

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

	KnowledgeWorker - HP 0058	KnowledgeWorker - HP 0049
		
Product version	5.8.5	5.8.5
EUX version	EUX2023	EUX2023
VSIMax version	EUX2023	EUX2023
Connector	Storefront	Storefront
Launcher group(s)	LoadTest	LoadTest
# of users	60 users	60 users
Test duration	10 minutes	10 minutes
Date	01/03/24 01:36 UTC	29/02/24 19:43 UTC
Workload	Session starts	Session starts
	(KW) Prepare for Microsoft Office 365	(KW) Prepare for Microsoft Office 365
	(KW) Microsoft Outlook	(KW) Microsoft Outlook
	(KW) Microsoft Edge (browsing + multimedia)	(KW) Microsoft Edge (browsing + multimedia)
	(KW) Microsoft Excel	(KW) Microsoft Excel
	(KW) Microsoft PowerPoint	(KW) Microsoft PowerPoint
	(KW) Microsoft Word	(KW) Microsoft Word
	(KW) Close Microsoft Excel	(KW) Close Microsoft Excel
	(KW) Close Microsoft Word	(KW) Close Microsoft Word
	(KW) Close Microsoft PowerPoint	(KW) Close Microsoft PowerPoint
	Wait 30 second(s)	Wait 30 second(s)
	Repeat all actions	Repeat all actions

Test Results

Success rates

Test	Logins	Engine	Apps
KnowledgeWorker - HP 0058	 98.33%	 98.31%	 93.33%
KnowledgeWorker - HP 0049	 100%	 100%	 87.21%

EUX score

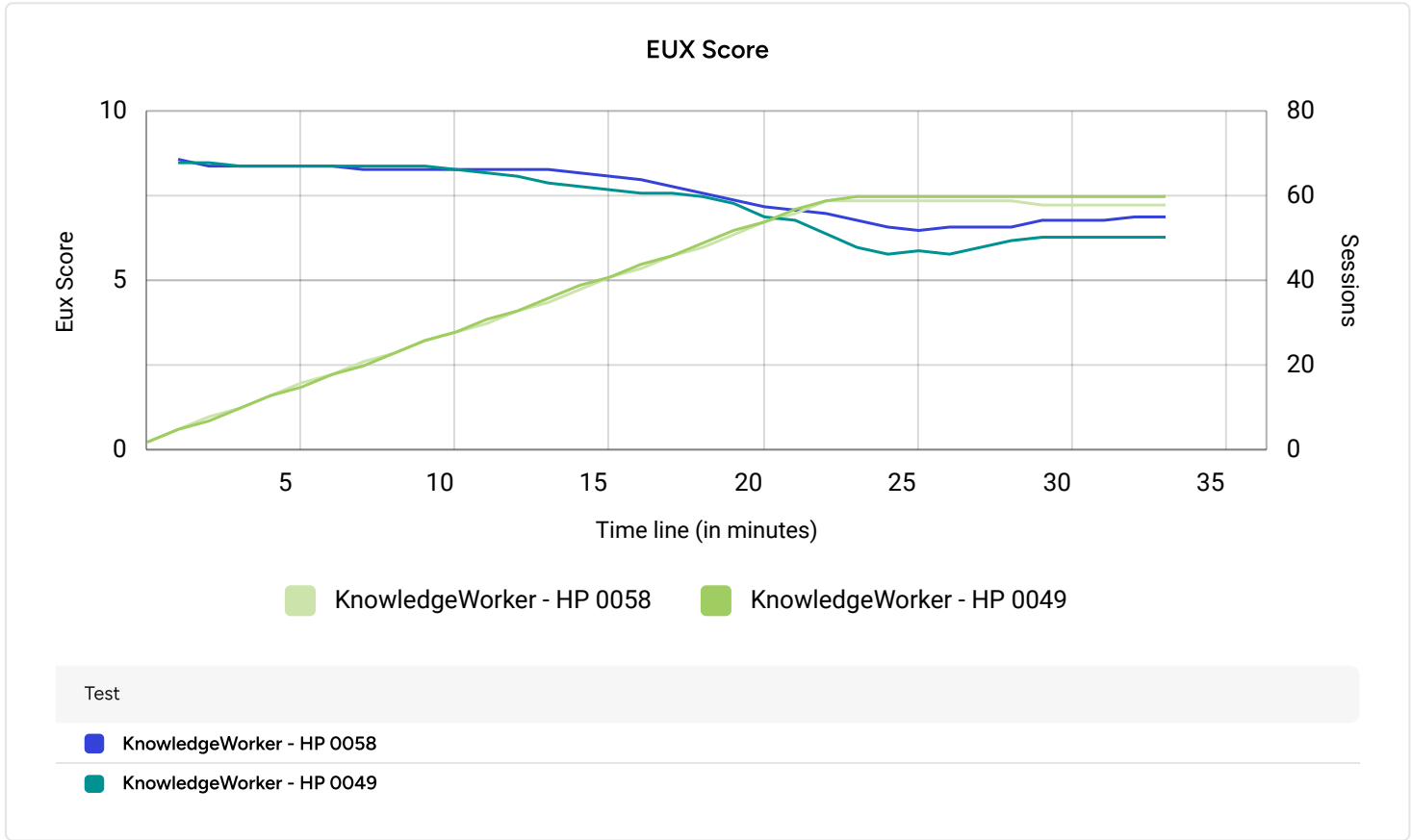
Test	Eux Score	Difference in %	Comment
KnowledgeWorker - HP 0058	7.1	Baseline	-
KnowledgeWorker - HP 0049	6.6	-7.04%	-

Test	EUX Score (Base)	Difference in %
KnowledgeWorker - HP 0058	8.4	Baseline
KnowledgeWorker - HP 0049	8.4	0%

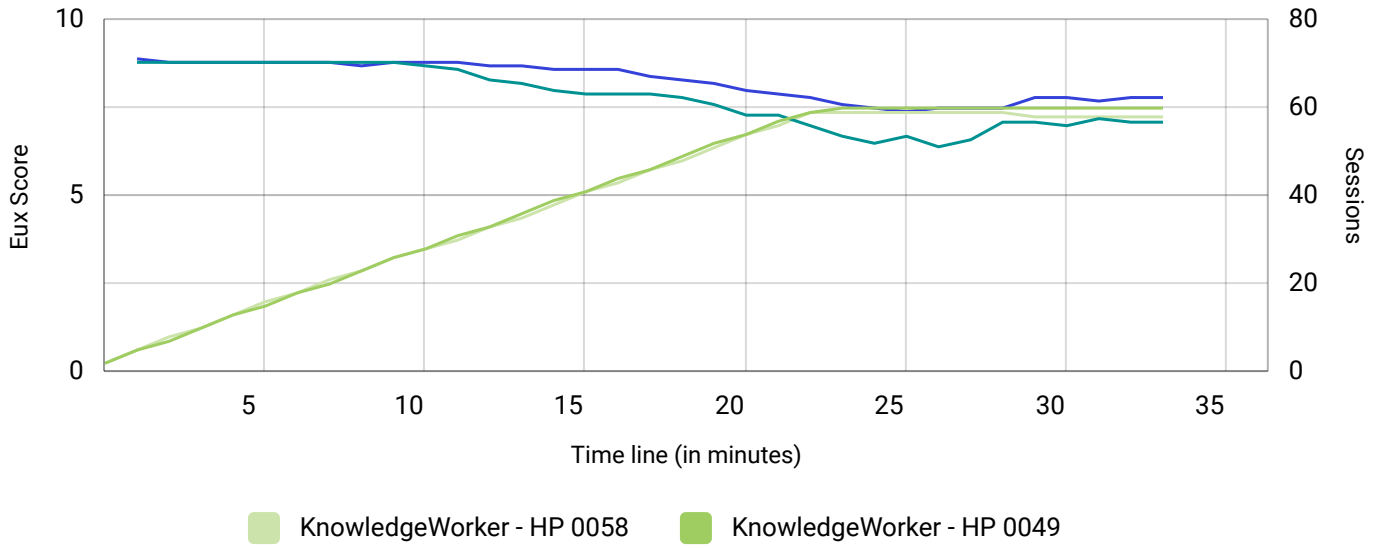
Test	EUX Score (Steady state)	Difference in %
KnowledgeWorker - HP 0058	6.9	Baseline
KnowledgeWorker - HP 0049	6.4	-7.25%

VSImax

Test	VSImax	Difference in %	Comment
KnowledgeWorker - HP 0058	59	Baseline	VSImax calculates the amount of users to reach the capacity of the target environment. Your VSImax is 59 users.
KnowledgeWorker - HP 0049	52	-11.86%	VSImax calculates the amount of users to reach the capacity of the target environment. Your VSImax is 52 users.



