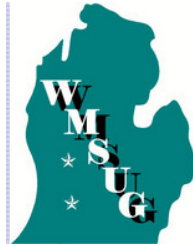


***Southeast Michigan
IBM i User Group***



Run SQL Scripts & Other DB2 Tools Re-invented

Scott Forstie
DB2 for i Business Architect

forstie@us.ibm.com



Strategy



Windows
Install
Only



Any Device

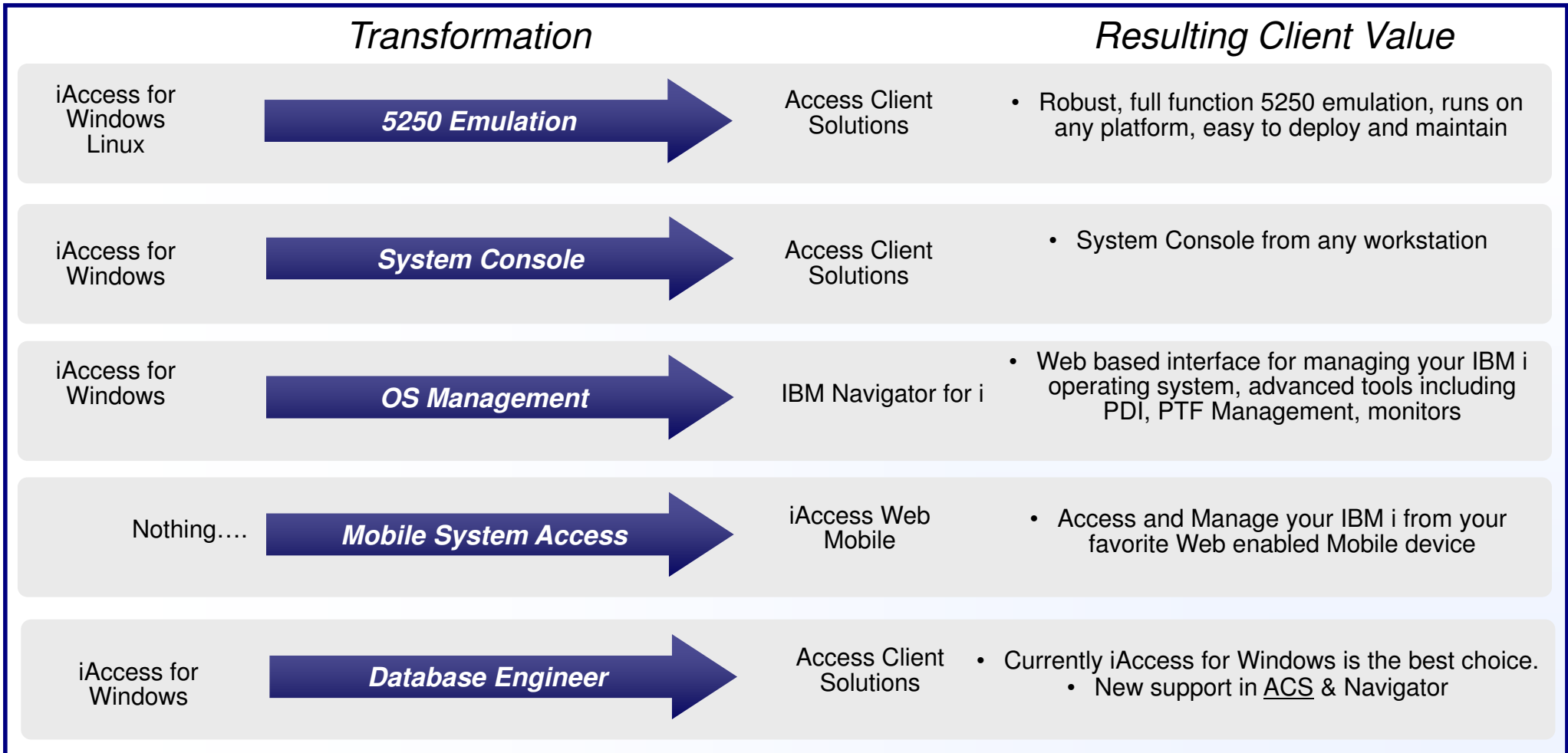
Why ?

