

Load Test Report

Introduction

This document summarizes the findings obtained from the load testing process. It covers such subject areas as test details, test results, login and application specifics, EUX score, and metrics to characterize system performance. The report serves as a valuable resource in understanding the performance of your system under different workloads and implementing necessary improvements.

Login VSI provides the industry-standard virtual desktop testing platform, Login Enterprise, which helps organizations benchmark and validate the performance and scalability of their virtual desktop solutions. With Login Enterprise, IT teams can reliably measure the effects of changes to their virtual desktop infrastructure on end-user experience and identify performance issues before they impact the business.

Login Enterprise uses virtual user workloads to simulate real-world user behavior, so IT teams can measure the responsiveness and performance of their virtual desktop environment under different scenarios. Login Enterprise has two built-in workloads: The task worker and the knowledge worker.

NOTE: Login Enterprise workloads and analytics cannot be compared to test data from the legacy Login VSI benchmarking product. The Login Enterprise workloads are much more resource-intensive and the calculations used to determine max density (VSI_{max}) are different.

EUX Score

The EUX (End User Experience) score represents the performance of any Windows machine (virtual, physical, cloud, or on-premises). The score ranges from 0 to 10 and measures the experience of one (minimum) or many virtual users.

As you add more users to your VDI platform, expect your EUX score to drop. As more users demand a greater share of a VDI system's shared resources, performance and user experience decrease.

Metrics

The following are some metrics that can be used to characterize system performance.

- **EUX baseline score:** The baseline EUX score represents the best possible performance of the system and is the average EUX score of the best 5 minutes of the test. This score indicates how the system performs when it's not under stress. Typically, you capture the baseline EUX score at the beginning of the test before the system is fully loaded.
- **EUX score:** The average EUX score for the entire test.
- **EUX steady state score:** The steady state represents the period after all users have logged on (login storm) and the system has started to normalize. The steady state EUX score is the average of the EUX scores captured between 5 minutes after all sessions have logged in and at the end of the test.
- **Total logon time** The amount of time it takes the user to go from launching the session to the point where the workspace is ready to be used.
- **VSI_{max}** A number of triggers determine the VSI_{max} (or the maximum number of users that can fit on the system before performance degrades). These triggers are application-, CPU- and disk-related operations and can determine whether the user experience is acceptable. EUX scores below 5.5 are one example of a trigger. Another example could be a setting of <85% of the baseline EUX score.

Test specifics

	1 users 5m ramp up and duration (app group 001) 0005	5 users 5m ramp up and duration 1in2 sessions 0011	Horizon VMware 0002	1 users 5m ramp up and duration (AppGroup and single apps) 0006	1 users 2m ramp up and duration - no workload 0008
Product version	6.0.16	6.0.16	6.0.16	6.1.2	6.1.2
EUX version		EUX2023	EUX2023		EUX2023
VSIMax version		EUX2023	EUX2023		EUX2023
Connector	Rdp	Rdp	Horizon	Rdp	Rdp
Launcher group(s)	LAUNCHER-2, LAUNCHER-1	LAUNCHER-2, LAUNCHER-1	LAUNCHER-2, LAUNCHER-1	LAUNCHER-2, LAUNCHER-1	All
# of users	1 user	5 users	1 user	1 user	1 user
Login window	5 minutes	5 minutes	3 minutes	5 minutes	2 minutes
Test duration	5 minutes after last session has started	5 minutes after last session has started	3 minutes after last session has started	5 minutes after last session has started	2 minutes after last session has started
Date	21/05/25 13:30 UTC	21/05/25 13:42 UTC	21/05/25 14:50 UTC	03/06/25 08:55 UTC	03/06/25 09:51 UTC
Workload	Session starts Wait 12 second(s) edge.Private Wait 8 second(s) Paint (interaction) Wait 12 second(s) (TW) Microsoft Excel Wait 8 second(s) Wordpad Wait 12 second(s) Repeat all actions	Session starts Notepad Paint Wordpad Wait 15 second(s) Wait 30 second(s) Repeat all actions	Session starts Wait 30 second(s) Repeat all actions	Session starts Wait 10 second(s) chromePrivate Wait 9 second(s) Wordpad Wait 8 second(s) Custom_timer_notepad Wait 7 second(s) Wait 12 second(s) edge.Private Wait 8 second(s) Paint (interaction) Wait 12 second(s) (TW) Microsoft Excel Wait 8 second(s) Wordpad Wait 12 second(s) Repeat all actions	Session starts Repeat all actions

Test results

Success rates

Test	Logins	Engine	Apps
1 users 5m ramp up and duration (app group 001) 0005	100%	100%	100%
5 users 5m ramp up and duration 1in2 sessions 0011	100%	100%	100%
Horizon VMware 0002	0%	0%	0%
1 users 5m ramp up and duration (AppGroup and single apps) 0006	100%	100%	100%
1 users 2m ramp up and duration - no workload 0008	100%	100%	0%

EUX score

Test	EUX Score	Difference in %	Comment
1 users 5m ramp up and duration (app group 001) 0005	-	Baseline	-
5 users 5m ramp up and duration 1in2 sessions 0011	4.1	-	-
Horizon VMware 0002	0	-	-
1 users 5m ramp up and duration (AppGroup and single apps) 0006	-	-	-
1 users 2m ramp up and duration - no workload 0008	5.7	-	The EUX score may be inaccurate due to a small amount of measurements taken. See troubleshooting guide for more information

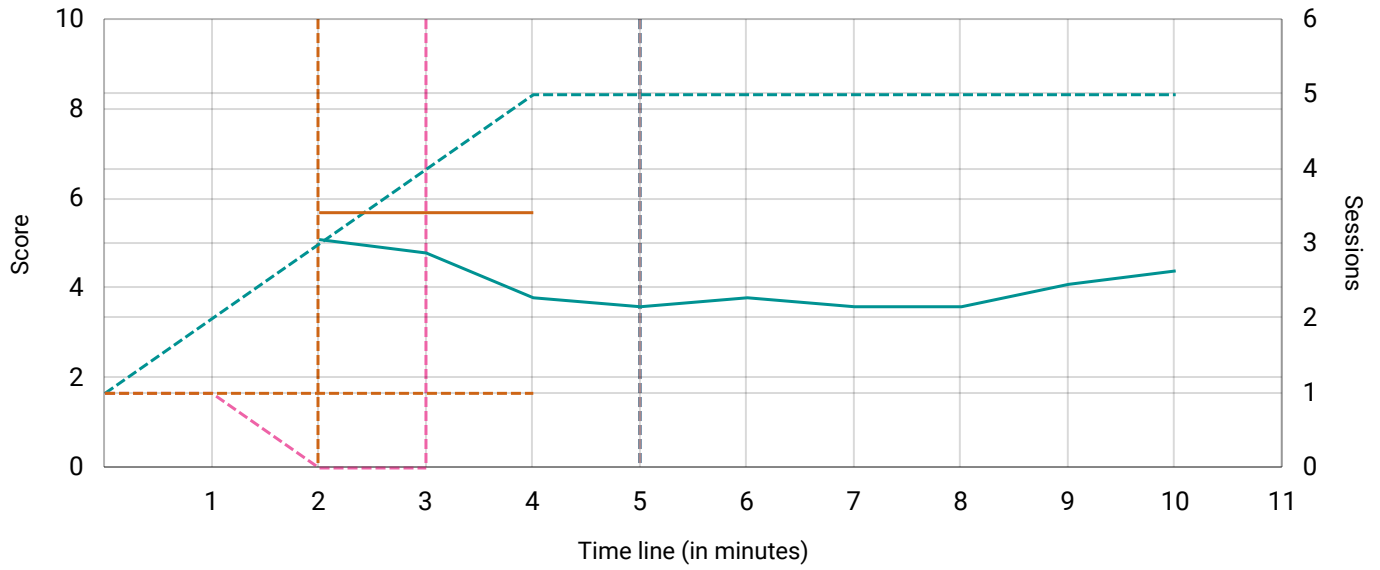
Test	EUX Score (Base)	Difference in %
1 users 5m ramp up and duration (app group 001) 0005	-	Baseline
5 users 5m ramp up and duration 1in2 sessions 0011	4.2	-
Horizon VMware 0002	-	-
1 users 5m ramp up and duration (AppGroup and single apps) 0006	-	-
1 users 2m ramp up and duration - no workload 0008	-	-

Test	EUX Score (Steady state)	Difference in %
1 users 5m ramp up and duration (app group 001) 0005	-	Baseline
5 users 5m ramp up and duration 1in2 sessions 0011	-	-
Horizon VMware 0002	-	-
1 users 5m ramp up and duration (AppGroup and single apps) 0006	-	-
1 users 2m ramp up and duration - no workload 0008	-	-