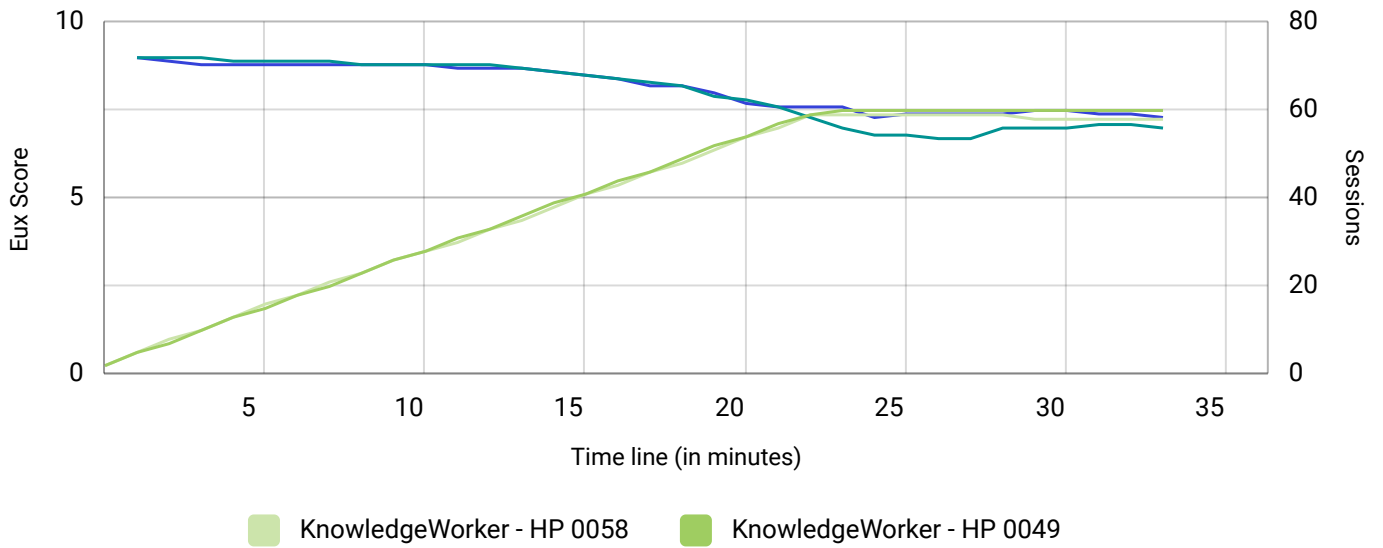
Generic Application score



Test

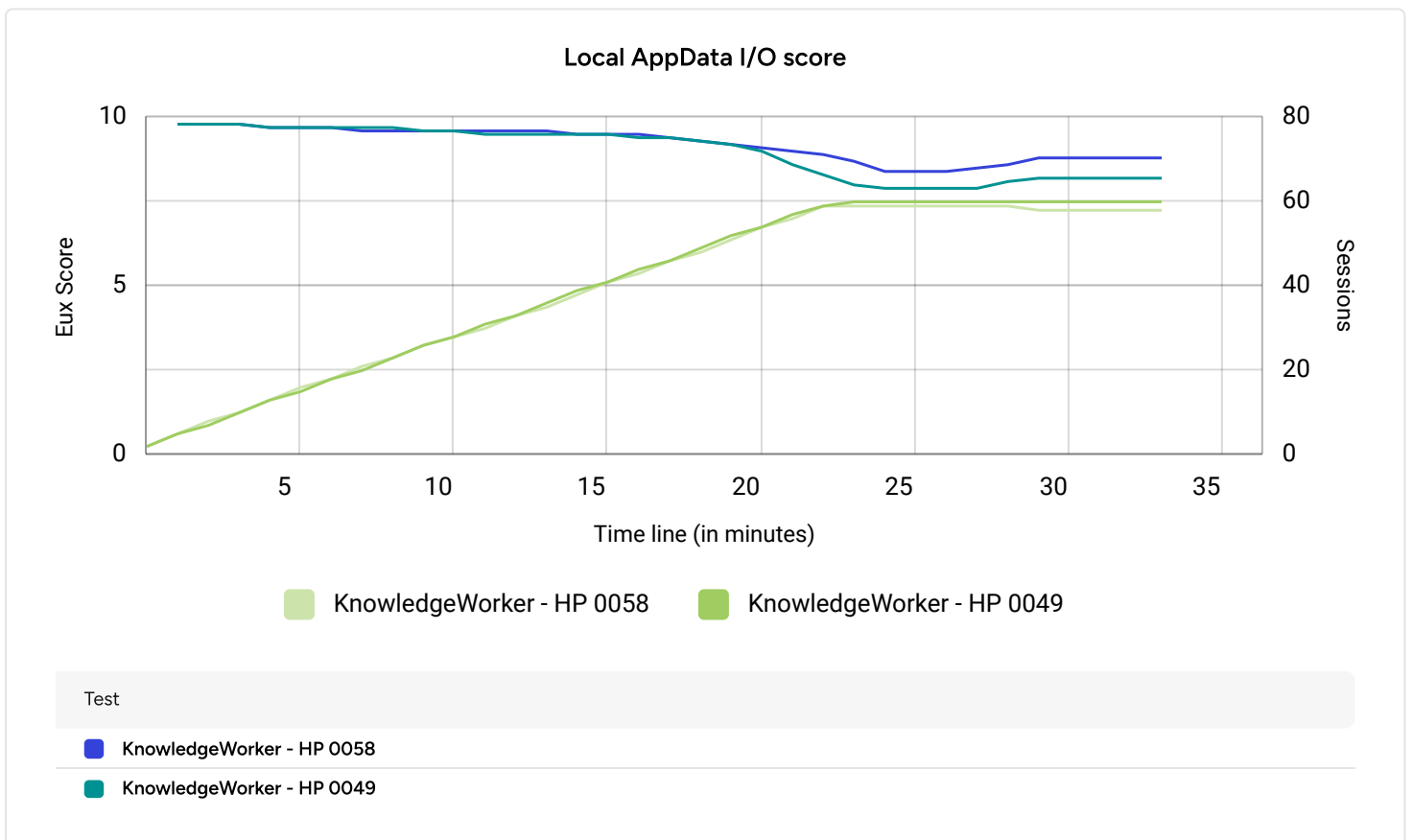
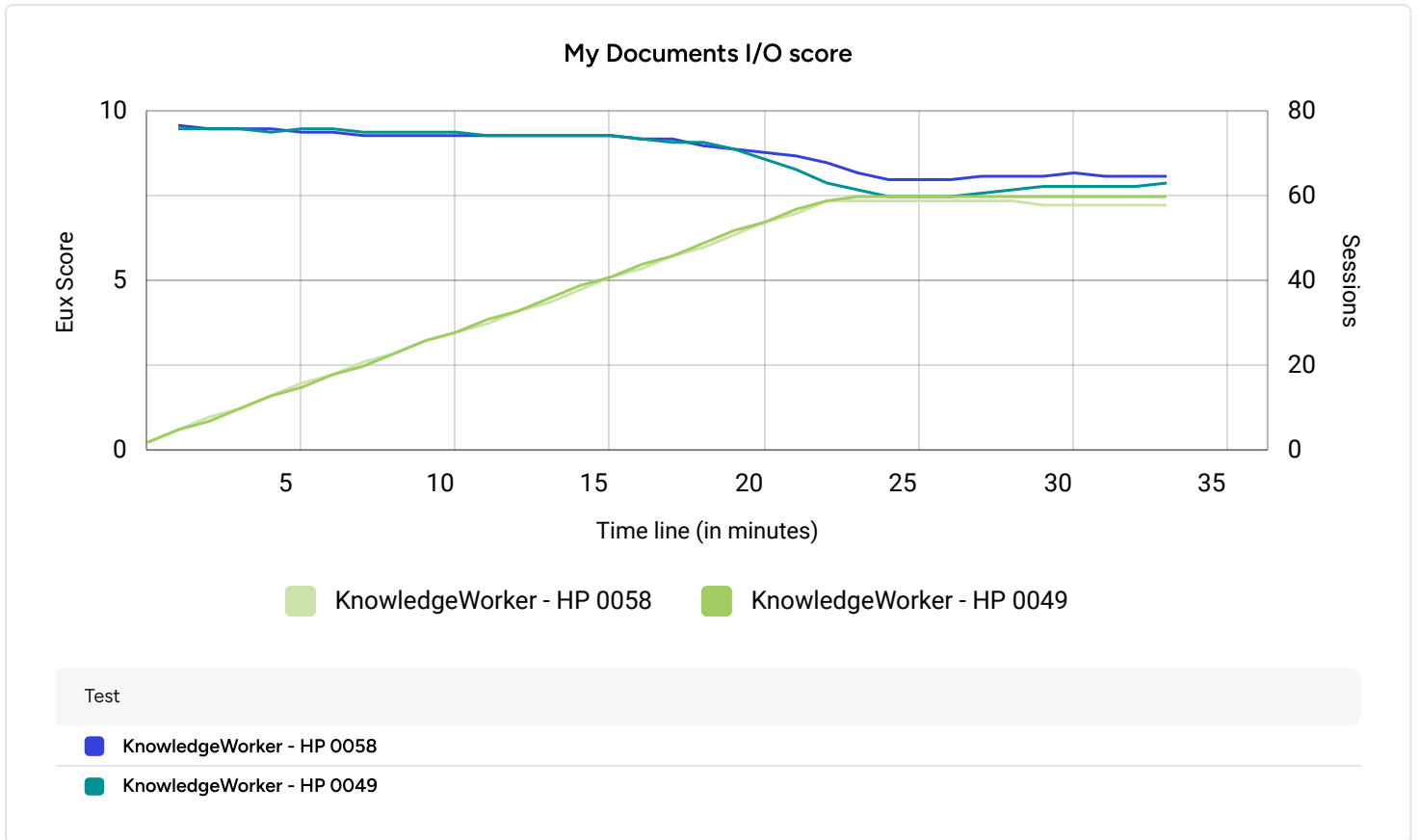
- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049