Core issues

- No support for Linux & Mac
- No support for Mobile
- Difficult to deploy for many users
- Difficult to update
- Development is costly
- Existing support is OLD – The world has changed!



IBM i System Management Trends



IBM i Access Client Solutions (ACS)

My emulator is better than your emulator



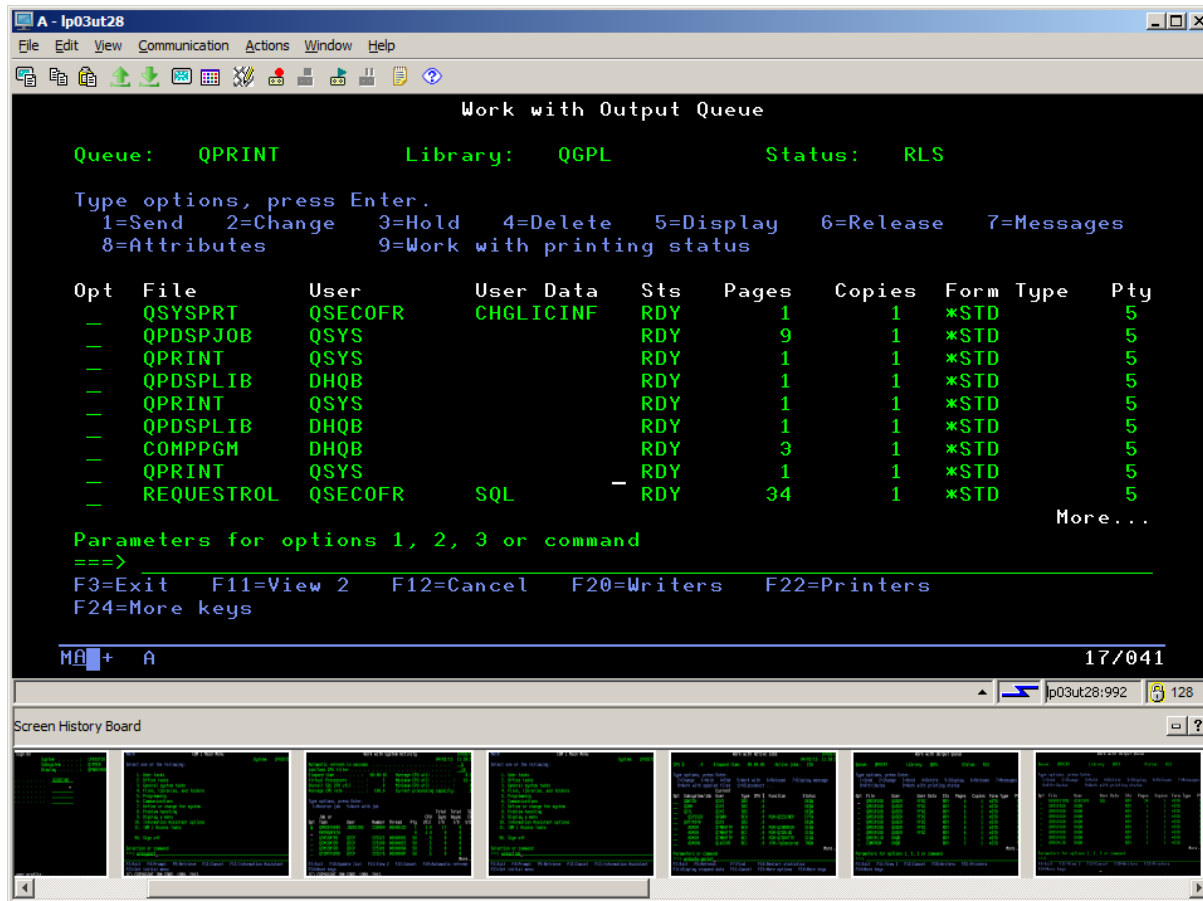
Run SQL Scripts is a useful tool for running SQL statements and CL commands. This task requires a system configuration. To add or change a system configuration, see the **Configurations** from the **Management** tasks.