VSImax

Test	VSImax	Difference in %	Comment
1 users 5m ramp up and duration (app group 001) 0005	-	Baseline	-
5 users 5m ramp up and duration 1in2 sessions 0011	> 5	-	The End User Experience score was acceptable for the entire duration of the load test. Your VSImax was not found based on the amount of logged on users (5) of the test. You may rerun the test with more users to find your VSImax.
Horizon VMware 0002	✖	-	The VSImax could not be provided because the EUX Score could not be calculated or is not valid. See troubleshooting guide for more information
1 users 5m ramp up and duration (AppGroup and single apps) 0006	-	-	-
1 users 2m ramp up and duration - no workload 0008	✖	-	The VSImax could not be provided because the EUX Score could not be calculated or is not valid. See troubleshooting guide for more information

EUX Score



Test name

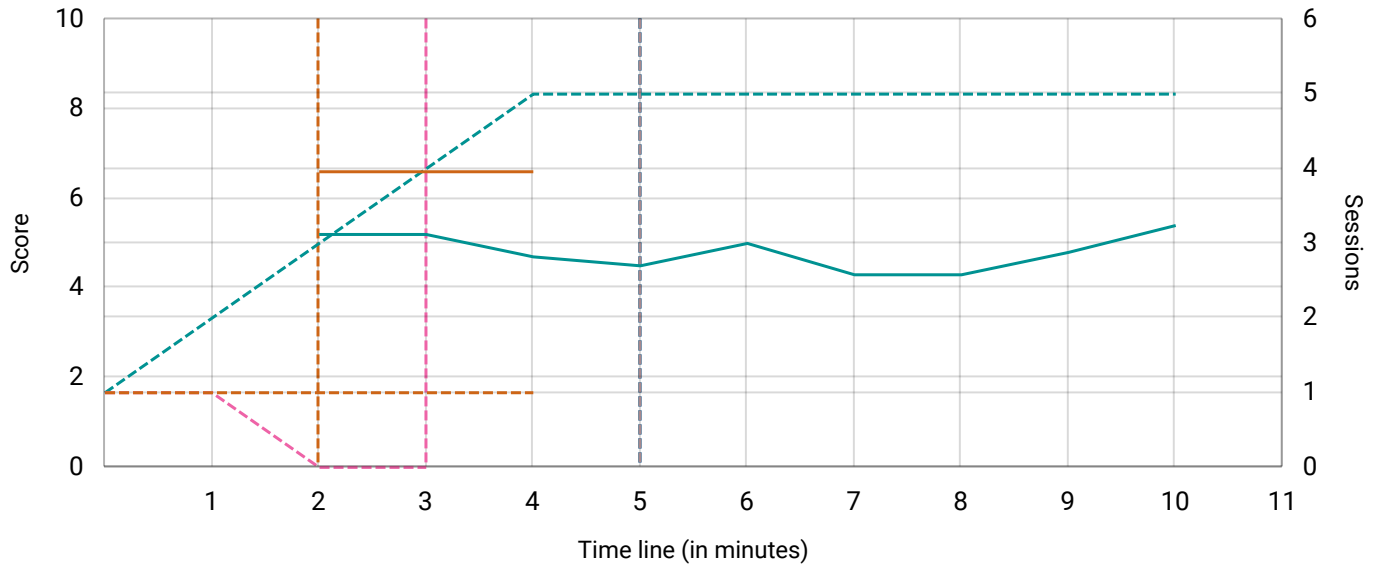
VSI max

Active sessions

- 5 users 5m ramp up and duration 1in2 sessions 0011
- Horizon VMware 0002
- 1 users 2m ramp up and duration - no workload 0008



Generic Application score



Test name

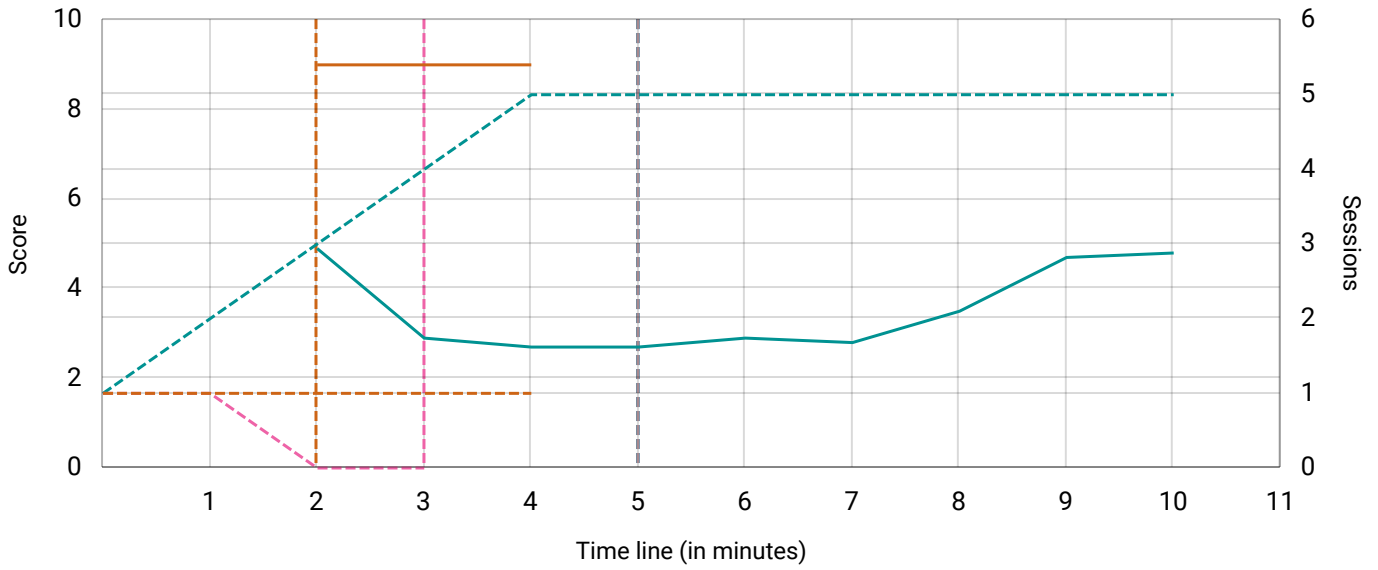
VSI max

Active sessions

- 5 users 5m ramp up and duration 1in2 sessions 0011
- Horizon VMware 0002
- 1 users 2m ramp up and duration - no workload 0008



CPU score



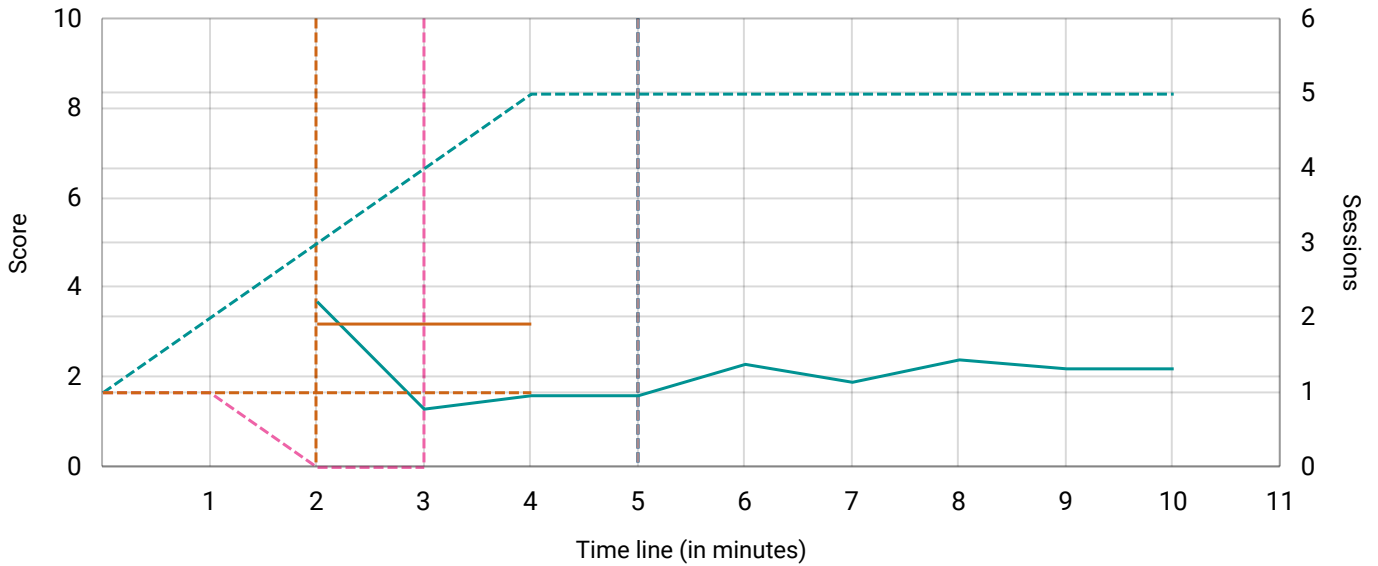
Test name

VSImax

Active sessions

- 5 users 5m ramp up and duration 1in2 sessions 0011
- Horizon VMware 0002
- 1 users 2m ramp up and duration - no workload 0008

