



G8 vs iSeries (i130)

Performance Comparison —

Executive Summary

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1 EXECUTIVE SUMMARY

This report summarizes a head-to-head performance benchmark between the G8 release (G8R2SP7HF10, Windows Client) and the iSeries i130 release (Web Client), executed on equivalent, production-like environments. Across 23 equivalent Work Order transactions, the i130 Web Client completed the full test sequence in 3 minutes 35 seconds versus 9 minutes 5 seconds on the G8 Windows Client — a 60.6% reduction in total execution time — while also requiring fewer screens (20 vs. 29) and fewer clicks (39 vs. 58). Of the 23 transactions compared, 13 were faster on the Web Client, 8 completed in equal time, and 2 were marginally faster on the Windows Client, both attributable to one-time page/data-load behavior rather than a systemic disadvantage.

Overall, the results support the iSeries i130 Web Client as a meaningful efficiency improvement over the G8 Windows Client for the Work Order lifecycle scenarios tested.

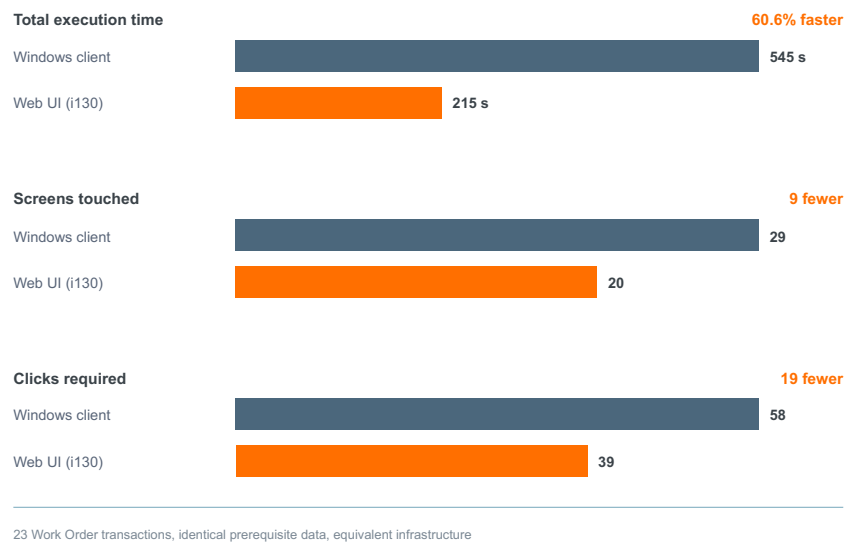


Figure 1. Executive Results Dashboard

2 PURPOSE & SCOPE

The objective of this exercise was to benchmark application response times between the G8 release (G8R2SP7HF10) and the iSeries i130 release on equivalent, production-like environments. The scope covers the test environment, the methodology followed, an executive results dashboard, and detailed scenario-level comparisons across Work Order creation, release, operation processing, data collection, Discrepancy Item handling, and sign-off — backed by the raw timing data captured for each of 23 transactions.

3 TEST ENVIRONMENT

Both releases were benchmarked on equivalent, production-like middle-tier and database infrastructure, provisioned in line with iBase-t's standard deployment guidelines.

3.1 Middle-Tier Infrastructure

Parameter	G8-Series	i-Series
Release level	G8R2SP7HF10	i130
Operating system	Windows Server 2025	Linux – RHEL 10.x
Total nodes	3	7 (3 masters + 4 worker)
Master CPU / RAM / HDD (per node)	–	2 vCPU / 8 GB / 100 GB
Worker CPU / RAM / HDD (per node)	–	4 vCPU / 32 GB / 100 GB

Table 1. Middle-Tier Node Infrastructure

3.2 Database Infrastructure (SQL Server)

Parameter	G8-Series	i-Series
Release level	G8R2SP7HF10	i130
DB name (SID)	G8RXREG	G8RXREG
Operating system	Windows Server – 64 bit	Windows Server – 64 bit
CPU / RAM	16 vCPU / 64 GB	16 vCPU / 64 GB
Database edition	Microsoft SQL Server	Microsoft SQL Server
HDD / storage	~1.5 TB (D:\ 750 GB + E:\ 750 GB)	~1.5 TB (D:\ 750 GB + E:\ 750 GB)
DB size	~406 GB	~406 GB