CPU score

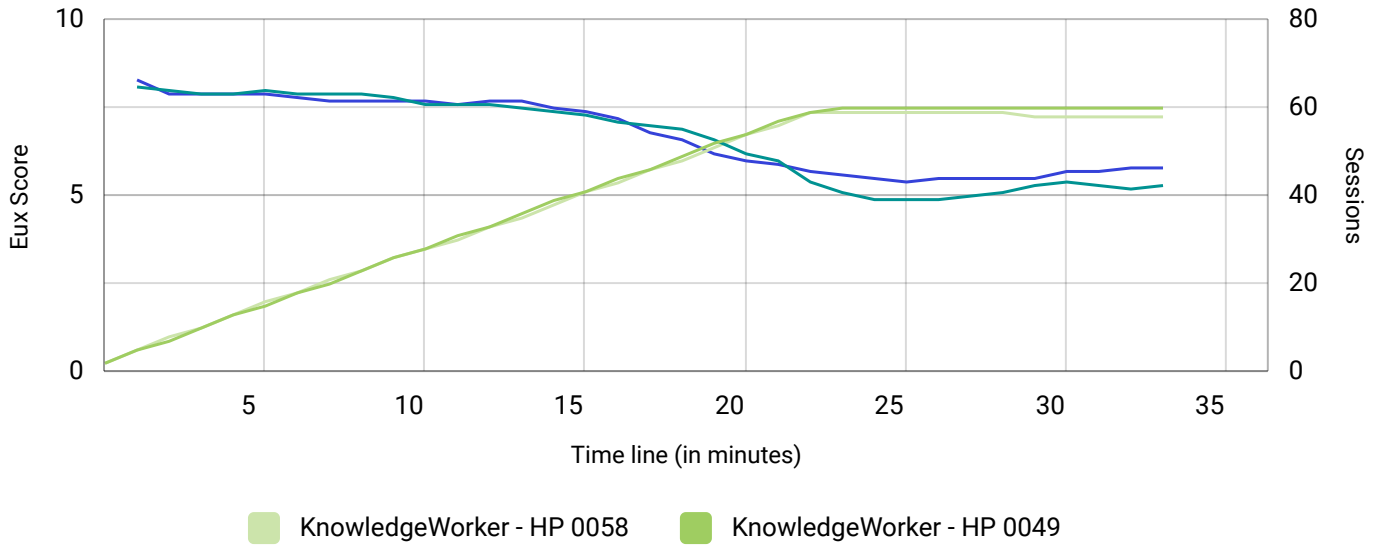


Test

- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049



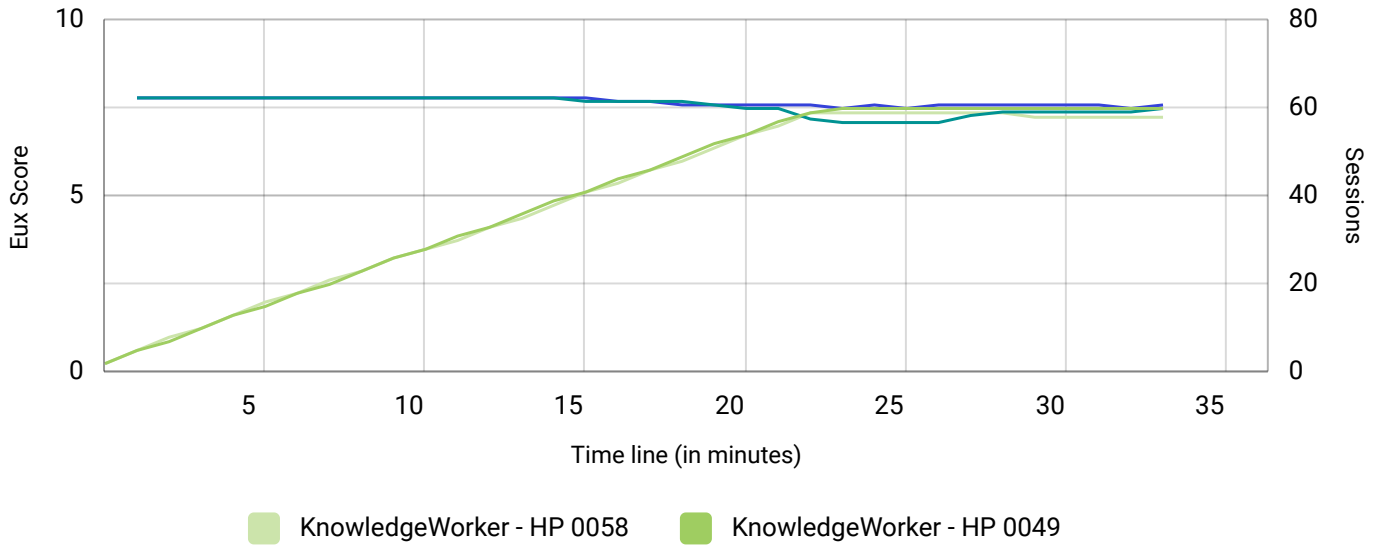
Mixed CPU I/O score



Test

- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049

User Input score

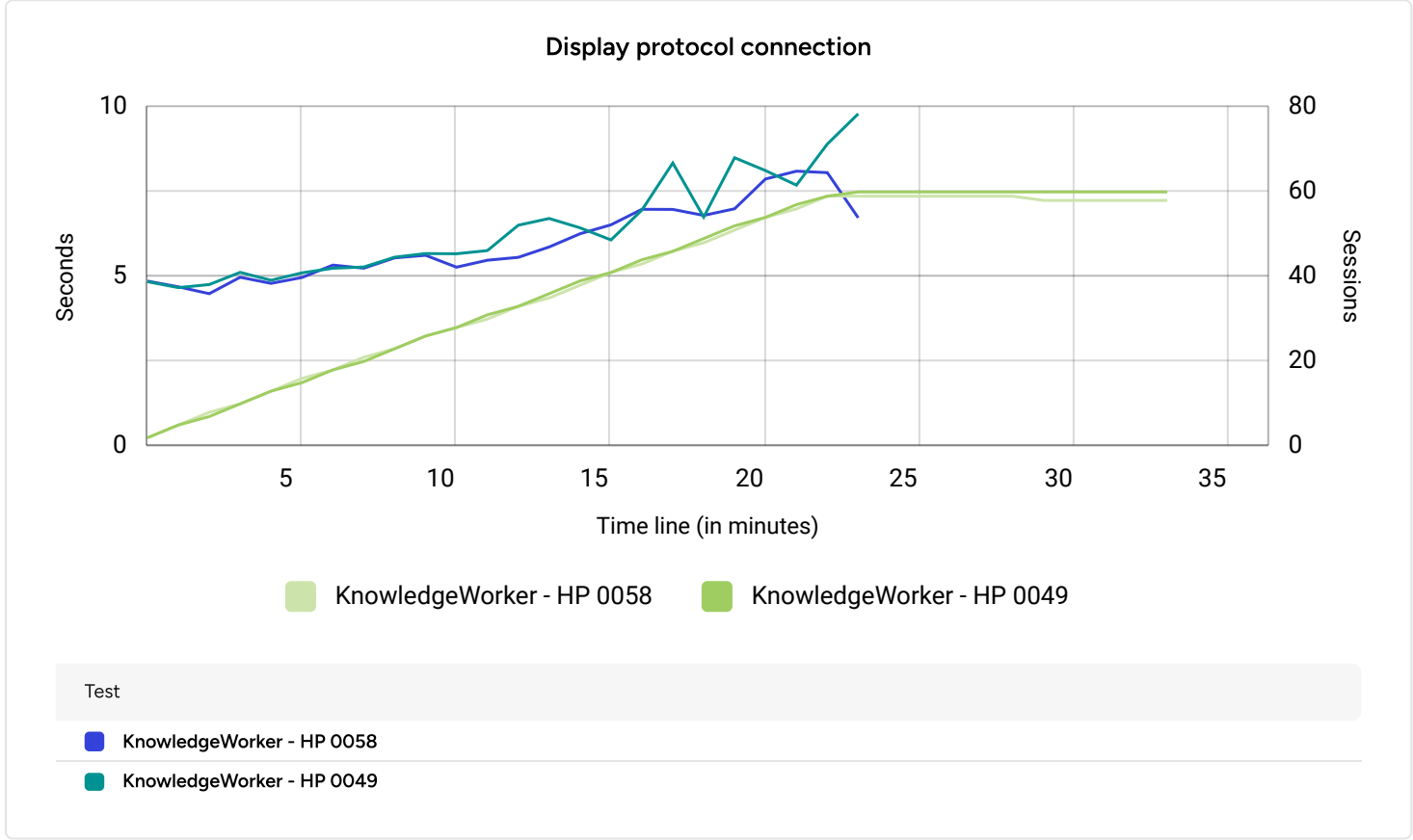


Test

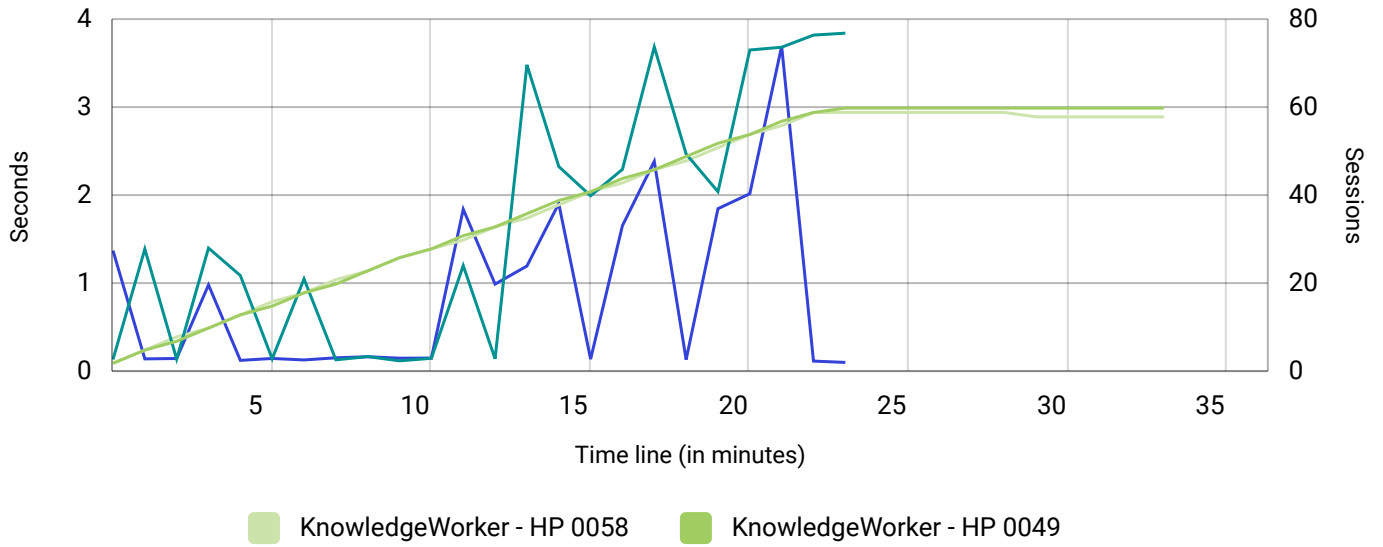
- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049

Logins specific

	KnowledgeWorker - HP 0058	KnowledgeWorker - HP 0049
Display protocol connection	6 sec	6.4 sec (-7%)
Profile load	0.9 sec	1.7 sec (-89%)
GPO processing	1.3 sec	1.8 sec (-38%)
Total login time	11.2 sec	14.1 sec (-26%)