My Documents I/O score



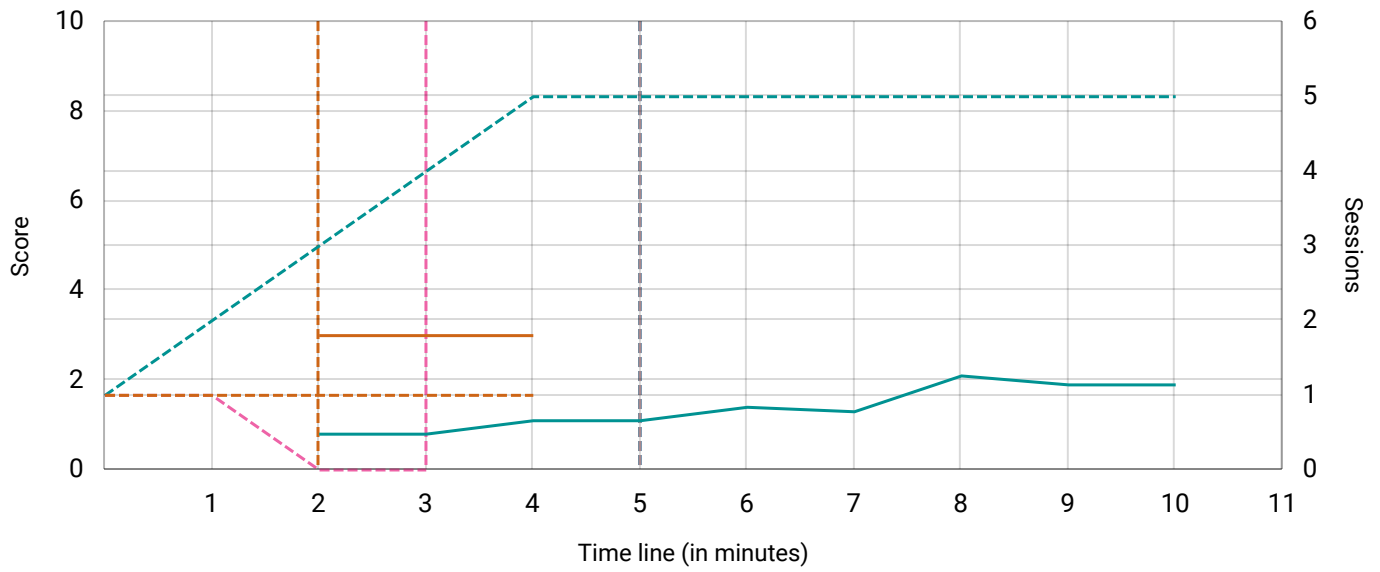
Test name

VSImax

Active sessions

- 5 users 5m ramp up and duration 1in2 sessions 0011
- Horizon VMware 0002
- 1 users 2m ramp up and duration - no workload 0008

Local AppData I/O score



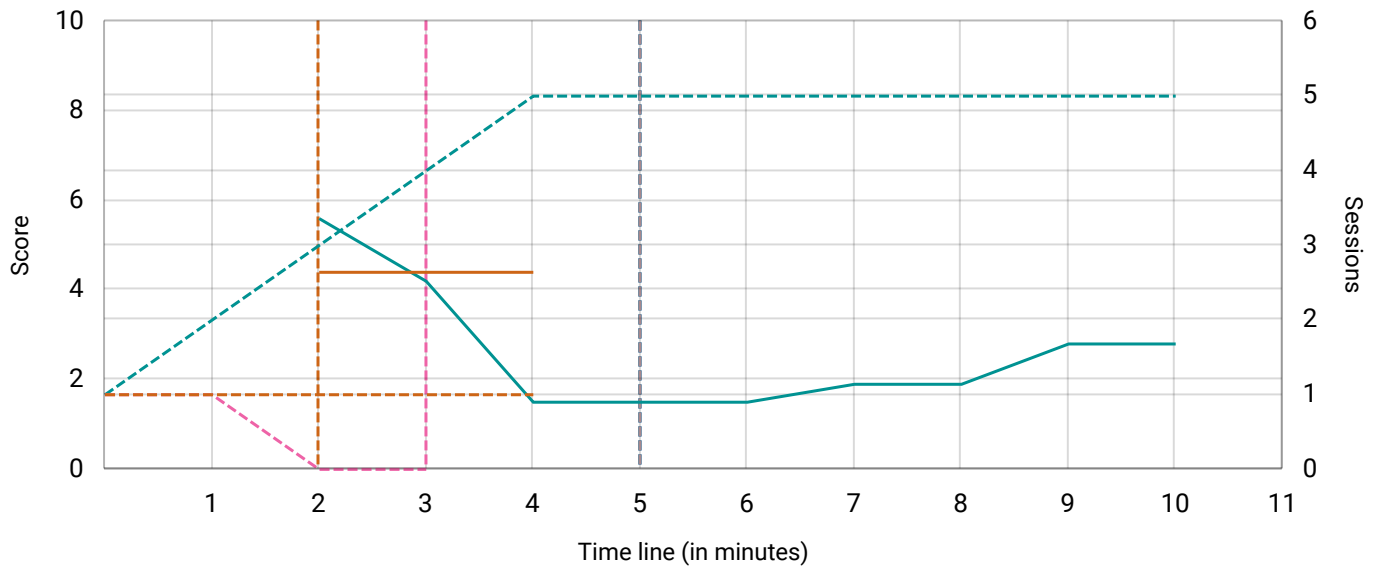
Test name

VSImax

Active sessions

- 5 users 5m ramp up and duration 1in2 sessions 0011
- Horizon VMware 0002
- 1 users 2m ramp up and duration - no workload 0008

Mixed CPU I/O score



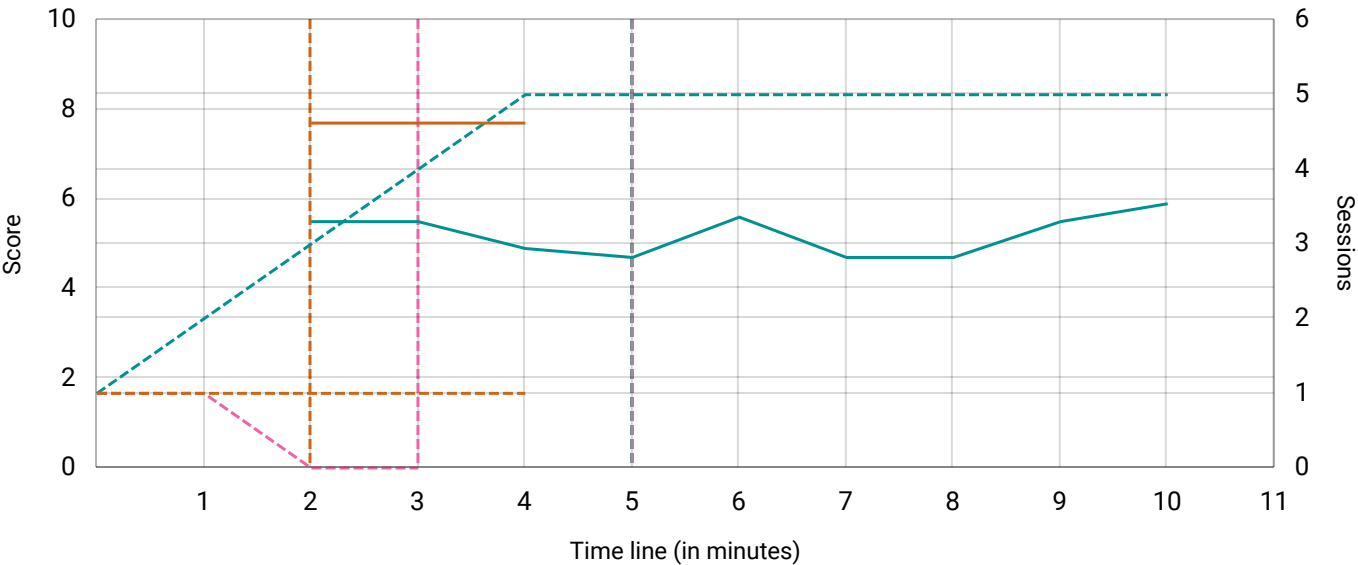
Test name

VSImax

Active sessions

- 5 users 5m ramp up and duration 1in2 sessions 0011
- Horizon VMware 0002
- 1 users 2m ramp up and duration - no workload 0008

