



ibi Golden Summit

ibi Mainframe

Walter Brengel

Principal Product Manager, ibi

Mark Nesson

Senior Principal Systems Software Engineer, ibi



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Agenda

- ibi Mainframe
 - What's Next?
- FOCUS Studio Overview
- FOCLOG Overview
- Open Data Hub
 - Use Cases
 - Benefits of z
 - Demo
 - Visualization Tools

What's Next?



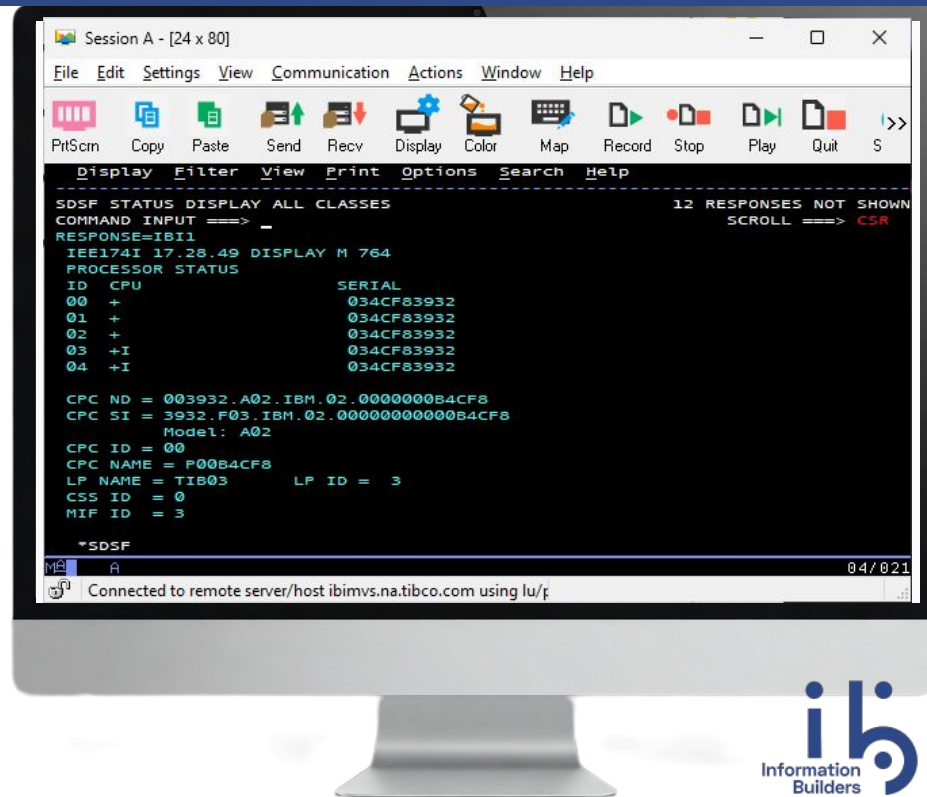
Capacity On Demand in FOCUS



The current FOCUS licensing limits the product to a specific CPU Model and serial number.

When Capacity On Demand is active, the effective capacity model is changed which could also change the number of CPs.

If a license is created for Capacity On Demand then the license will allow any capacity to be run on the same serial number.