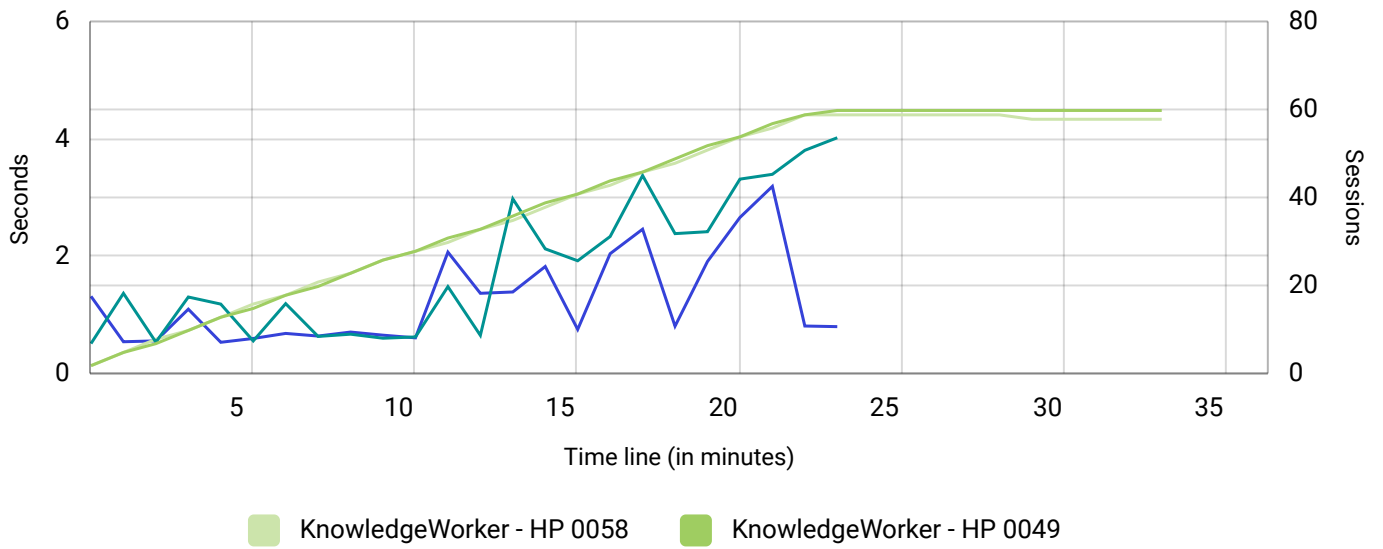
Profile load



Test

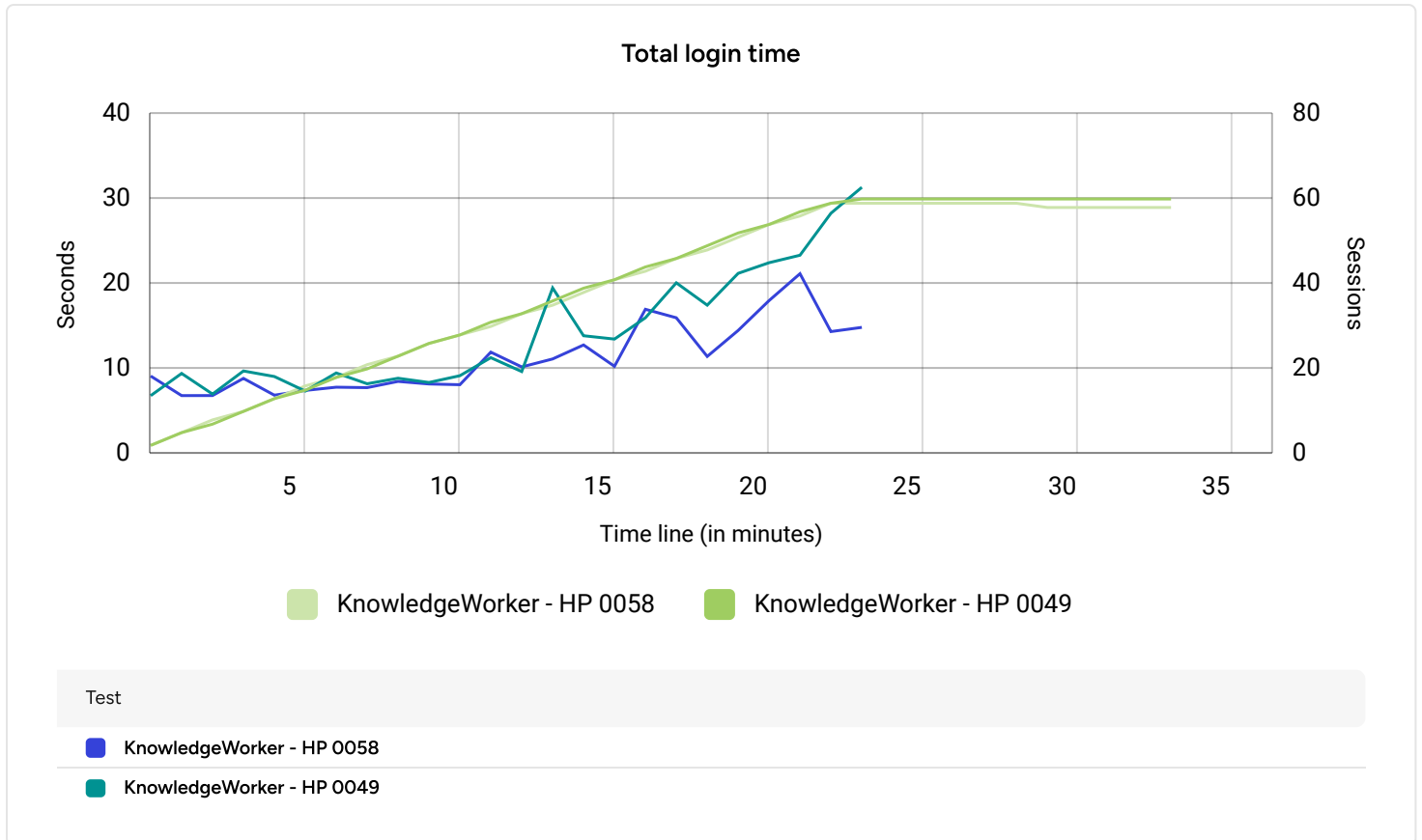
- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049

GPO processing



Test

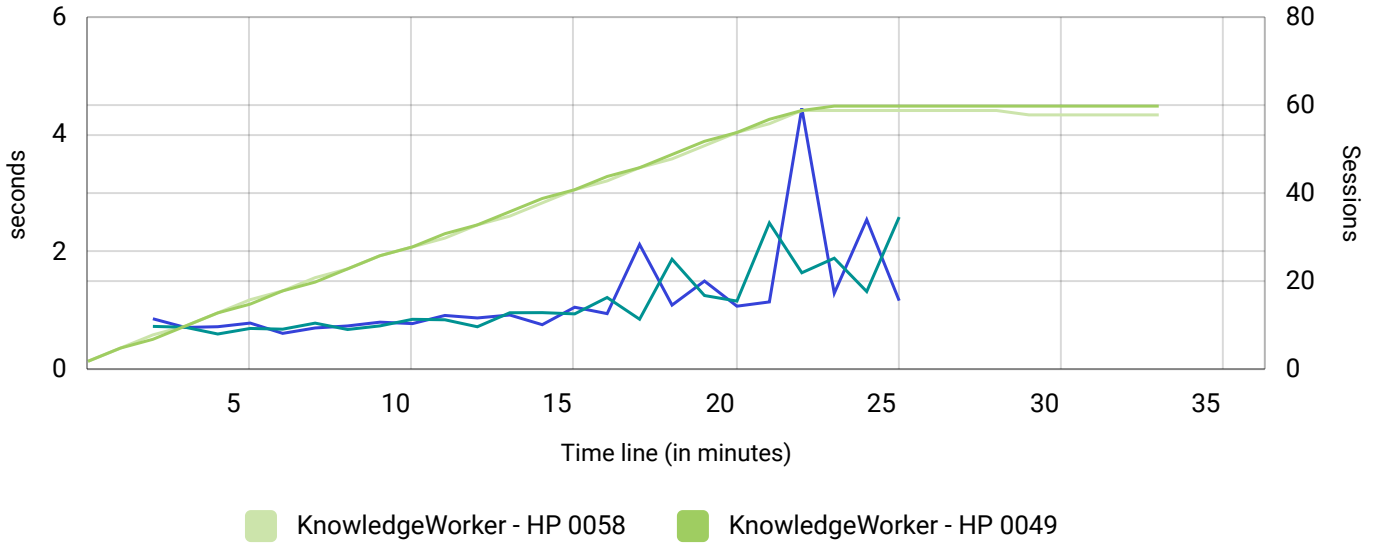
- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049



Application specific

	KnowledgeWorker - HP 0058	KnowledgeWorker - HP 0049
(KW) Prepare for Microsoft Office 365 (start)	1.17 sec	1.18 sec (-1%)
(KW) Microsoft Outlook (start)	3.83 sec	4.7 sec (-23%)
(KW) Microsoft Edge (browsing + multimedia) (page load)	3.93 sec	5.1 sec (-30%)
(KW) Microsoft Edge (browsing + multimedia) (logon)	0.26 sec	0.28 sec (-9%)
(KW) Microsoft Excel (start)	3.3 sec	7.85 sec (-138%)
(KW) Microsoft Excel (saving file)	0.9 sec	1.1 sec (-22%)
(KW) Microsoft Excel (open window)	1.73 sec	2.2 sec (-27%)
(KW) Microsoft Excel (open excel document)	2 sec	2.43 sec (-21%)
(KW) Microsoft PowerPoint (start)	3.27 sec	3.95 sec (-21%)
(KW) Microsoft PowerPoint (open window)	1.57 sec	1.57 sec - equal
(KW) Microsoft PowerPoint (open powerpoint document)	4.79 sec	5.64 sec (-18%)
(KW) Microsoft PowerPoint (saving file)	1.28 sec	1.25 sec (2%)
(KW) Microsoft Word (start)	3.75 sec	5.65 sec (-51%)
(KW) Microsoft Word (open window)	1.54 sec	2.27 sec (-48%)
(KW) Microsoft Word (open word document)	3.85 sec	3.71 sec (4%)
(KW) Microsoft Word (saving file)	1.31 sec	2 sec (-52%)
(KW) Close Microsoft Excel (start)	3.17 sec	5.14 sec (-62%)
(KW) Close Microsoft Word (start)	3.82 sec	4.39 sec (-15%)
(KW) Close Microsoft PowerPoint (start)	2.82 sec	3.7 sec (-31%)

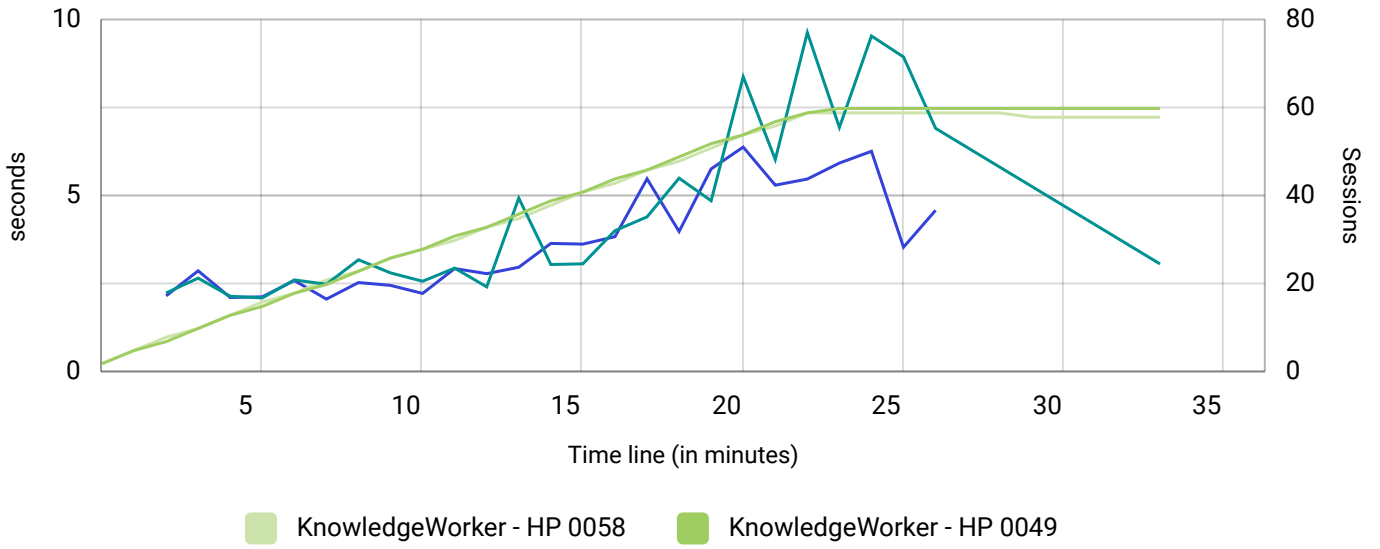
(KW) Prepare for Microsoft Office 365 (start)