User Input score

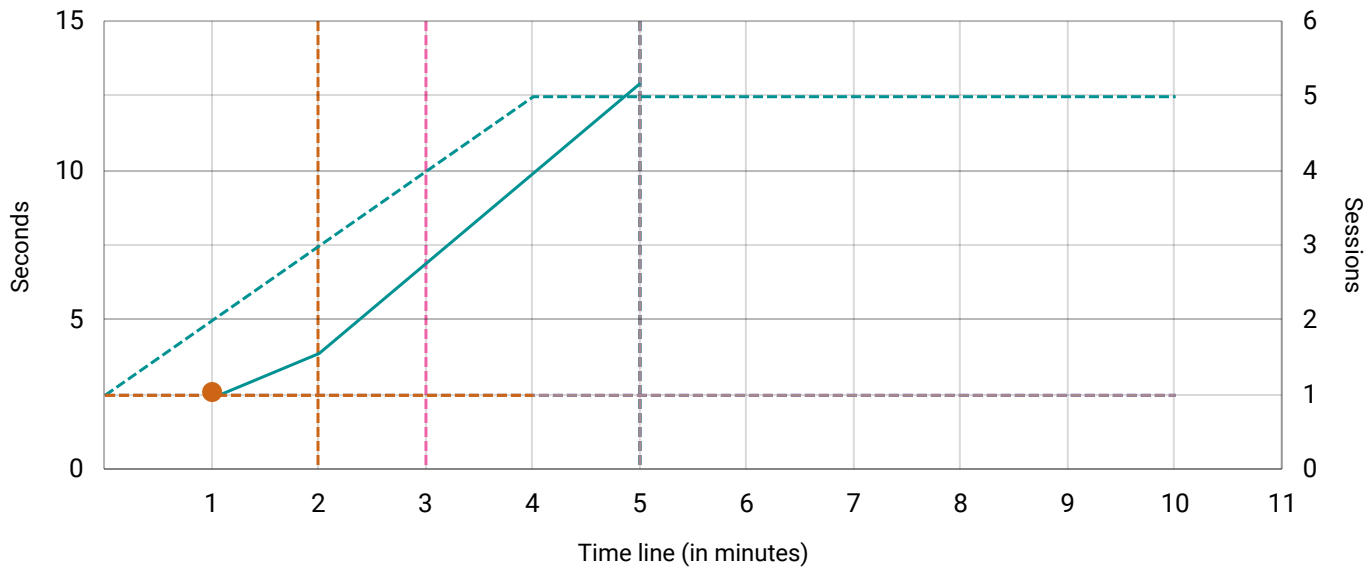


Test name	VSImax	Active sessions
5 users 5m ramp up and duration 1in2 sessions 0011		<div></div>
Horizon VMware 0002		<div></div>
1 users 2m ramp up and duration - no workload 0008		<div></div>

Logon time

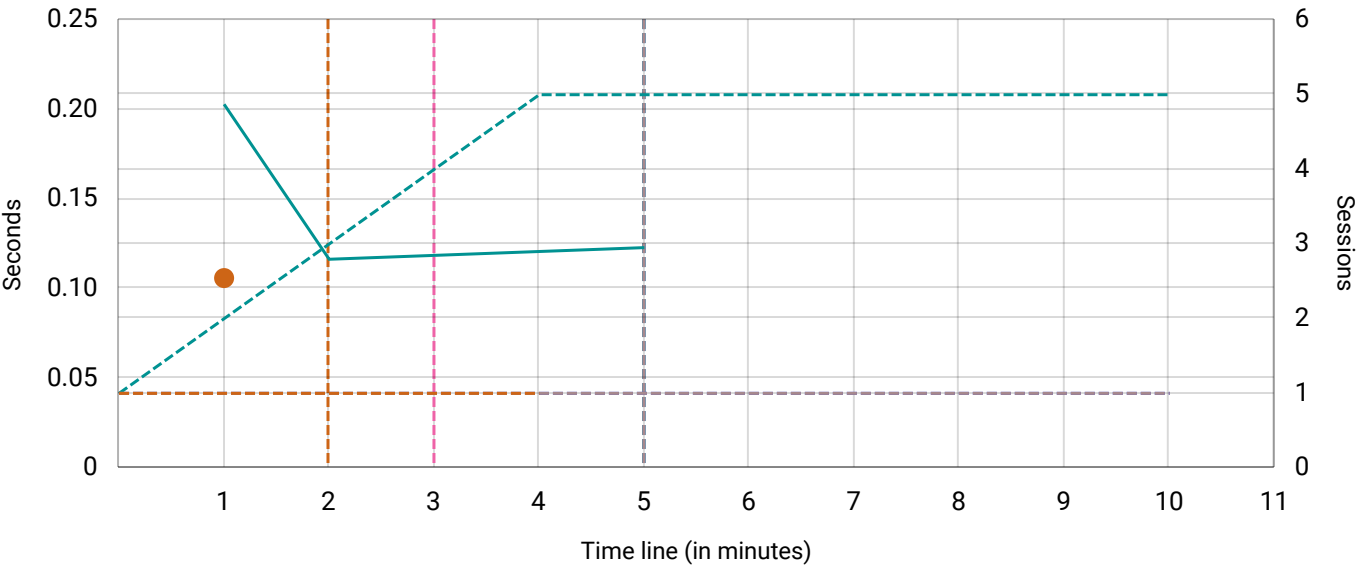
	1 users 5m ramp up and duration (app group 001) 0005	5 users 5m ramp up and duration 1in2 sessions 0011	Horizon VMware 0002	1 users 5m ramp up and duration (AppGroup and single apps) 0006	1 users 2m ramp up and duration - no workload 0008
Display Protocol Connection	2.3 sec	7.2 sec (-213%)	-	2.4 sec (-4%)	2.6 sec (-13%)
Profile load	0.1 sec	0.1 sec - equal	-	0.1 sec - equal	0.1 sec - equal
GPO Processing	0.2 sec	1.1 sec (-450%)	-	0.2 sec - equal	1.2 sec (-500%)
Total login time	3.2 sec	18.7 sec (-484%)	-	3.5 sec (-9%)	6.1 sec (-91%)

Display protocol connection



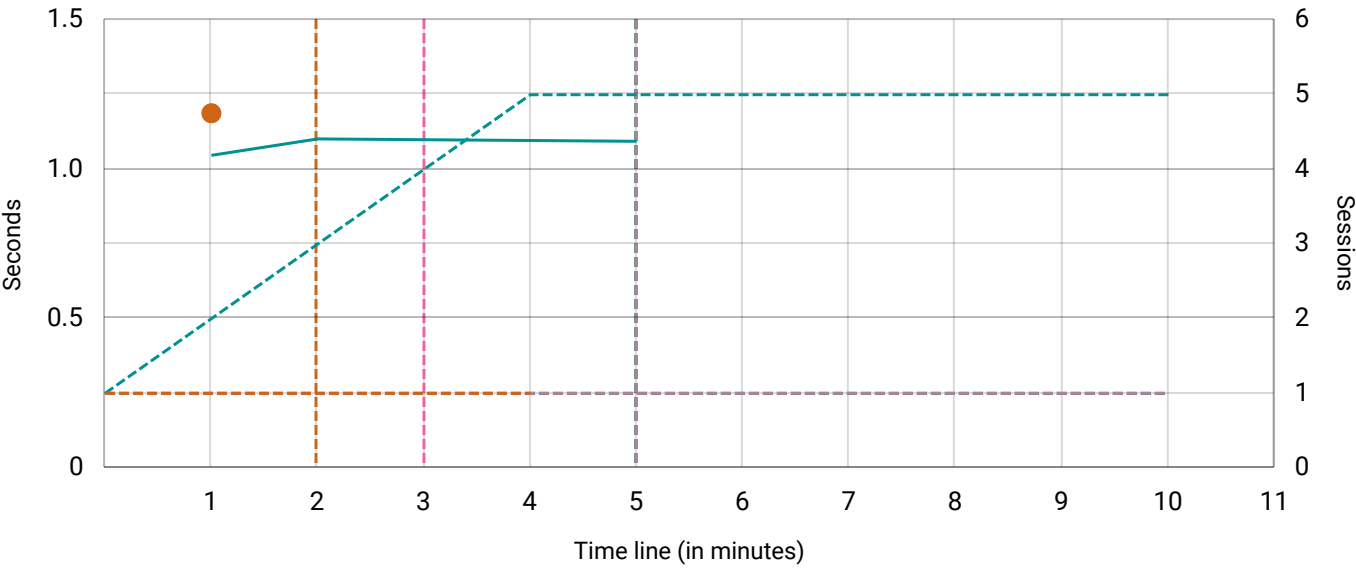
Test name	VSI max	Active sessions
1 users 5m ramp up and duration (app group 001) 0005	
5 users 5m ramp up and duration 1in2 sessions 0011	
1 users 5m ramp up and duration (AppGroup and single apps) 0006	
1 users 2m ramp up and duration - no workload 0008	

