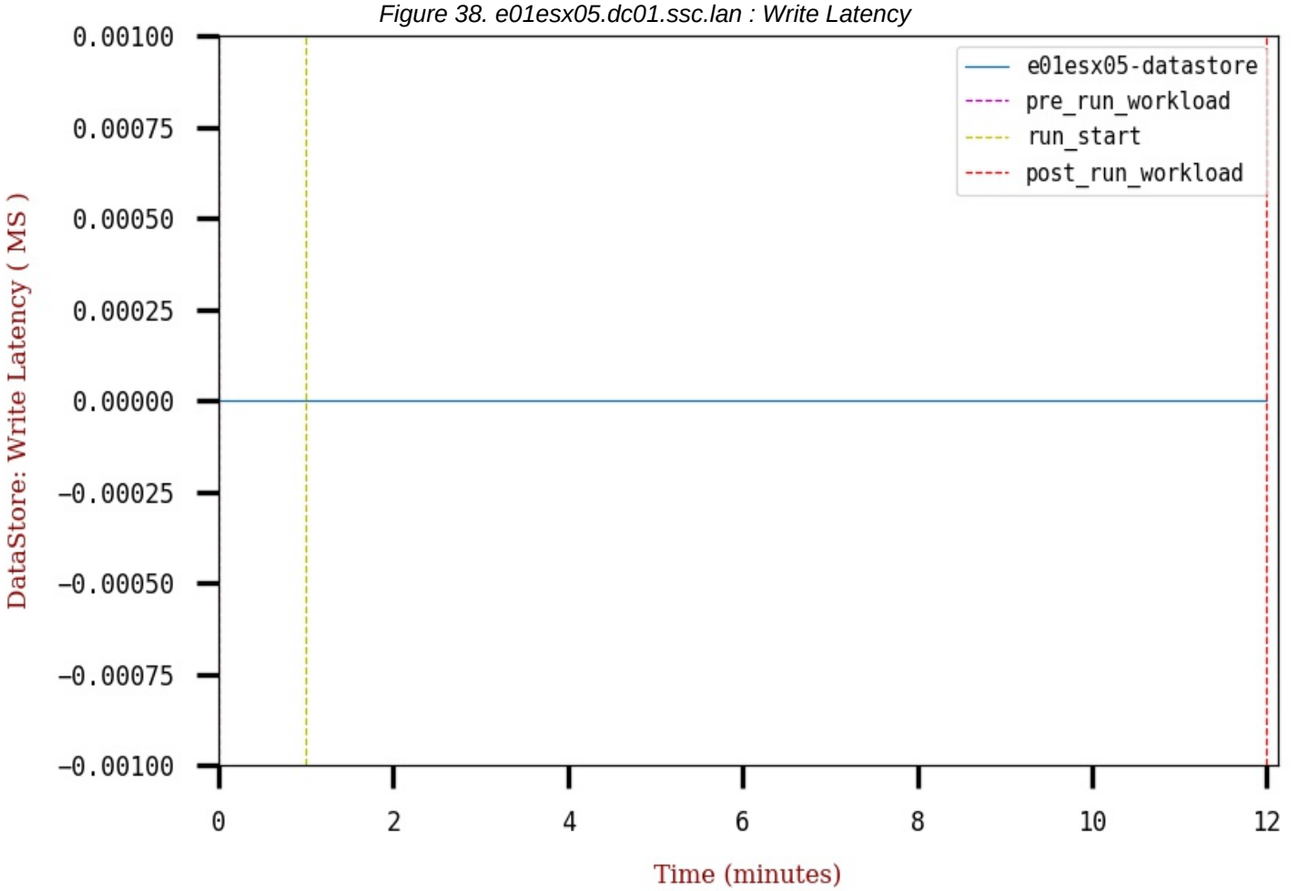


Figure 39. e01esx05.dc01.ssc.lan : Average write requests per second

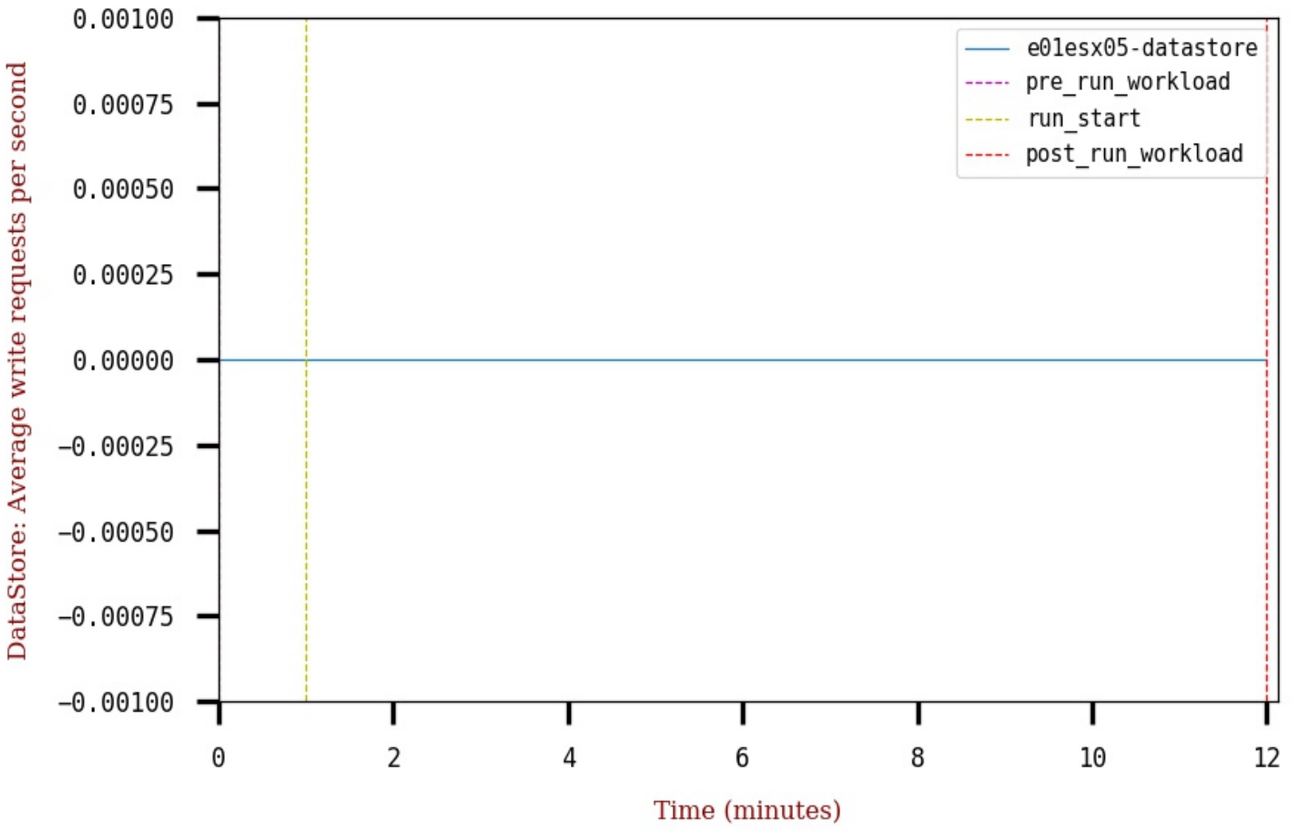