Test

- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049

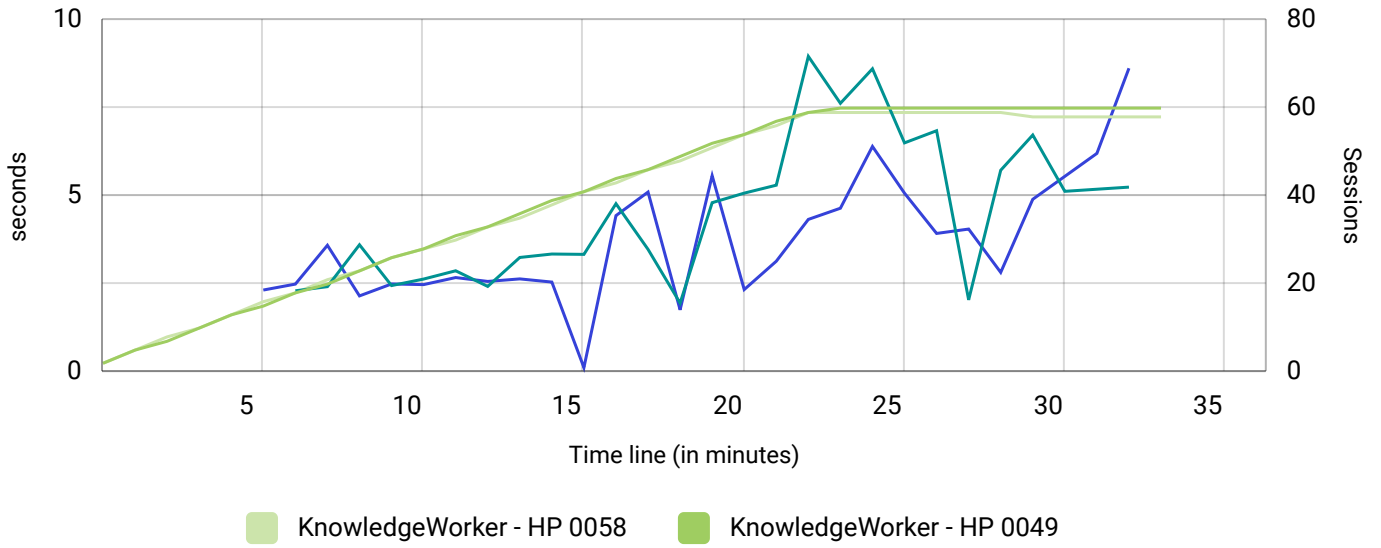
(KW) Microsoft Outlook (start)



Test

- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049

(KW) Microsoft Edge (browsing + multimedia) (page load)

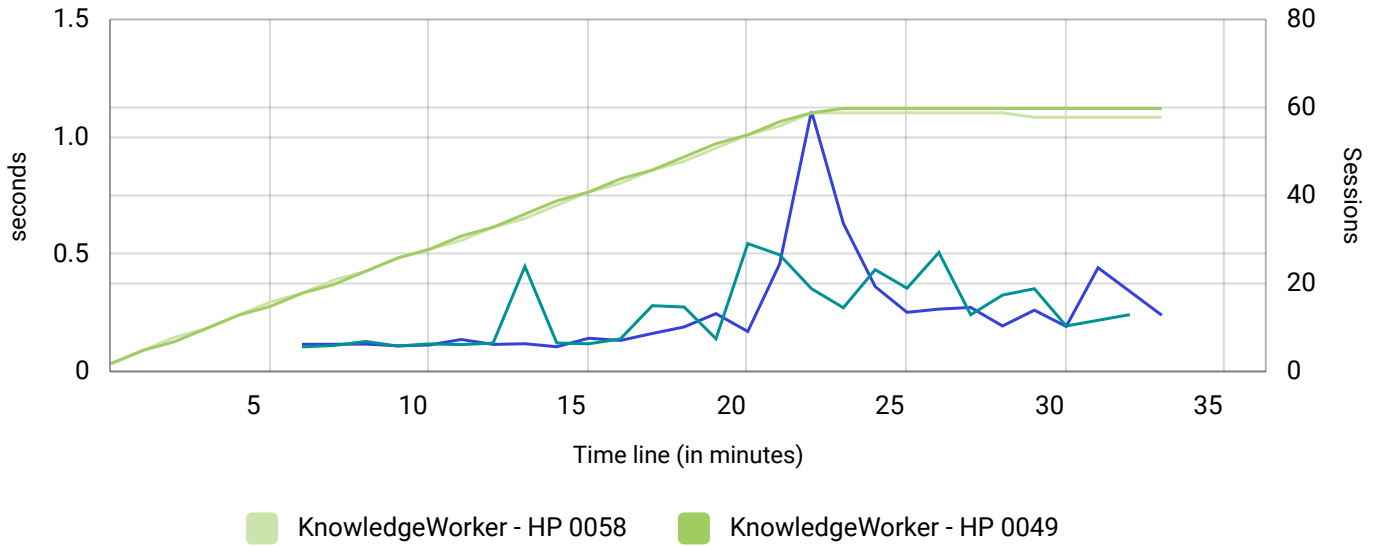


Test

KnowledgeWorker - HP 0058

KnowledgeWorker - HP 0049

(KW) Microsoft Edge (browsing + multimedia) (login)

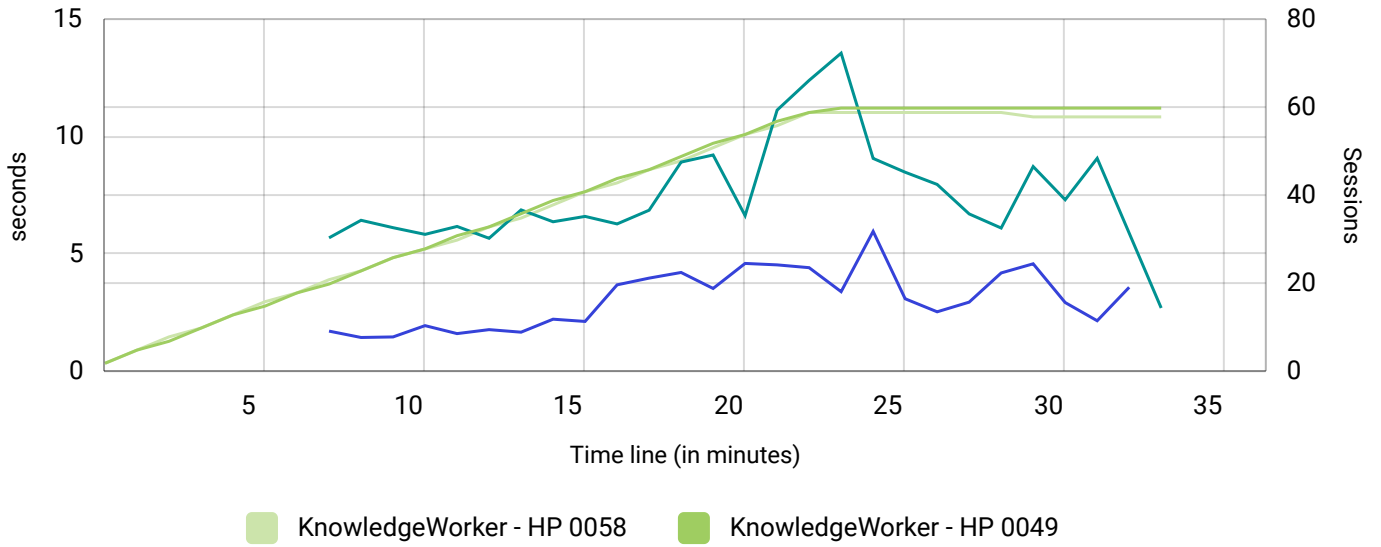


Test

KnowledgeWorker - HP 0058

KnowledgeWorker - HP 0049

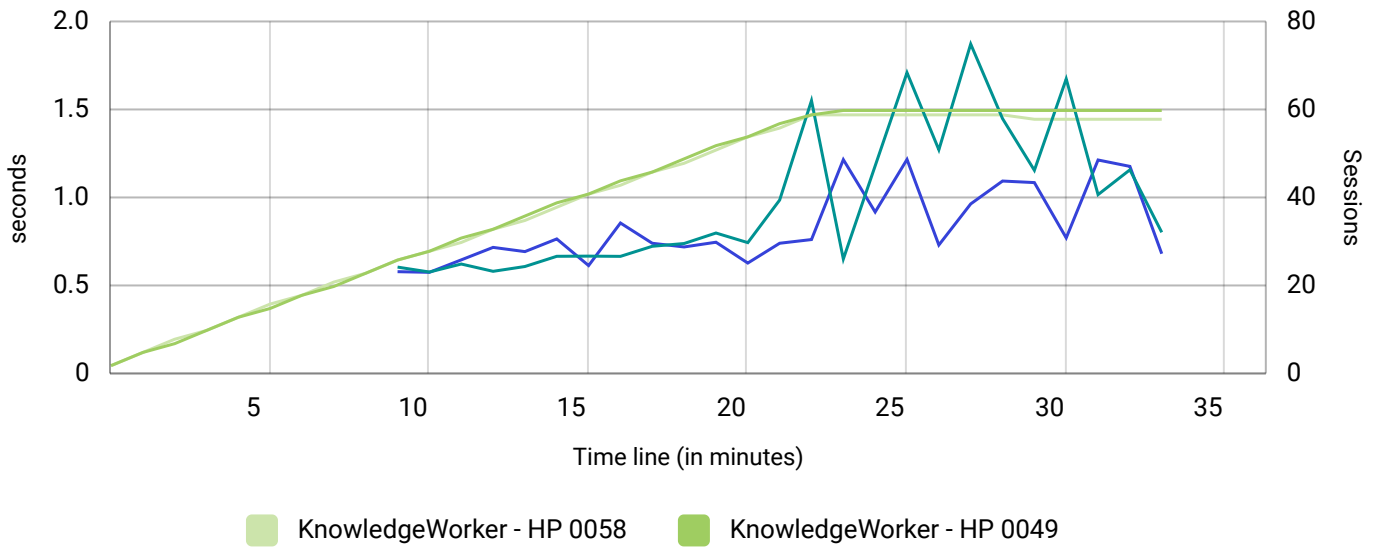
(KW) Microsoft Excel (start)