Profile load

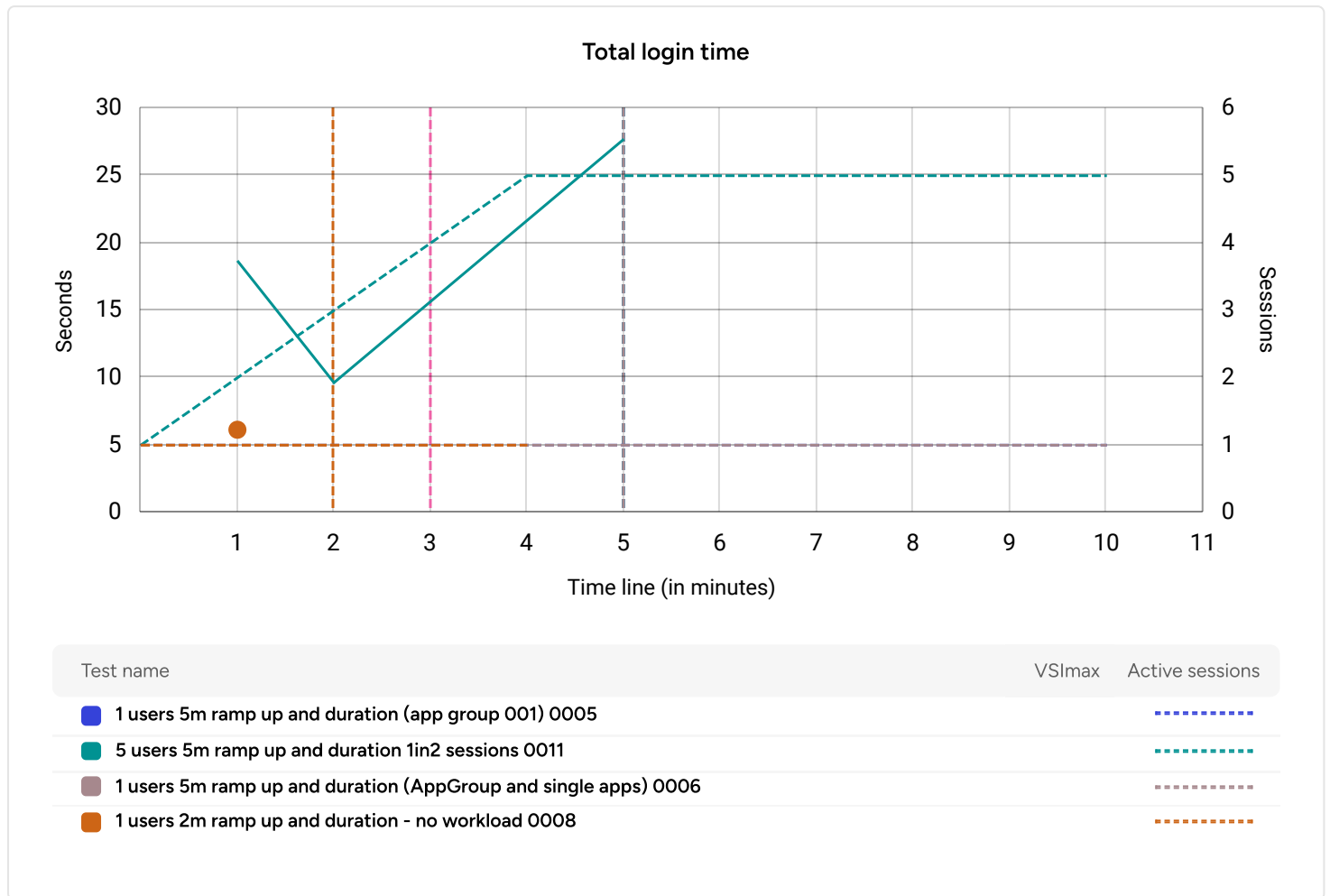


Test name	VSI max	Active sessions
1 users 5m ramp up and duration (app group 001) 0005	
5 users 5m ramp up and duration 1in2 sessions 0011	
1 users 5m ramp up and duration (AppGroup and single apps) 0006	
1 users 2m ramp up and duration - no workload 0008	

GPO processing



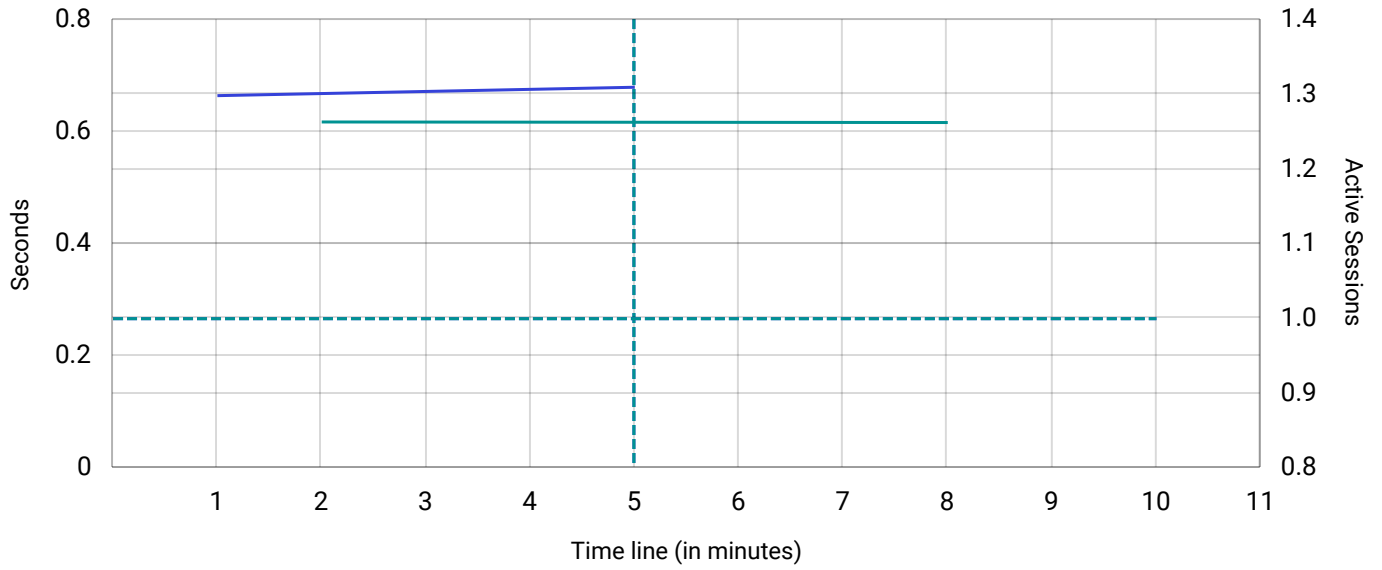
Test name	VSI max	Active sessions
1 users 5m ramp up and duration (app group 001) 0005	
5 users 5m ramp up and duration 1in2 sessions 0011	
1 users 5m ramp up and duration (AppGroup and single apps) 0006	
1 users 2m ramp up and duration - no workload 0008	



Application response time

	1 users 5m ramp up and duration (app group 001) 0005	5 users 5m ramp up and duration 1in2 sessions 0011	Horizon VMware 0002	1 users 5m ramp up and duration (AppGroup and single apps) 0006	1 users 2m ramp up and duration - no workload 0008
edge.Private (page load)	0.67 sec	-	-	0.62 sec (8%)	-
Paint (interaction) (start)	0.45 sec	-	-	0.44 sec (3%)	-
Paint (interaction) (saving file)	0.32 sec	-	-	0.4 sec (-25%)	-
(TW) Microsoft Excel (open window)	0.8 sec	-	-	0.83 sec (-5%)	-
(TW) Microsoft Excel (start)	1.44 sec	-	-	5.99 sec (-315%)	-
(TW) Microsoft Excel (open excel document)	1.49 sec	-	-	1.6 sec (-8%)	-
(TW) Microsoft Excel (saving file)	0.69 sec	-	-	0.69 sec (1%)	-
Wordpad (start)	0.67 sec	3.73 sec (-453%)	-	0.68 sec (-1%)	-

edge.Private (page load)



Test name

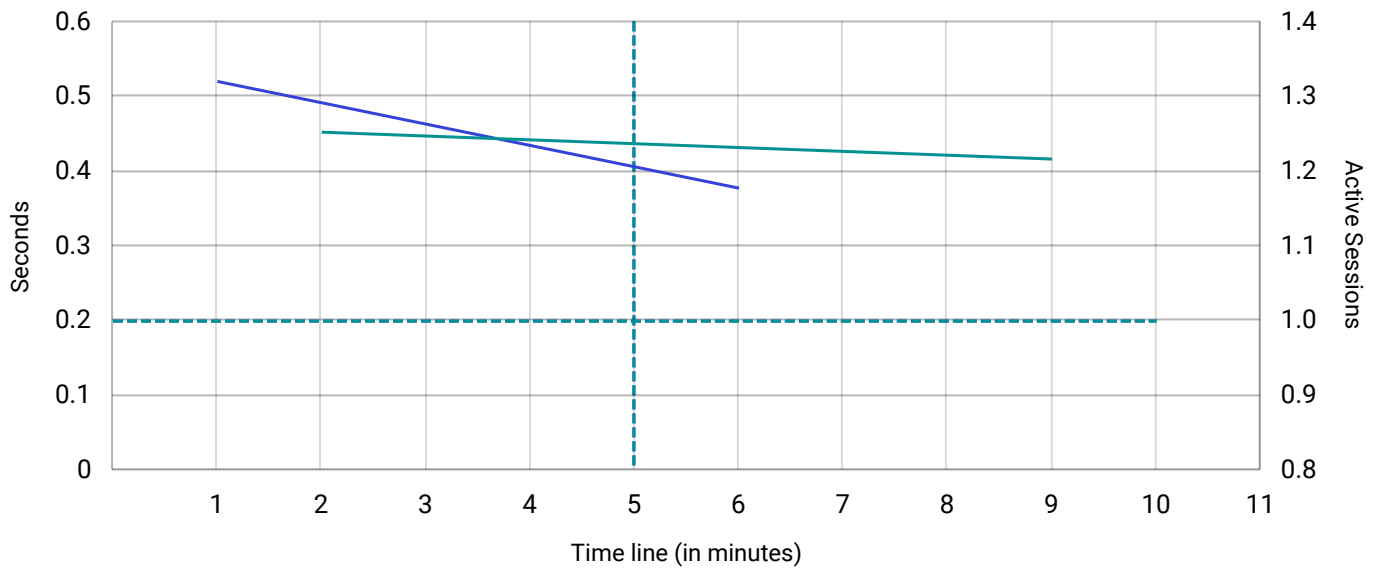
VSImax

Active sessions

1 users 5m ramp up and duration (app group 001) 0005

1 users 5m ramp up and duration (AppGroup and single apps) 0006

Paint (interaction) (start)