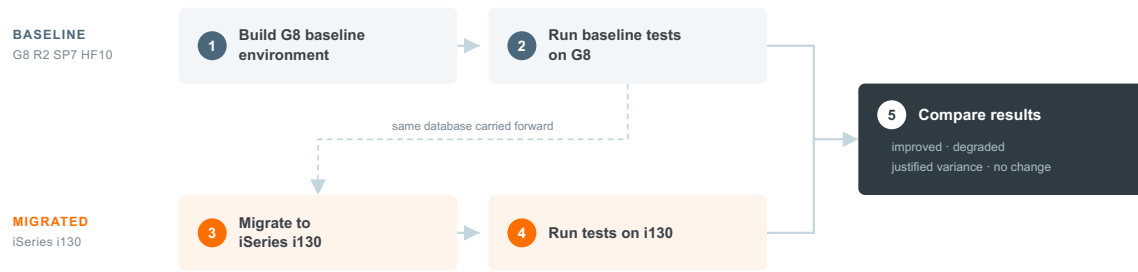
Table 2. Database Infrastructure

4 METHODOLOGY

The comparison followed a controlled, five-step approach to ensure the two releases were evaluated on a like-for-like basis:

1. Build G8 baseline environment – set up a production-like G8 environment on release version G8R2SP7HF10.
2. Run baseline tests on G8 – complete prerequisite data setup, then execute the defined test scenarios and capture response times.
3. Upgrade to iSeries i130 – upgrade the same database to the i130 release level and connect it to a production-like iSeries middle-tier setup.

4. Run tests on i130 – generate fresh Work Order test data on the same prerequisite data setup and execute the identical test scenarios, capturing response times.
5. Compare results – compare scenario execution times across both releases to evaluate performance differences (upgraded / degraded / justified variance / no significant change).



Identical test scenarios and prerequisite data on both releases; response times captured on each run

5 LIST OF TRANSACTIONS

The table below lists all 23 transactions executed on both platforms as part of this benchmark, covering the full Work Order lifecycle from application launch through operation sign-off.

#	Transaction – G8R2SP7HF10 (Windows Client)	Transaction – i130 (Web Client)
1	Launch application from Windows Client Shortcut	Launch application from Web URL on chrome
2	Login to G8 system	Log in to Web UI and land on Landing screen
3	Open Production Control - Work Plan/Work Order Release Control dispatch	Open Main Menu - Operations – Production Release Control dispatch
4	Filter the Work Plan	Filter the Work Plan
5	Create a new Work Order with 5 serialized units (UNIT1 to UNIT5)	Create a new Work Order with 5 serialized units (UNIT1 to UNIT5) - This will launch the work order screen.
6	Release Order from Work Order Pending Release tab	Release Order from Work Order Screen - Release Order button
7	Search for the newly created Work Order (Global Search)	Search for the newly created Work Order (Global Search)
8	Display the Work Order	Display the Work Order (This will load NTC - data collection)
9	Work Order - Select Operation 020 (View operation 020)	Work Order - Select Operation 020 (View operation 020) - This loads NTC
10	Work Order - Select first unit UNIT1	Work Order - Select first unit UNIT1
11	Work Order - Sign on to Operation	Work Order - Sign on to Operation
12	Work Order - Expand all the instructions with Expand All button	Work Order - Expand all the instructions with Expand All button
13	Work Order - Click on the slide and display illustration in side panel	Work Order - Click on the slide and display illustration in side panel

#	Transaction – G8R2SP7HF10 (Windows Client)	Transaction – i130 (Web Client)
14	Work Order - Perform 4 Component serial part data collection (1 Component in first grid, 3 components in second grid)	Work Order - Perform 4 Component serial part data collection (1 Component in first grid, 3 components in second grid)
15	Work Order - Perform 4 Tool serial data collection (1 Tool in first grid, 3 Tools in second grid)	Work Order - Perform 4 Tool serial data collection (1 Tool in first grid, 3 Tools in second grid)
16	Work Order - Perform 4 Parametric data collection (1 DC in first grid, 3 DCs in second grid)	Work Order - Perform 4 Parametric data collection (1 DC in first grid, 3 DCs in second grid)
17	Work Order - Perform 3 Buyoff acceptance (MFG → MFG2 → TECH)	Work Order - Perform 3 Buyoff acceptance (MFG → MFG2 → TECH)
18	Work Order - Create DI and Display DI	Work Order - Create DI and Display DI
19	Discrepancy Item - Add Defect	Discrepancy Item - Add Defect
20	Discrepancy Item - Add Symptoms	Discrepancy Item - Add Symptoms
21	Discrepancy Item - Add Actual Condition – (image and text)	Discrepancy Item - Add Actual Condition – (image and text)
22	Discrepancy Item - Display Work Order	Discrepancy Item - Display Work Order - This will load NTC - data collection
23	Work Order - Sign Off from the operation	Work Order - Sign Off from the operation

Table 3. List of Transactions

6 RESULTS SUMMARY

The table below consolidates the headline metrics across all 23 compared transactions.