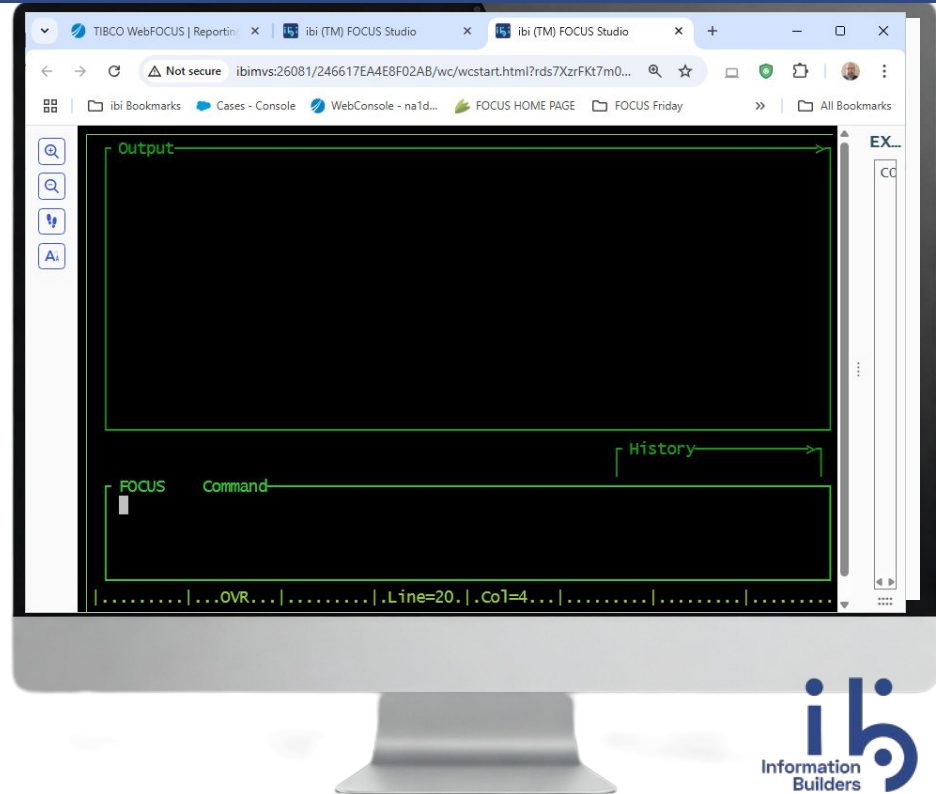
FOCUS Studio on More Platforms



Are you still running FOCUS for Unix?

Do you want to take advantage of newer features like XLSX support and Active Reports without losing your current application's interactive aspects?

FOCUS Studio gives you a text based/green screen environment where current FOCUS for Unix code will run while opening up features that are only available in the newer versions.



Enhance Scope of FOCUS Licensing

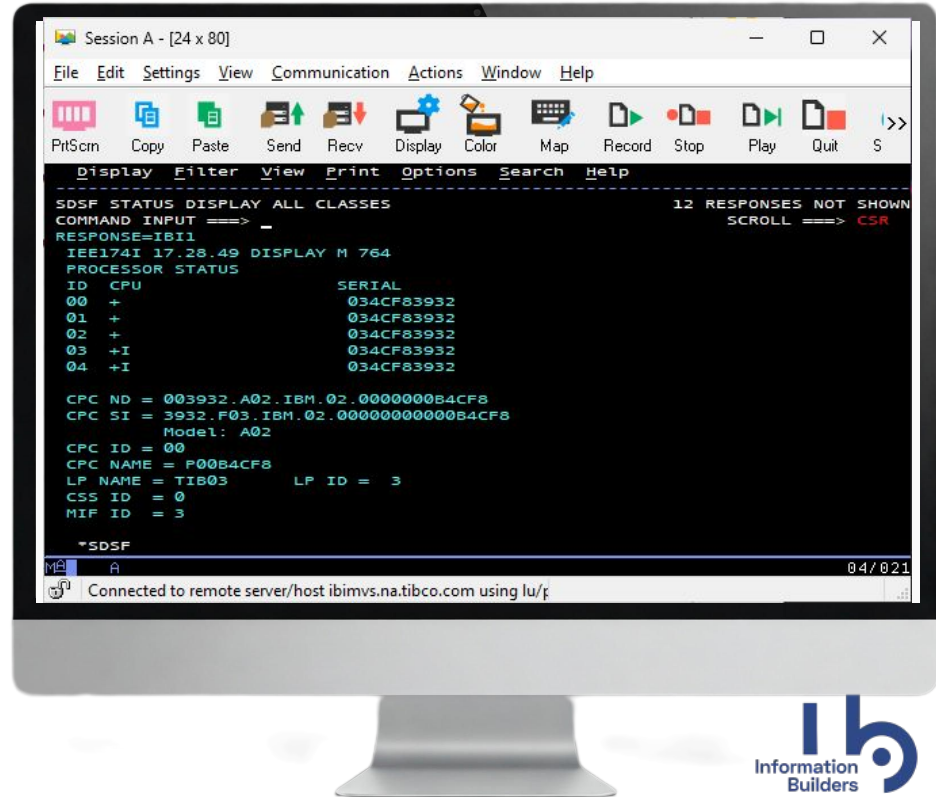
Allow Capacity On Demand Licensing



The current FOCUS licensing limits the product to a specific CPU Model and serial number.

When Capacity On Demand is active, the effective capacity model is changed which could also change the number of CPs.

If a license is created for Capacity On Demand then the license will allow any capacity (the last 3 digits of the model) to be run on the same serial number.