Test name

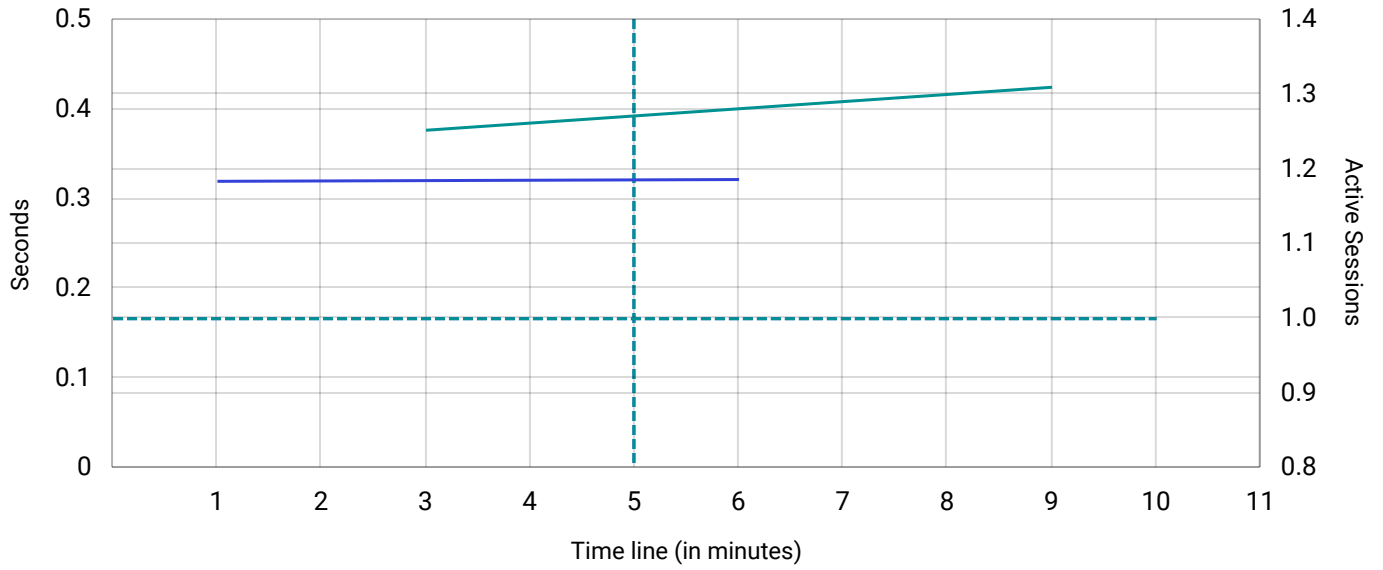
VSImax

Active sessions

1 users 5m ramp up and duration (app group 001) 0005

1 users 5m ramp up and duration (AppGroup and single apps) 0006

Paint (interaction) (saving file)



Test name

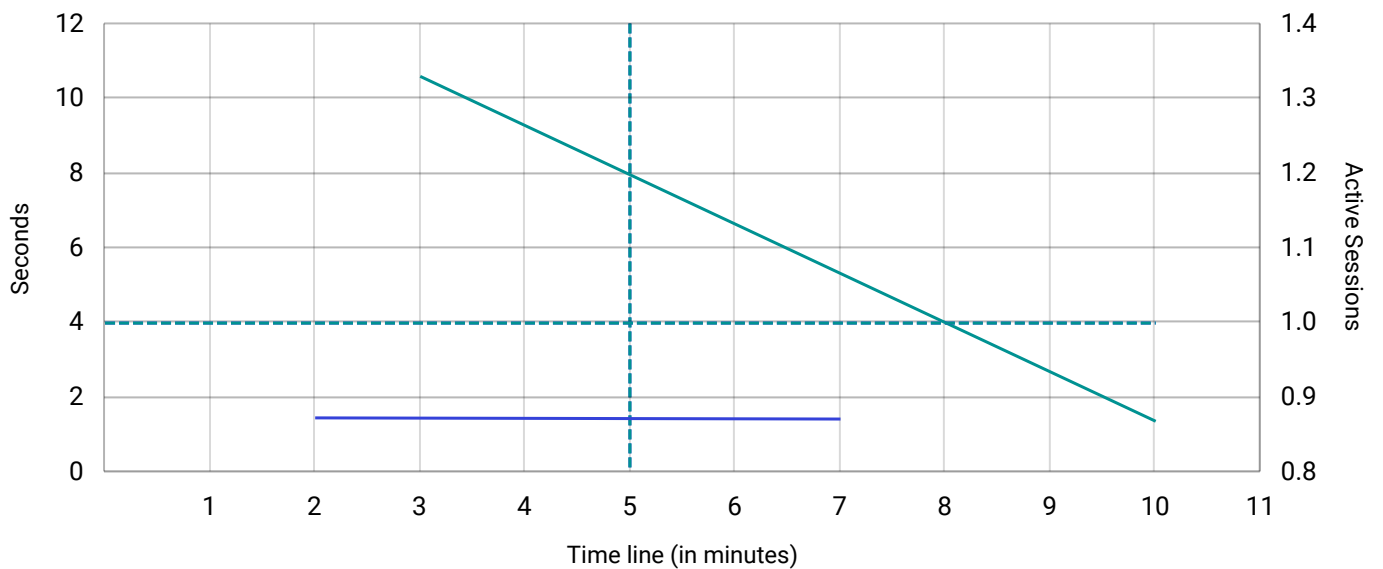
VSImax

Active sessions

1 users 5m ramp up and duration (app group 001) 0005

1 users 5m ramp up and duration (AppGroup and single apps) 0006

(TW) Microsoft Excel (start)



Test name

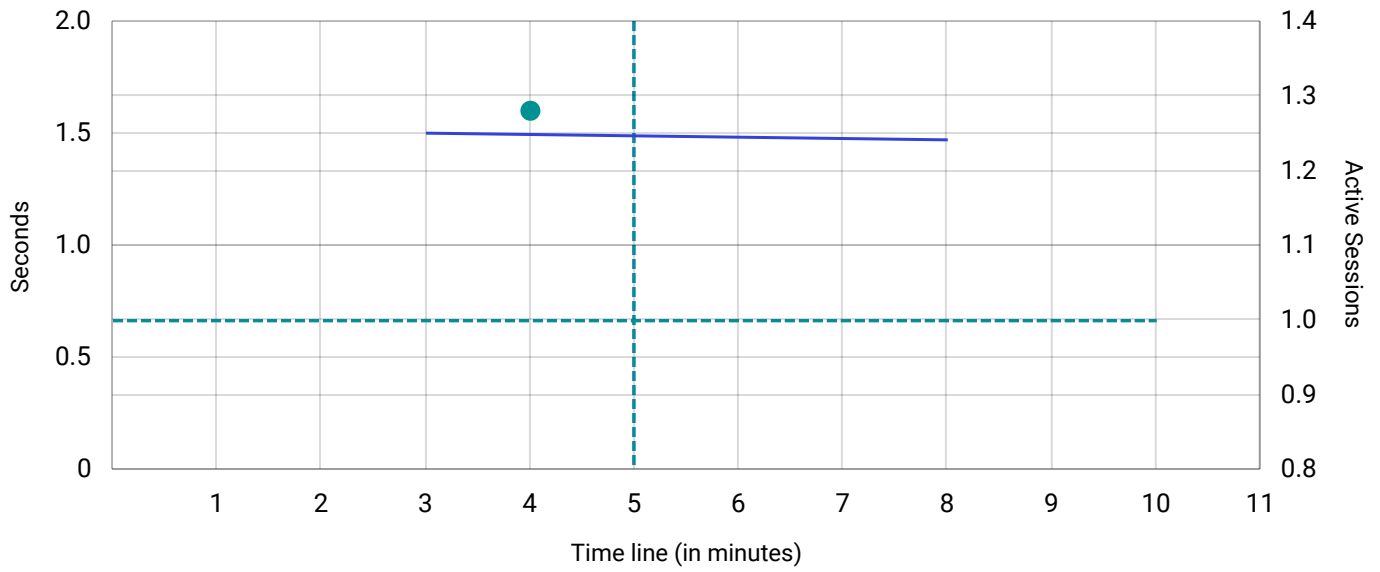
VSImax

Active sessions

1 users 5m ramp up and duration (app group 001) 0005

1 users 5m ramp up and duration (AppGroup and single apps) 0006

(TW) Microsoft Excel (open excel document)