Metric	Windows Client (G8)	Web (i130)	Difference	% Improvement
Total screens	29	20	9	31.0%
Total clicks	58	39	19	32.8%
Total execution time (s)	545	215	330	60.6%
Total execution time	9 min 05 s	3 min 35 s	–	–

Table 4. Executive Results Dashboard

6.1 Transaction-Level Outcomes

Outcome	Transaction count
Faster on Web (i130)	13
Faster on Windows Client (G8) - See section 7 below for reason, both transactions load extra screens on the webui compared to win client.	2
Equal execution time	8

Table 5. Transaction-Level Comparison Outcomes

7 ADDITIONAL SCREEN / LANDING-PAGE LOAD IMPACT ON WEB (i130)

Three transactions in the raw timing data carry an extra screen or page-load step on the i130 Web Client that does not exist on the G8 Windows Client. In two of these, that extra load was enough to make the Windows Client the faster of the two platforms; in the third, the Web Client remained faster overall despite the additional load.

#	Transaction	G8 Time (s)	i130 Time (s)	Faster	Explanation
1	Login to G8 system / Log in to Web UI and land on Landing screen	8	11	Win	The Web Client login includes an additional landing-page load step after authentication that has no equivalent on the Windows Client, adding roughly 3 seconds.
2	Work Order - Select Operation 020 (View operation 020)	4	8	Win	Selecting the operation on the Web Client triggers the NTC (Data Collection Readiness) screen to load, adding roughly 4 seconds that the Windows Client does not incur.

Table 6. Transactions with Additional Screen/Landing-Page Load on i130

In summary: of the 2 transactions where the Windows Client measured faster (Login and Select Operation 020), both are explained by a one-time page or NTC data-collection screen load unique to the Web Client. A third transaction (Display the Work Order) also loads the NTC screen onto the Web Client, but the Web Client remained the faster platform on that transaction overall.

8 KEY FINDINGS

- The i130 Web Client reduced total execution time across the test sequence by 60.6% (545s → 215s), while also using 31.0% fewer screens and 32.8% fewer clicks than the G8 Windows Client.
- The single largest gain was on the multi-component serialized data collection step (Component data collection across two grids), which dropped from 233 seconds on G8 to 54 seconds on i130 — a 76.8% reduction — the largest time saving observed in the test set.
- 13 of 23 transactions were faster on the Web Client, 8 completed in equal time, and only 2 were marginally faster on the Windows Client.
- Both Windows-favored transactions, plus one additional Web-favored transaction, involve an extra screen or landing-page/NTC load on the Web Client — one-time load overhead rather than a recurring performance gap (see “Additional Screen / Landing-Page Load Impact on Web (i130)”).

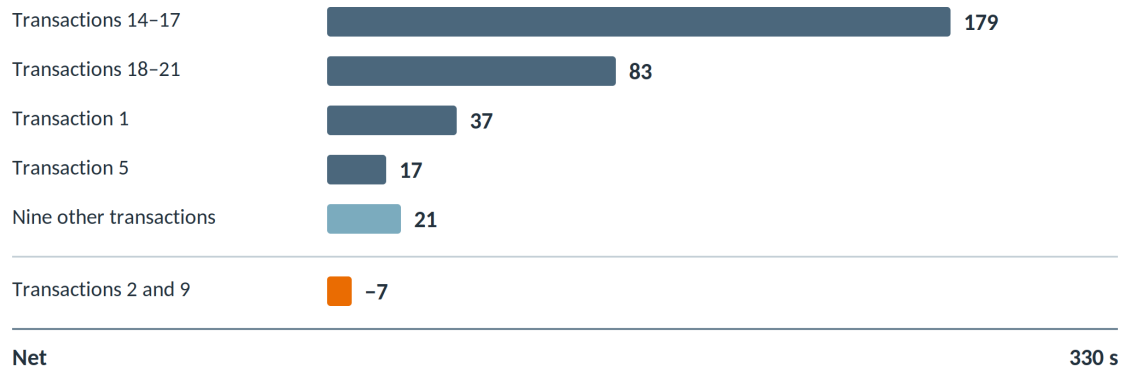


Figure 2. Per-transaction time saving

9 CONCLUSION & RECOMMENDATION

The benchmark results demonstrate that the iSeries i130 Web Client delivers a substantial, consistent performance improvement over the G8 Windows Client across the Work Order lifecycle — fewer screens, fewer clicks, and significantly faster execution time, with the largest gains concentrated in multi-item data collection workflows. The two scenarios where the Windows Client was marginally faster are explained by one-time page-load behavior rather than a systemic disadvantage of the Web Client and do not offset the overall efficiency gains observed. These results support proceeding with the iSeries i130 Web Client as the direction for the Work Order workflow.