Test

- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049

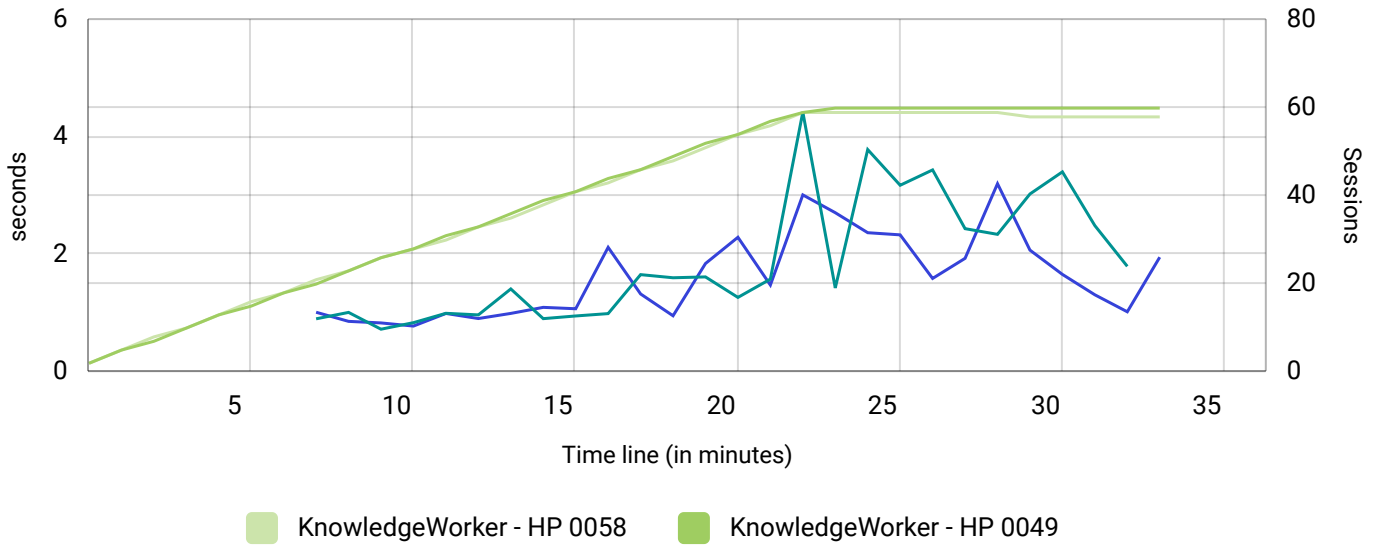
(KW) Microsoft Excel (saving file)



Test

- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049

(KW) Microsoft Excel (open window)

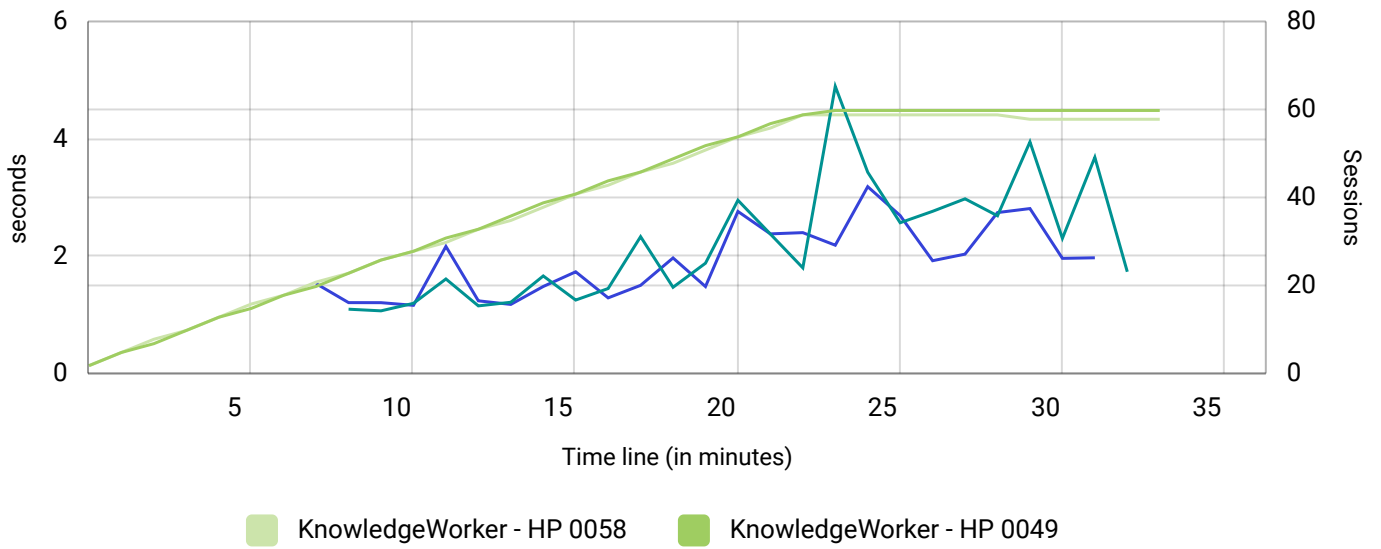


Test

KnowledgeWorker - HP 0058

KnowledgeWorker - HP 0049

(KW) Microsoft Excel (open excel document)

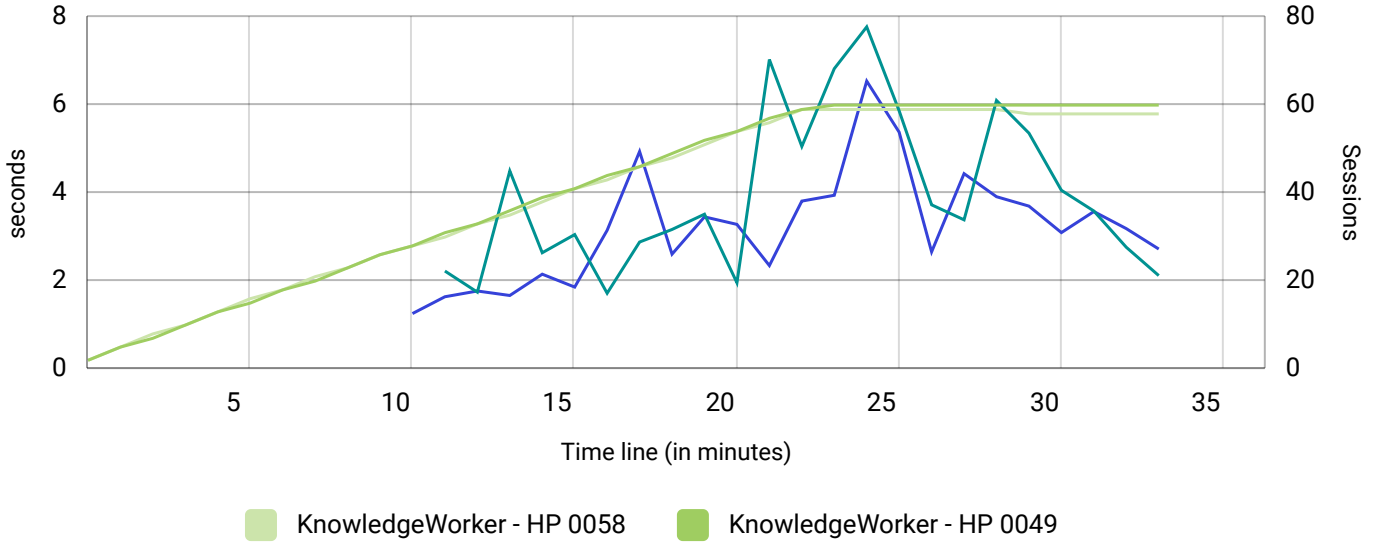


Test

KnowledgeWorker - HP 0058

KnowledgeWorker - HP 0049

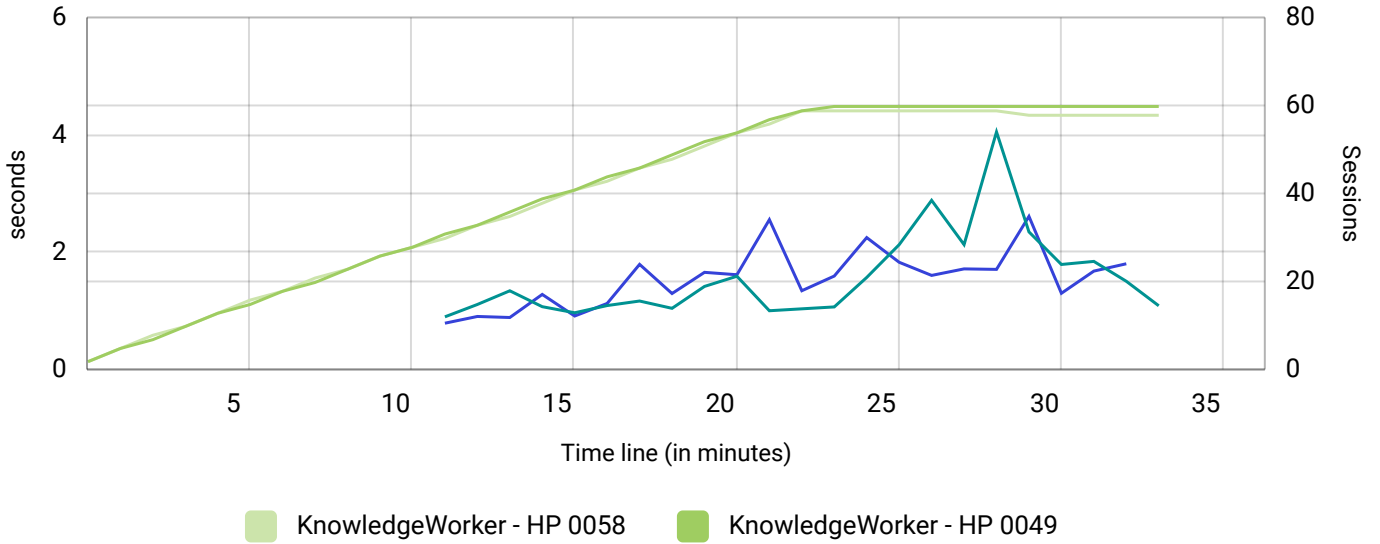
(KW) Microsoft PowerPoint (start)



Test

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- KnowledgeWorker - HP 0049

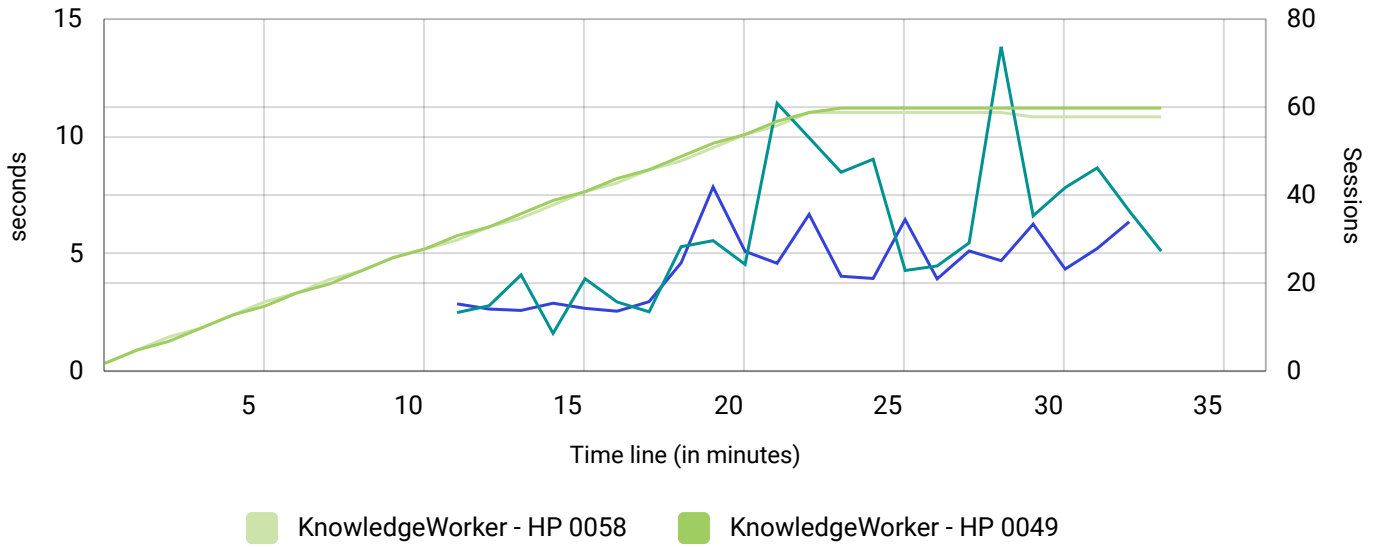
(KW) Microsoft PowerPoint (open window)