Opt	File	User	User Data	Sts	Pages	Copies	Form Type	Pty
—	QSYSPT	QSECOFR	CHGLICINF	RDY	1	1	*STD	5
—	QPDSPJOB	QSYS		RDY	9	1	*STD	5
—	QPRINT	QSYS		RDY	1	1	*STD	5
—	QPDSPLIB	DHQB		RDY	1	1	*STD	5
—	QPRINT	QSYS		RDY	1	1	*STD	5
—	QPDSPLIB	DHQB		RDY	1	1	*STD	5
—	COMPPGM	DHQB		RDY	3	1	*STD	5
—	QPRINT	QSYS		RDY	1	1	*STD	5
—	REQUESTROL	QSECOFR	SQL	RDY	34	1	*STD	5



My database tool is better than your database tool

5250 Emulator



- Mouse wheel support
- Water marks
- Images as water mark
- Easy SSL configuration
- Globalization
- Screen History
- Tab support



ACS – Plan for database features

Navigator Feature	IBM i ACS Version 1.1.5.0 (December/2015)	IBM i ACS Version 1.1.6.0 (~July/2016)	IBM i ACS Version 1.1.7.0 (~December/2016)
Run SQL Scripts	Initial/Partial support	Add CL Prompter, Statement formatter, JDBC connection manager, and others	SQL Assist (statement builder)
Analyze	Initial/Full support	No changes needed	No changes needed
Graphical Debugger	Initial/Full support	No changes needed	No changes needed
Visual Explain	Not supported	Initial/Full support	No changes needed
Show Statements	Not supported	Initial/Full support	No changes needed
Compare Monitors	Not supported	Initial/Full support	No changes needed
Below this line are those features that will only exist within Navigator for i (browser)			