Test name

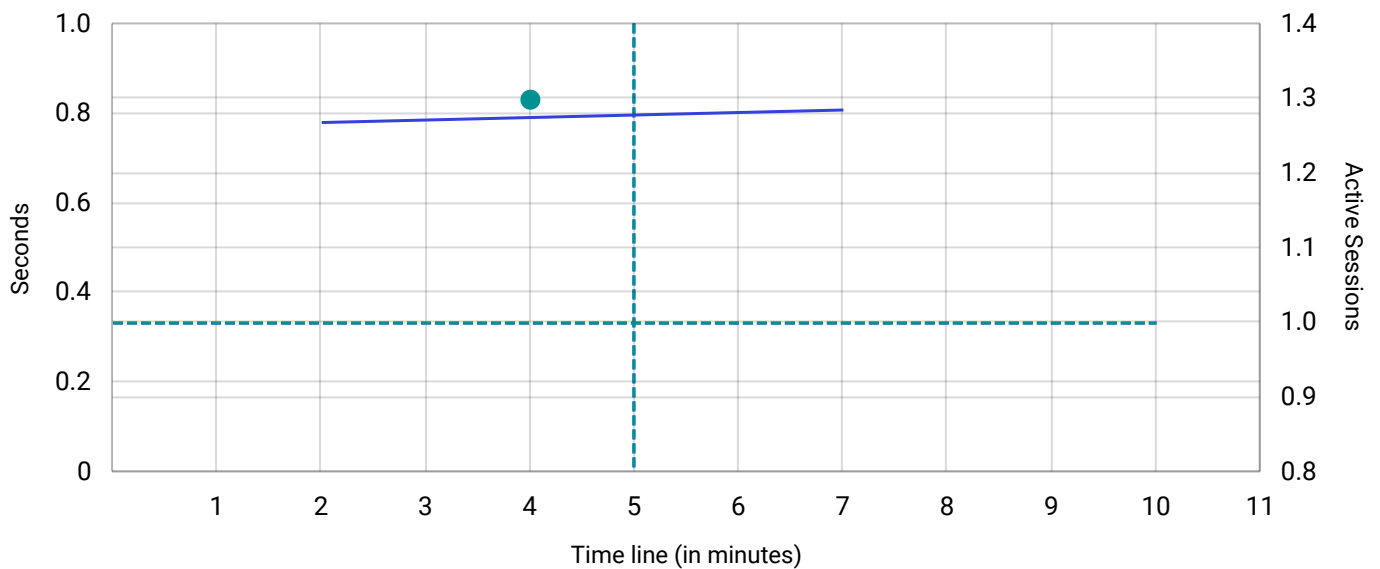
VSImax

Active sessions

1 users 5m ramp up and duration (app group 001) 0005

1 users 5m ramp up and duration (AppGroup and single apps) 0006

(TW) Microsoft Excel (open window)



Test name

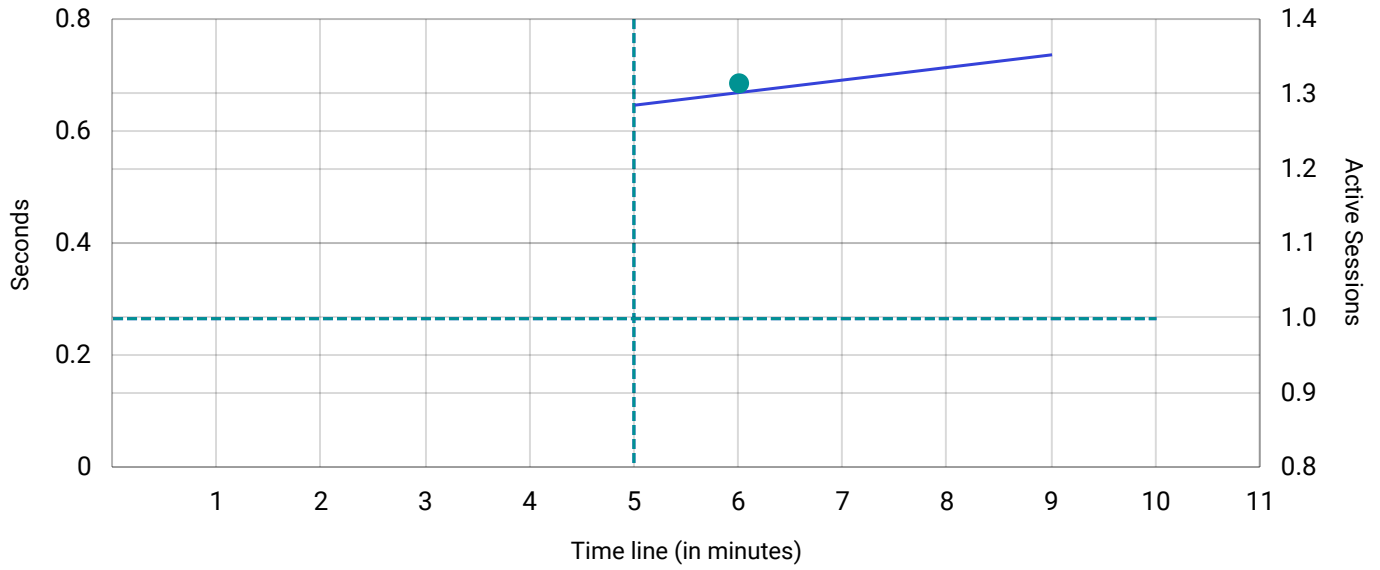
VSImax

Active sessions

1 users 5m ramp up and duration (app group 001) 0005

1 users 5m ramp up and duration (AppGroup and single apps) 0006

(TW) Microsoft Excel (saving file)



Test name

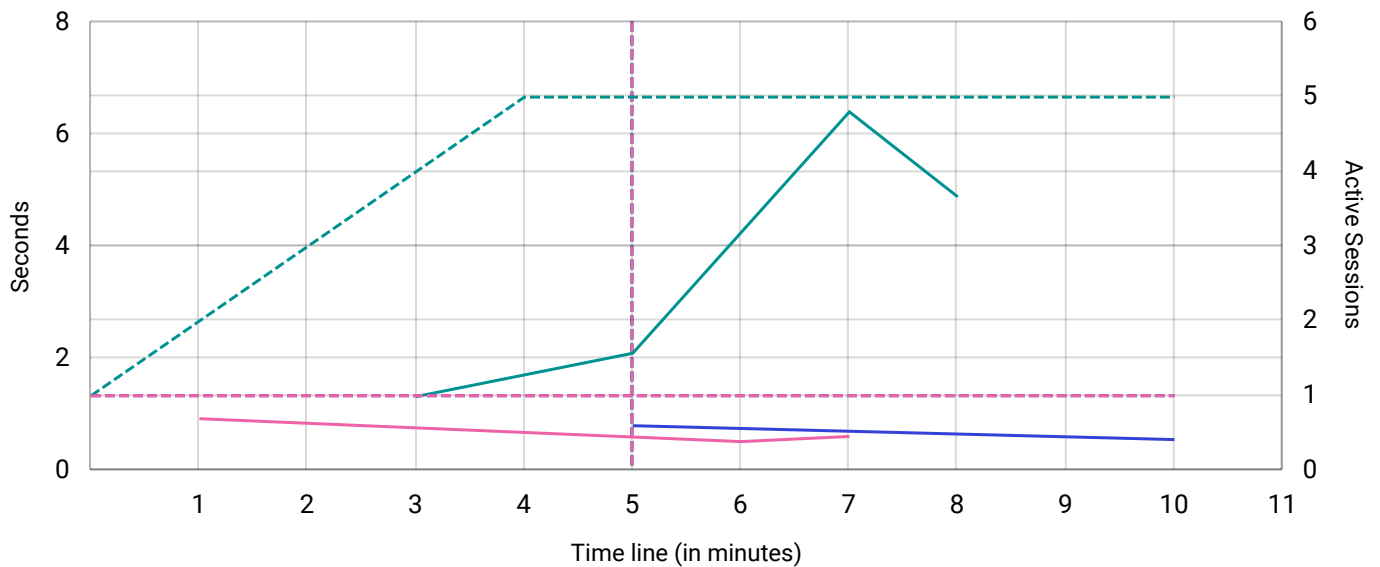
VSImax

Active sessions

1 users 5m ramp up and duration (app group 001) 0005

1 users 5m ramp up and duration (AppGroup and single apps) 0006

Wordpad (start)