Test

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- KnowledgeWorker - HP 0049

(KW) Microsoft PowerPoint (open powerpoint document)

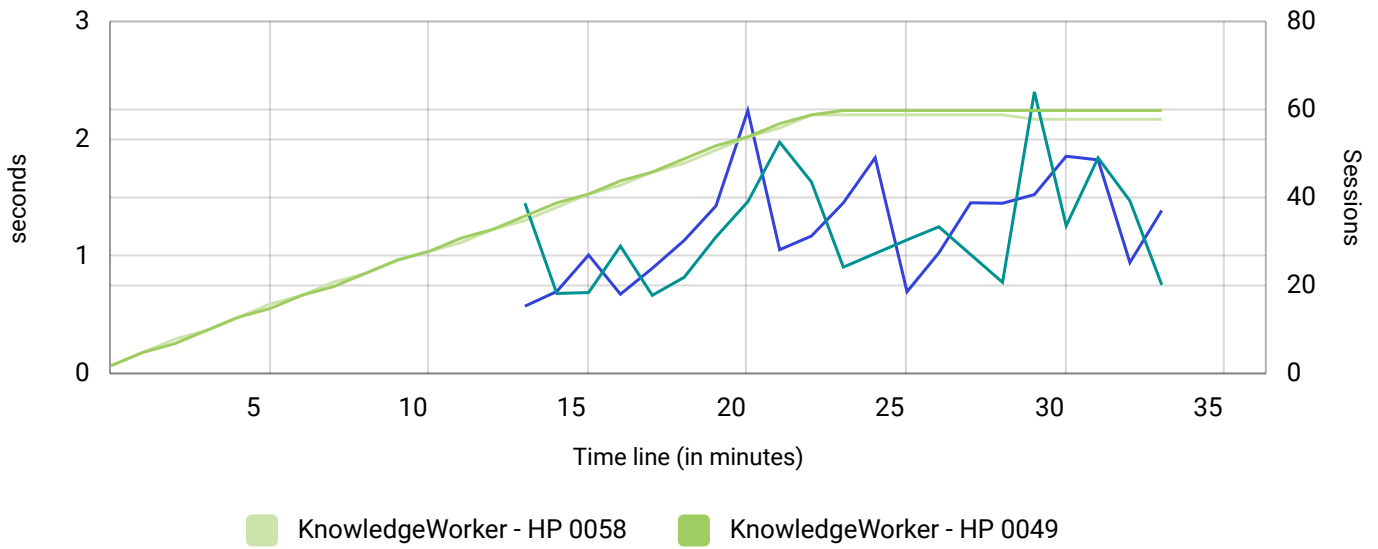


Test

KnowledgeWorker - HP 0058

KnowledgeWorker - HP 0049

(KW) Microsoft PowerPoint (saving file)

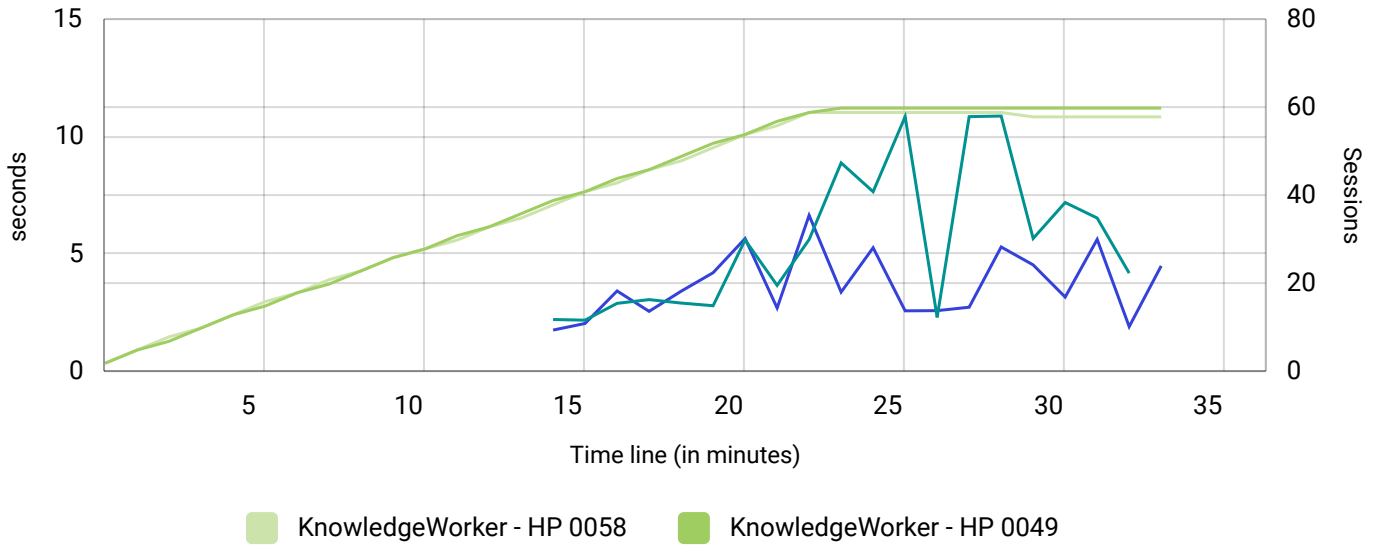


Test

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KnowledgeWorker - HP 0049

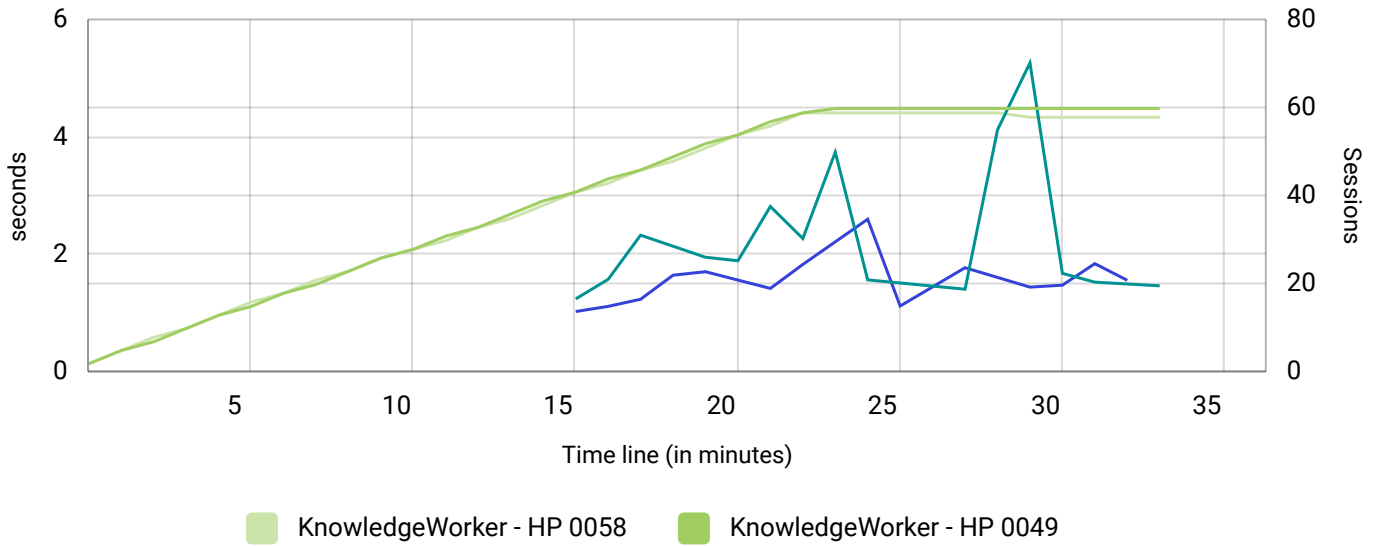
(KW) Microsoft Word (start)



Test

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- KnowledgeWorker - HP 0049

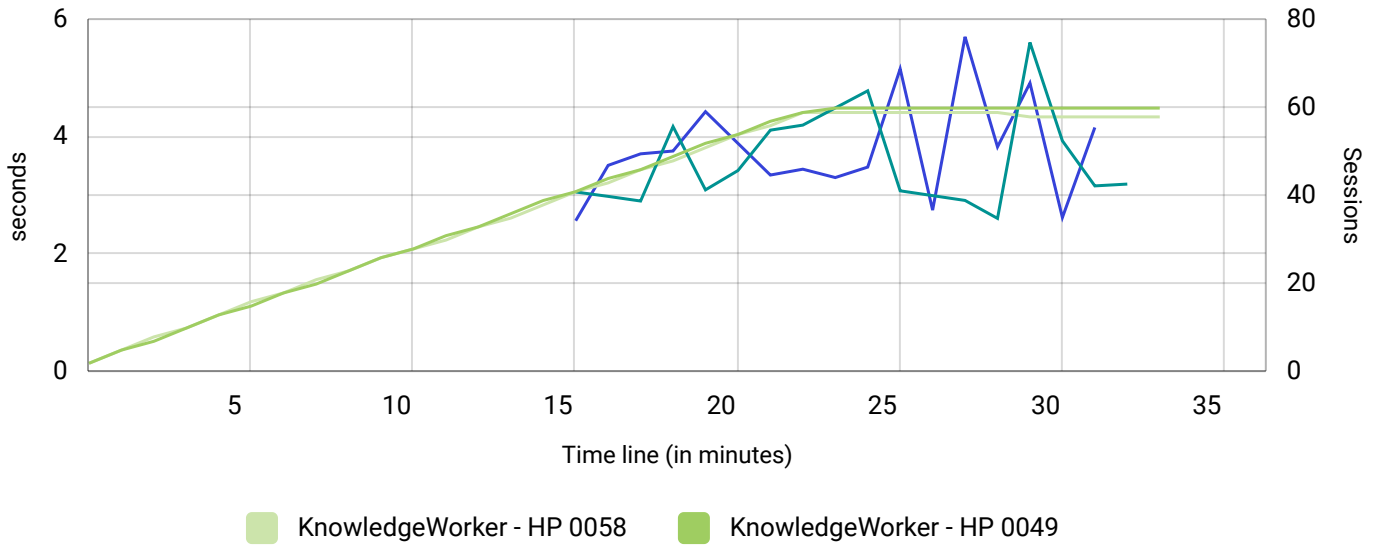
(KW) Microsoft Word (open window)