Schema Folders (and object actions)	Use Navigator for i	Use Navigator for i	Use Navigator for i
Index Advisor	Use Navigator for i	Use Navigator for i	Use Navigator for i
DB2 Health Center	Use Navigator for i	Use Navigator for i	Use Navigator for i
Database Maintenance	Use Navigator for i	Use Navigator for i	Use Navigator for i
Transactions	Use Navigator for i	Use Navigator for i	Use Navigator for i
OmniFind Text Search	Use Navigator for i	Use Navigator for i	Use Navigator for i
View Journal Entries	Use Navigator for i	Use Navigator for i	Use Navigator for i
Below this line are those database features that will only exist within IBM i Access for Windows			
Database Navigator Maps	Not supported	Not supported	Not supported
Table Actions - View Contents and Edit Contents	Not supported	Not supported	Not supported


<http://www.ibm.com/support/docview.wss?uid=nas8N1019797>

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ACS – Plan for database features

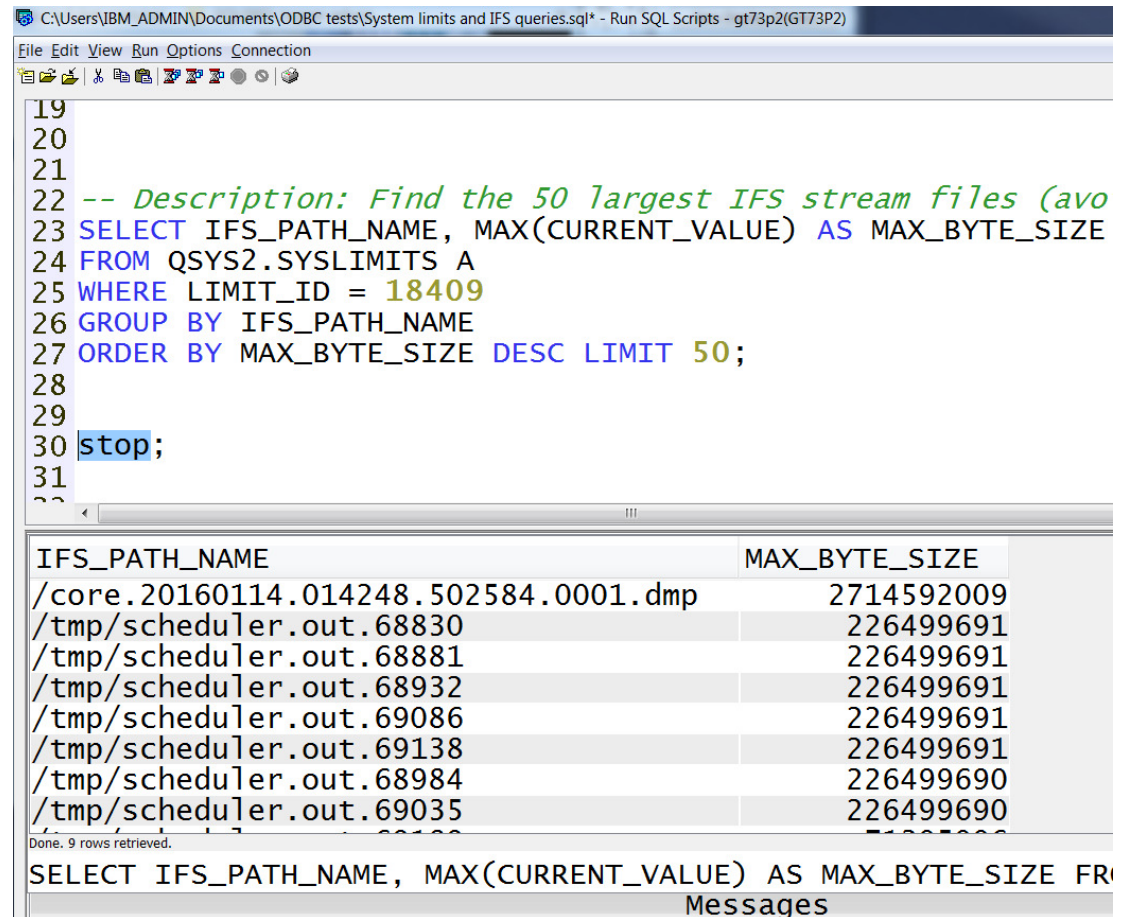
Navigator Feature	IBM i ACS Version 1.1.5.0 (December/2015)	IBM i ACS Version 1.1.6.0 (~July/2016)	IBM i ACS Version 1.1.7.0 (~December/2016)
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<http://www.ibm.com/support/docview.wss?uid=nas8N1019797>