Figure 40. e01esx05.dc01.ssc.lan : Read Latency

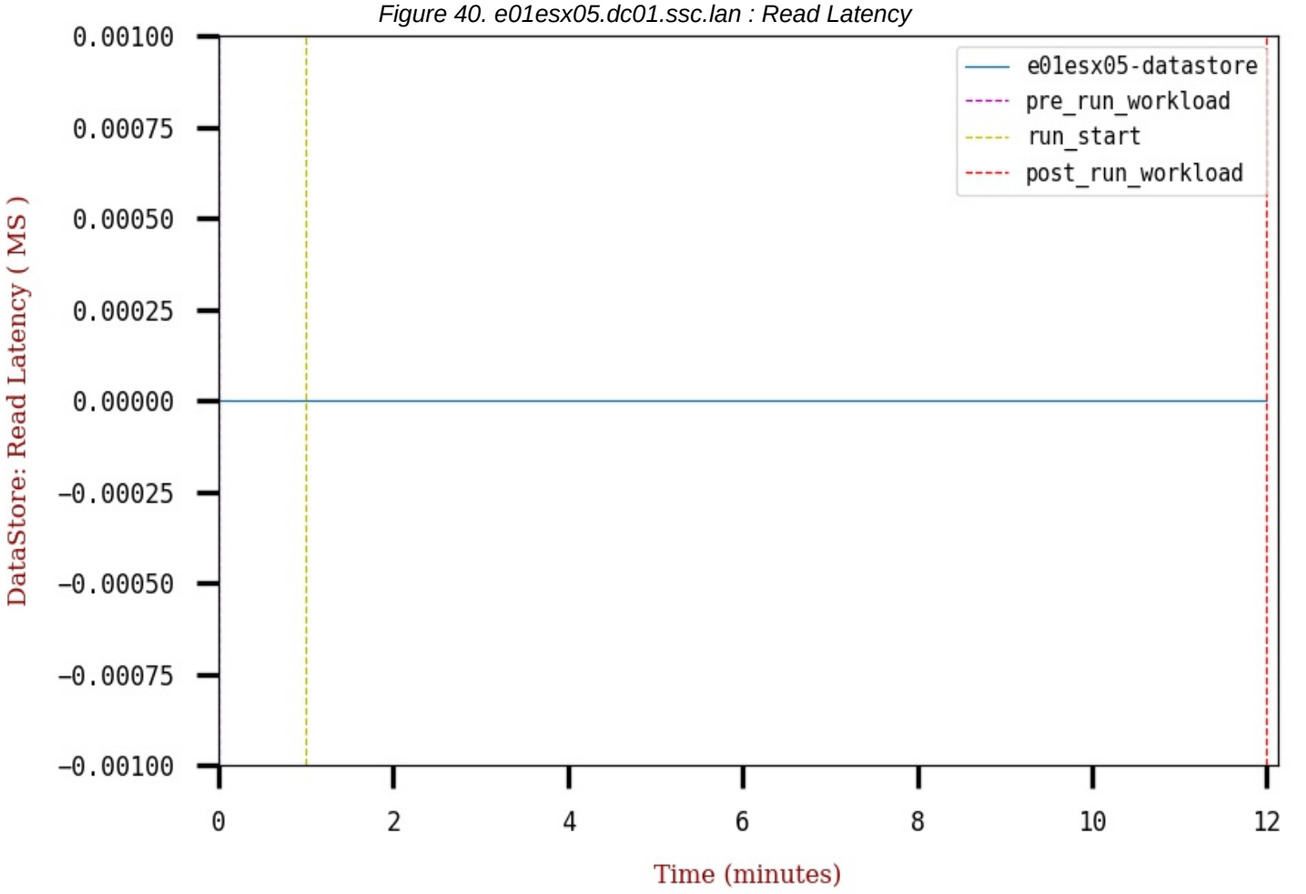


Figure 41. e01esx05.dc01.ssc.lan : Average read requests per second