Test

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- KnowledgeWorker - HP 0049

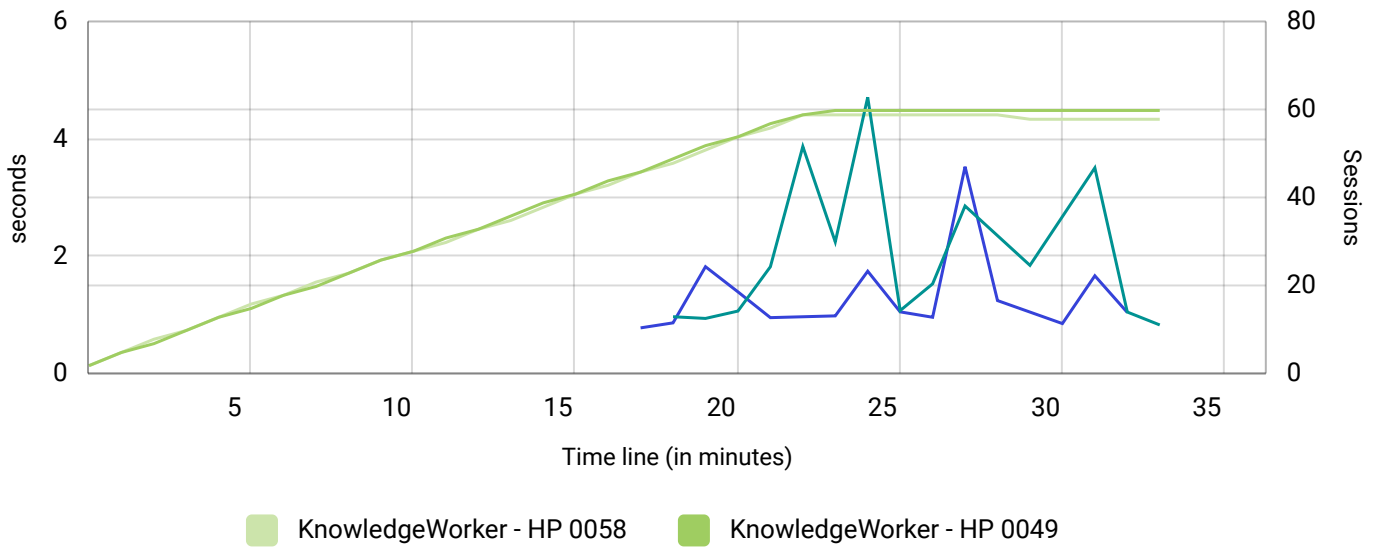
(KW) Microsoft Word (open word document)



Test

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- KnowledgeWorker - HP 0049

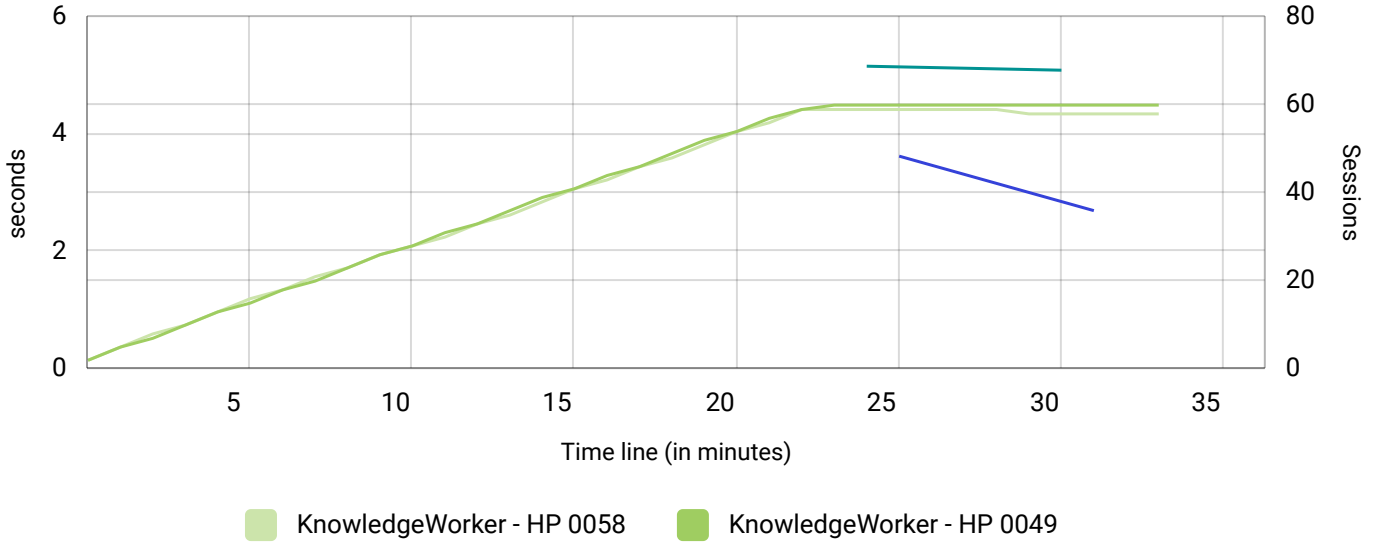
(KW) Microsoft Word (saving file)



Test

- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049

(KW) Close Microsoft Excel (start)

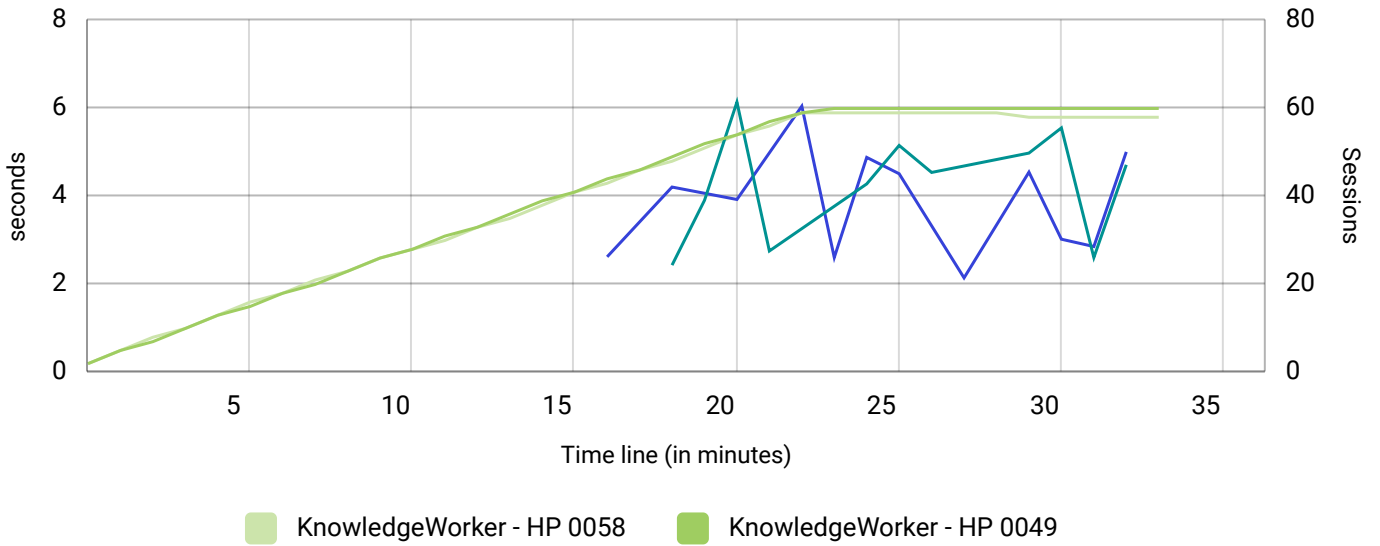


Test

KnowledgeWorker - HP 0058

KnowledgeWorker - HP 0049

(KW) Close Microsoft Word (start)

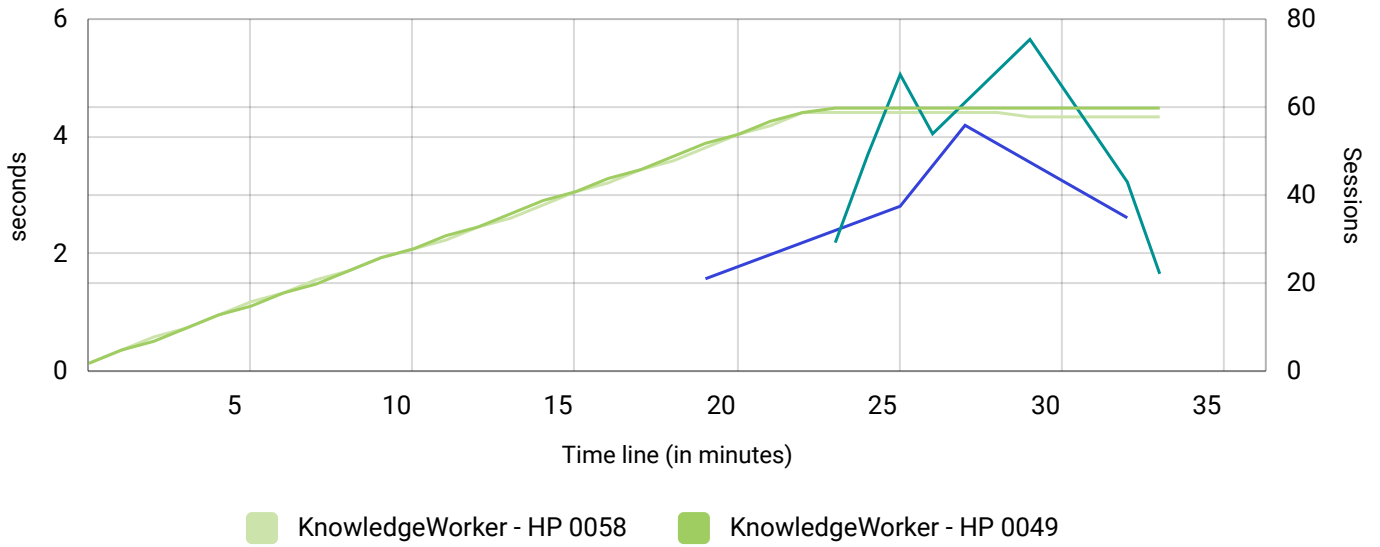


Test

KnowledgeWorker - HP 0058

KnowledgeWorker - HP 0049

(KW) Close Microsoft PowerPoint (start)



Test

- KnowledgeWorker - HP 0058
- KnowledgeWorker - HP 0049