ACS – Run SQL Scripts (available now)

Highlights

- Faster Startup Time
- Line Numbers
- Highlighting
- Color Coding
- Improved Usability
- Status Bar
- Reconnect
- Lots of Editor features
- Save Results
- Graphical Debugger
- Built-in examples



The screenshot shows a window titled "C:\Users\IBM_ADMIN\Documents\ODBC tests\System limits and IFS queries.sql* - Run SQL Scripts - gt73p2(GT73P2)". The window contains a SQL editor with the following code:

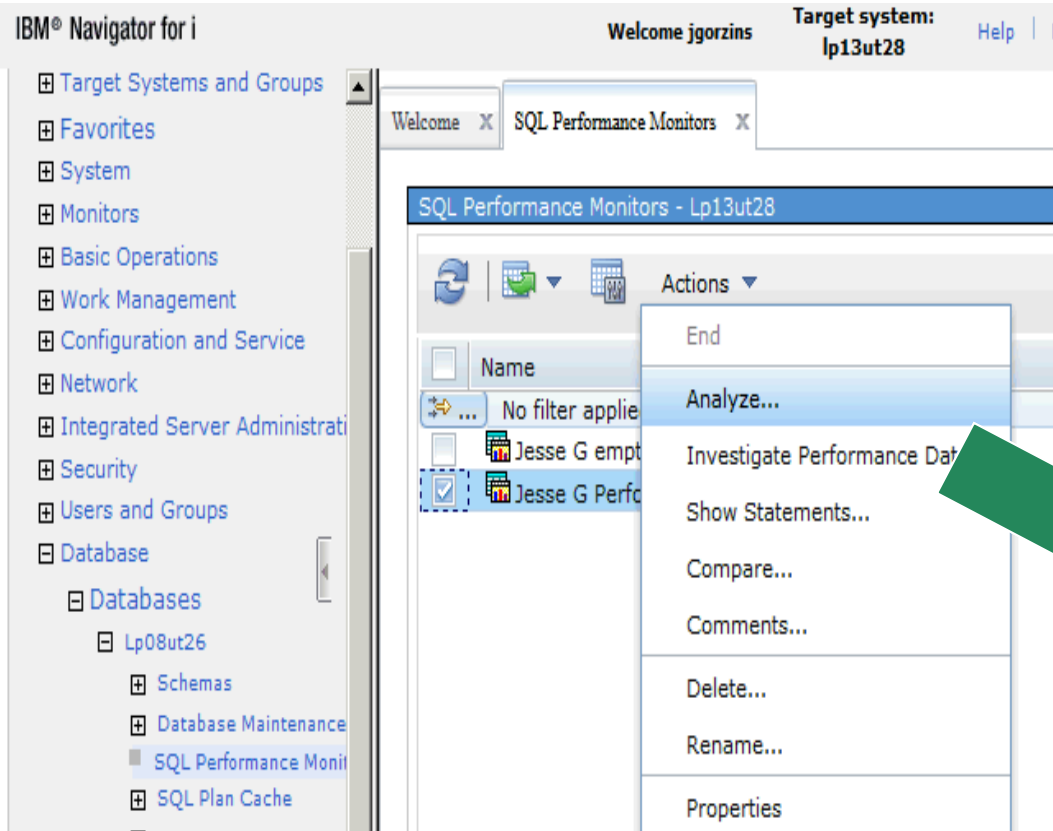
```
19
20
21
22 -- Description: Find the 50 largest IFS stream files (avo
23 SELECT IFS_PATH_NAME, MAX(CURRENT_VALUE) AS MAX_BYTE_SIZE
24 FROM QSYS2.SYSLIMITS A
25 WHERE LIMIT_ID = 18409
26 GROUP BY IFS_PATH_NAME
27 ORDER BY MAX_BYTE_SIZE DESC LIMIT 50;
28
29
30 stop;
31
??
```