Test name

VSImin

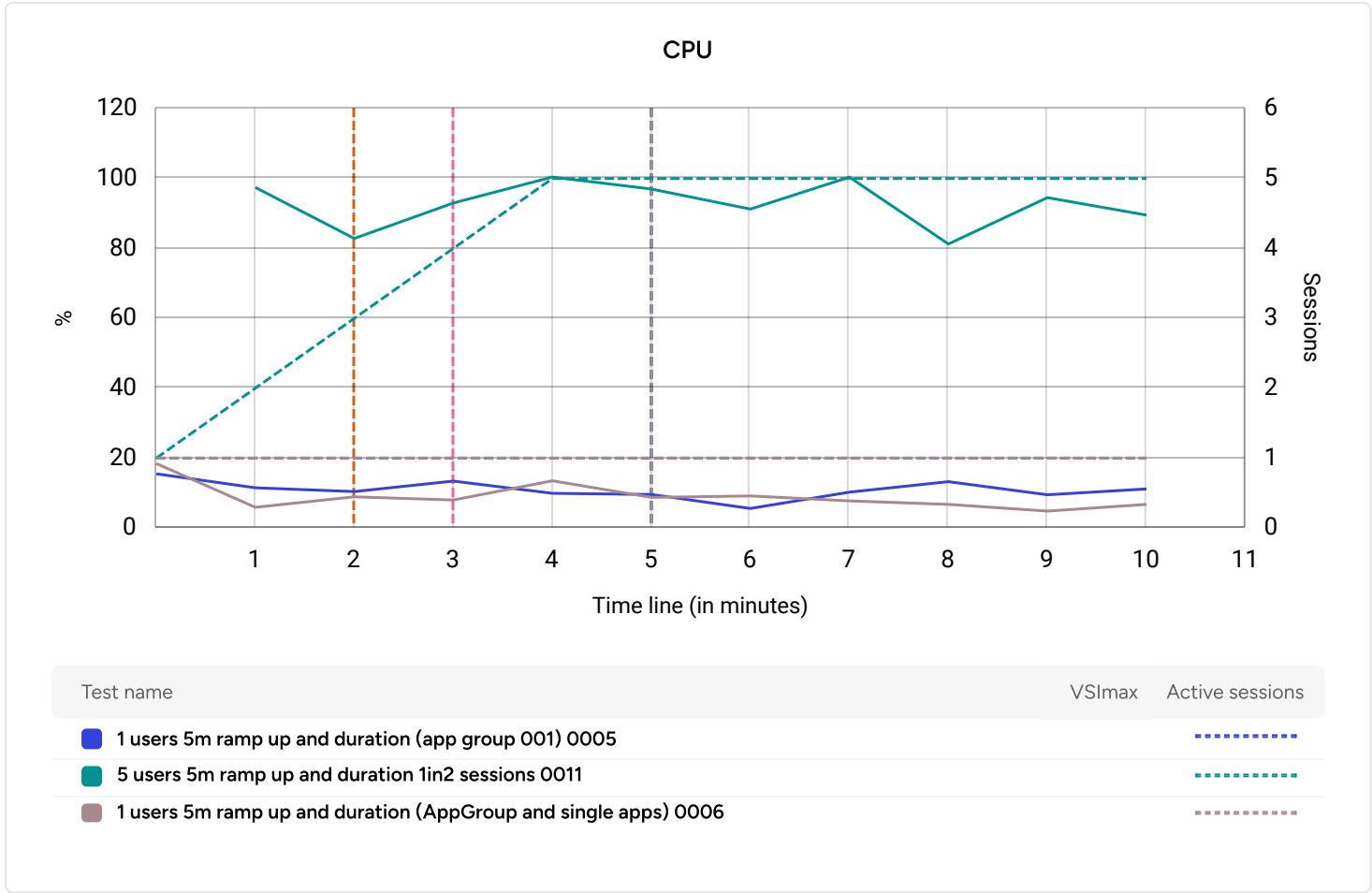
Active sessions

1 users 5m ramp up and duration (app group 001) 0005

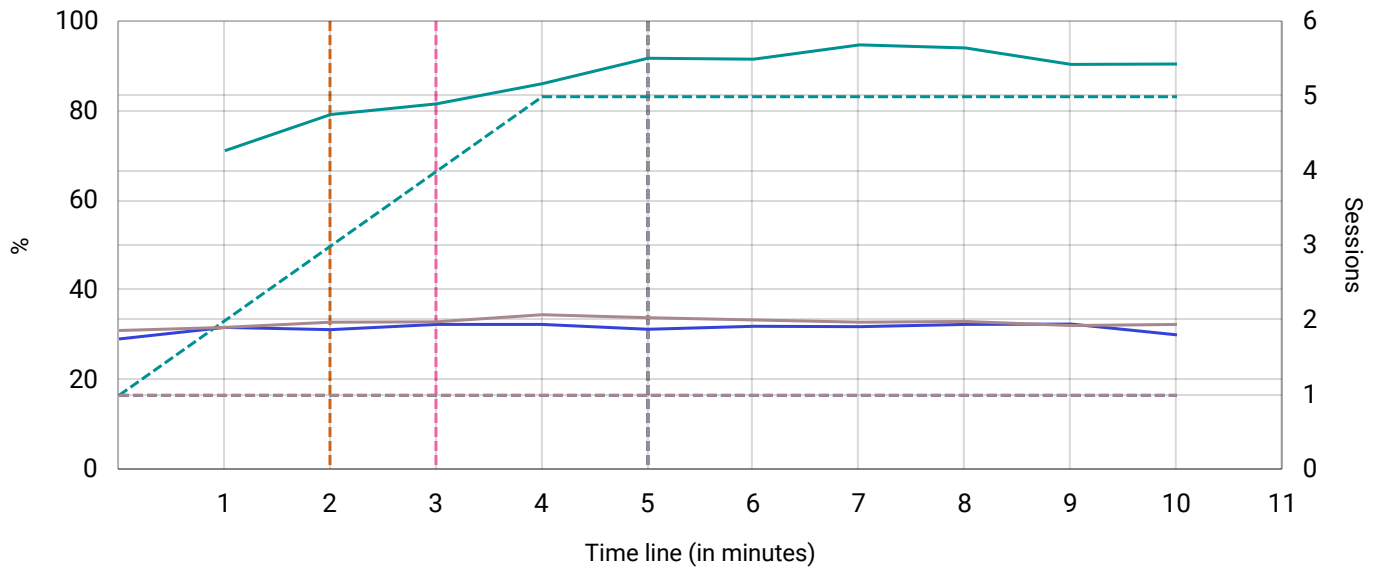
5 users 5m ramp up and duration 1in2 sessions 0011

1 users 5m ramp up and duration (AppGroup and single apps) 0006

Session metrics



Memory



Test name

VSI max

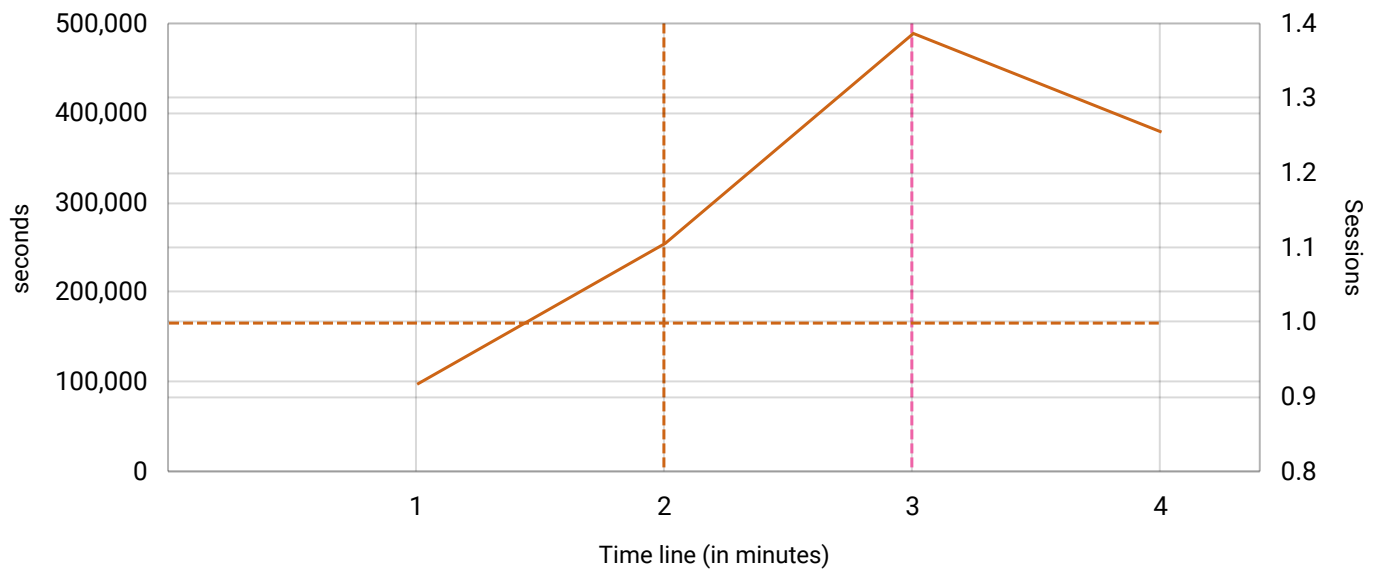
Active sessions

1 users 5m ramp up and duration (app group 001) 0005

5 users 5m ramp up and duration 1in2 sessions 0011

1 users 5m ramp up and duration (AppGroup and single apps) 0006

Miniport RSS Indirection Table Change Cycles



Test name

VSI max

Active sessions

1 users 2m ramp up and duration - no workload 0008