10 DETAILED TRANSACTION DATA

The tables below present the underlying screen-count, click-count, and execution-time data for all 23 transactions, drawn directly from the G8_vs_i130_Performance_Compare worksheet. Where a group of related sub-steps (e.g., Tool and Parametric data collection, or Discrepancy Item defect/symptom/condition entry) was measured as a single combined block in the source data, the corresponding rows are merged to reflect that grouping.

10.1 Number of Screens

#	Transaction	# of Screens – G8	# of Screens – i130	Δ (i130–G8)
1	Launch application from Windows Client Shortcut	1	1	0
2	Login to G8 system	1	1	0
3	Open Production Control - Work Plan/Work Order Release Control dispatch	1	1	0
4	Filter the Work Plan	1	1	0
5	Create a new Work Order with 5 serialized units (UNIT1 to UNIT5)	2	2	0

#	Transaction	# of Screens – G8	# of Screens – i130	Δ (i130–G8)
6	Release Order from Work Order Pending Release tab	1	1	0
7	Search for the newly created Work Order (Global Search)	1	1	0
8	Display the Work Order	1	1	0
9	Work Order - Select Operation 020 (View operation 020)	1	1	0
10	Work Order - Select first unit UNIT1	1	1	0
11	Work Order - Sign on to Operation	1	1	0
12	Work Order - Expand all the instructions with Expand All button	1	1	0
13	Work Order - Click on the slide and display illustration in side panel	1	1	0
14–17	Work Order - Perform 4 Component serial part data collection (1 Component in first grid, 3 components in second grid)	9	1	-8
18–21	Work Order - Create DI and Display DI	4	2	-2
22	Discrepancy Item - Display Work Order	1	2	1
23	Work Order - Sign Off from the operation	1	1	0
	TOTAL	29	20	-9

Table 7. Number of Screens by Transaction

10.2 Number of Clicks

#	Transaction	# of Clicks – G8	# of Clicks – i130	Δ (i130–G8)
1	Launch application from Windows Client Shortcut	2	1	-1
2	Login to G8 system	3	2	-1
3	Open Production Control - Work Plan/Work Order Release Control dispatch	2	2	0
4	Filter the Work Plan	3	2	-1
5	Create a new Work Order with 5 serialized units (UNIT1 to UNIT5)	8	3	-5
6	Release Order from Work Order Pending Release tab	2	2	0

#	Transaction	# of Clicks – G8	# of Clicks – i130	Δ (i130–G8)
7	Search for the newly created Work Order (Global Search)	1	2	1
8	Display the Work Order	1	2	1
9	Work Order - Select Operation 020 (View operation 020)	1	1	0
10	Work Order - Select first unit UNIT1	3	4	1
11	Work Order - Sign on to Operation	2	2	0
12	Work Order - Expand all the instructions with Expand All button	1	1	0
13	Work Order - Click on the slide and display illustration in side panel	1	2	1
14–17	Work Order - Perform 4 Component serial part data collection (1 Component in first grid, 3 components in second grid)	9	6	-3
18–21	Work Order - Create DI and Display DI	15	3	-12
22	Discrepancy Item - Display Work Order	2	2	0
23	Work Order - Sign Off from the operation	2	2	0
	TOTAL	58	39	-19

Table 8. Number of Clicks by Transaction

10.3 Execution Time

#	Transaction	G8 Execution Time (s)	i130 Execution Time (s)	Δ (i130–G8)
1	Launch application from Windows Client Shortcut	45	8	-37
2	Login to G8 system	8	11	3
3	Open Production Control - Work Plan/Work Order Release Control dispatch	6	5	-1
4	Filter the Work Plan	11	8	-3
5	Create a new Work Order with 5 serialized units (UNIT1 to UNIT5)	32	15	-17
6	Release Order from Work Order Pending Release tab	7	6	-1
7	Search for the newly created Work Order (Global Search)	11	11	0

#	Transaction	G8 Execution Time (s)	i130 Execution Time (s)	Δ (i130-G8)
8	Display the Work Order	8	6	-2
9	Work Order - Select Operation 020 (View operation 020)	4	8	4
10	Work Order - Select first unit UNIT1	15	11	-4
11	Work Order - Sign on to Operation	11	8	-3
12	Work Order - Expand all the instructions with Expand All button	8	8	0
13	Work Order - Click on the slide and display illustration in side panel	10	8	-2
14-17	Work Order - Perform 4 Component serial part data collection (1 Component in first grid, 3 components in second grid)	233	54	-179
18-21	Work Order - Create DI and Display DI	117	34	-83
22	Discrepancy Item - Display Work Order	8	6	-2
23	Work Order - Sign Off from the operation	11	8	-3
	TOTAL	9 min 11 sec	3 min 35 sec	-5 min 6 sec

Table 9. Execution Time by Transaction (seconds)