Below the editor, a table displays the results of the query:

IFS_PATH_NAME	MAX_BYTE_SIZE
/core.20160114.014248.502584.0001.dmp	2714592009
/tmp/scheduler.out.68830	226499691
/tmp/scheduler.out.68881	226499691
/tmp/scheduler.out.68932	226499691
/tmp/scheduler.out.69086	226499691
/tmp/scheduler.out.69138	226499691
/tmp/scheduler.out.68984	226499690
/tmp/scheduler.out.69035	226499690

Below the table, the status bar indicates "Done. 9 rows retrieved." and the bottom of the window shows the start of the SQL query: "SELECT IFS_PATH_NAME, MAX(CURRENT_VALUE) AS MAX_BYTE_SIZE FROM" and "Messages".

Work with Your Data – SQL Performance Center



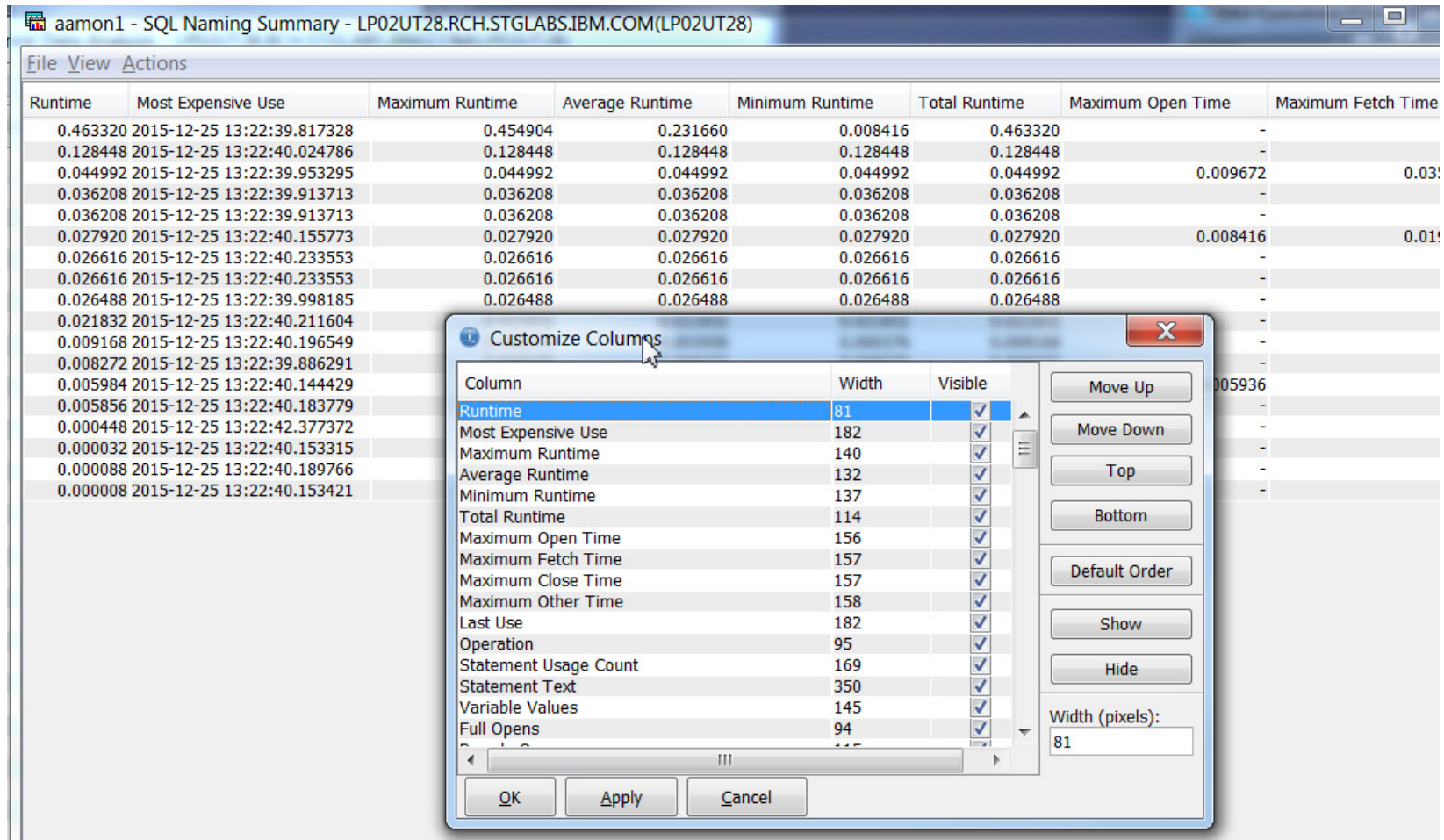
Navigator and ACS Working together

Metric	Value	Reports
SQL Statements	45	< Select a report >
Users	1	< Select a report >
Jobs	1	< Select a report >
Threads	1	
Average Table Rows	25.666	
Average Rows Returned	44.666	
Average Runtime	0.014595	
Average Parallel Degree Used	1.00	
Maximum Parallel Degree	1.00	
SQE	8	< Select a report >
CQE	0	
System Naming	0	
SQL Naming	41	< Select a report >
Unique Open Statements	3	< Select a report >
Full Opens	3	< Select a report >
Pseudo Opens	5	< Select a report >
Table Scans	1	< Select a report >
Average MQTs Used	0.000	
Average Indexes Used	0.666	< Select a report >
Full Indexes Created	0	
Sparse Indexes Created	0	
Index From Index Created	0	
Index Creates Advised	0	
Advised Statistics	4	< Select a report >
Temporary Tables	0	
Sorts	0	
Access Plans Rebuilt	2	< Select a report >
Sort Sequence	0	
Call Statements	5	< Select a report >
Error	1	< Select a report >

Debug applications, study macro level detail, assess performance details

Work with Your Data – SQL Performance Center

- Improved performance
- Tighter rendering of column widths



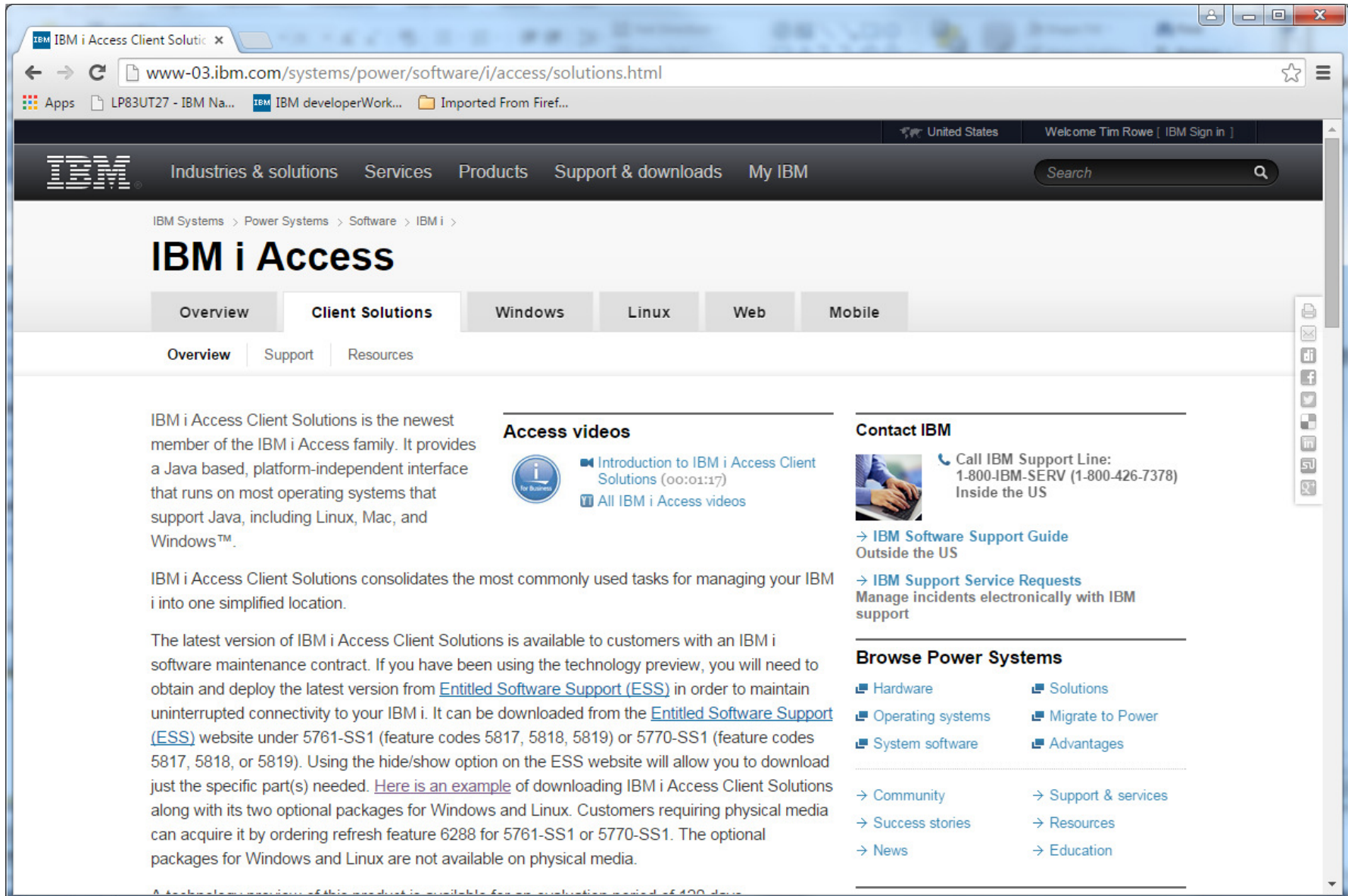
The screenshot shows a window titled "aamon1 - SQL Naming Summary - LP02UT28.RCH.STGLABS.IBM.COM(LP02UT28)". The main area contains a table with columns: Runtime, Most Expensive Use, Maximum Runtime, Average Runtime, Minimum Runtime, Total Runtime, Maximum Open Time, and Maximum Fetch Time. The table lists various SQL statements with their respective performance metrics.

A "Customize Columns" dialog box is open in the foreground, allowing users to adjust the width and visibility of columns. The dialog has a table with the following columns: Column, Width, and Visible. The "Runtime" column is currently selected, with a width of 81 pixels and the "Visible" checkbox checked. Other columns listed include Most Expensive Use (width 182), Maximum Runtime (width 140), Average Runtime (width 132), Minimum Runtime (width 137), Total Runtime (width 114), Maximum Open Time (width 156), Maximum Fetch Time (width 157), Maximum Close Time (width 157), Maximum Other Time (width 158), Last Use (width 182), Operation (width 95), Statement Usage Count (width 169), Statement Text (width 350), Variable Values (width 145), and Full Opens (width 94).

On the right side of the dialog, there are buttons for "Move Up", "Move Down", "Top", "Bottom", "Default Order", "Show", and "Hide". At the bottom right, there is a "Width (pixels):" field with the value "81" entered. At the bottom of the dialog are "OK", "Apply", and "Cancel" buttons.

Access Client Solutions Product Page

<http://www-03.ibm.com/systems/power/software/i/access/solutions.html>



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