Expand FOCUS Studio to WebFOCUS

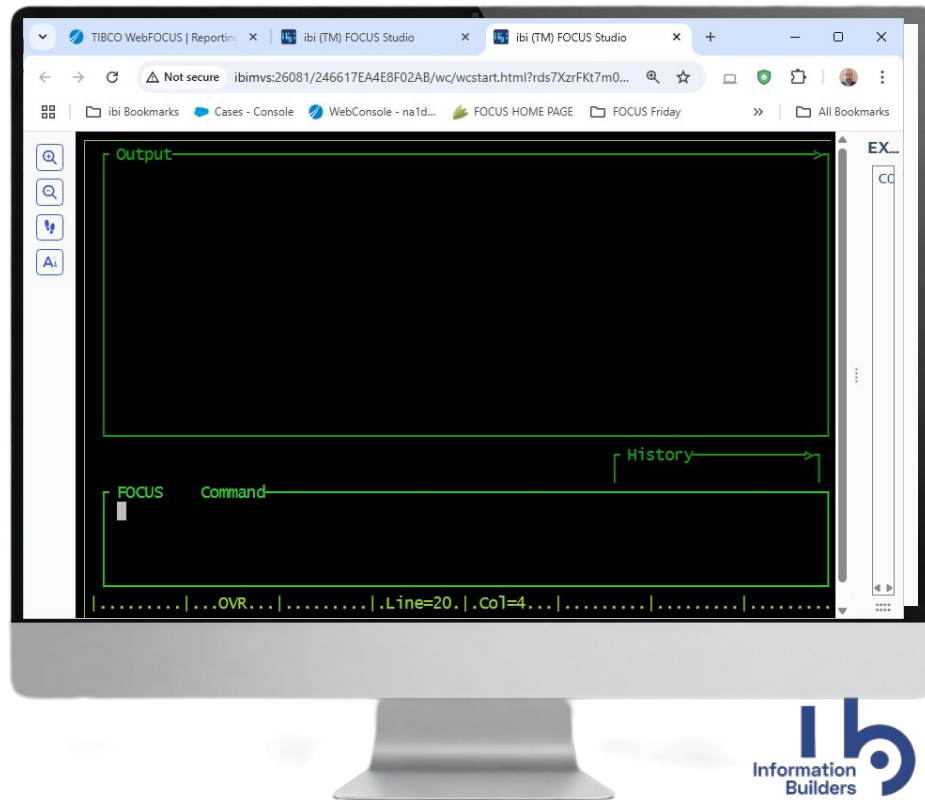
Run existing FOCUS applications in text based environment



Are you still running FOCUS for Unix?

Do you want to take advantage of newer features like XLSX support and Active Reports without losing your current application's interactive aspects?

FOCUS Studio gives you a text based/green screen environment where current FOCUS for Unix code will run while opening up features that are only available in the newer versions.

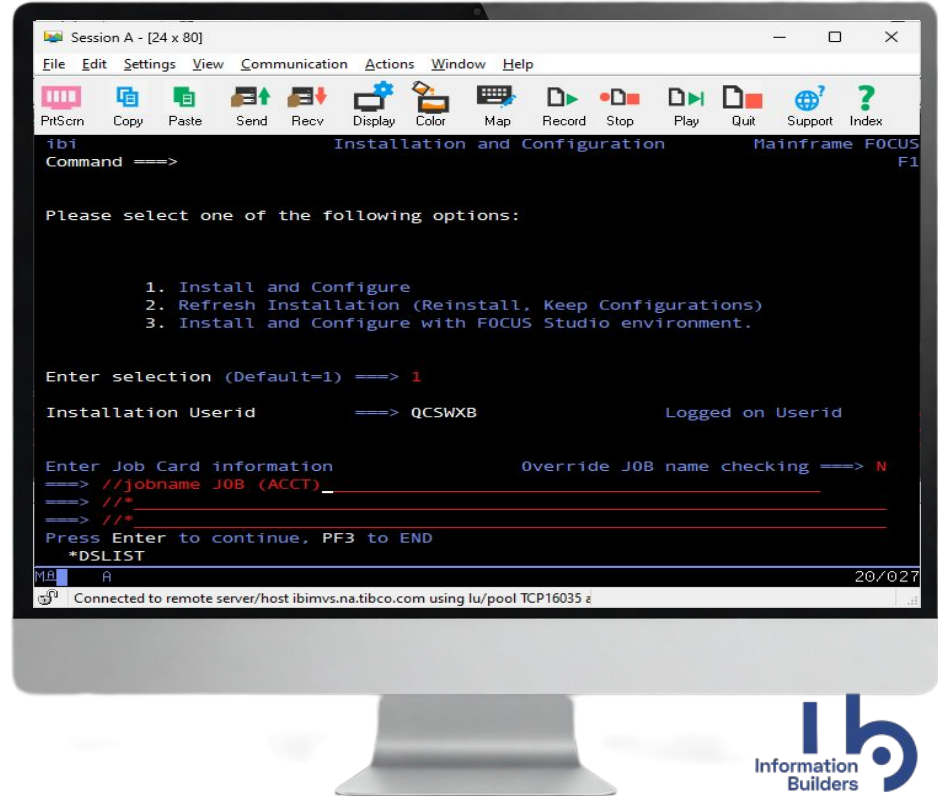


Consolidated Installation

Single Install for FOCUS, FOCUS Studio and WebFOCUS PDS Server



- Eliminates the need for multiple F.HOME and P.HOME libraries
- Create one (1) set of libraries that can be configured for either just FOCUS, FOCUS Studio or the WebFOCUS PDS Server
- Ensures all ibi Mainframe products are on the same version



FOCUS Studio Overview



ibi FOCUS Studio

Why should you use it?



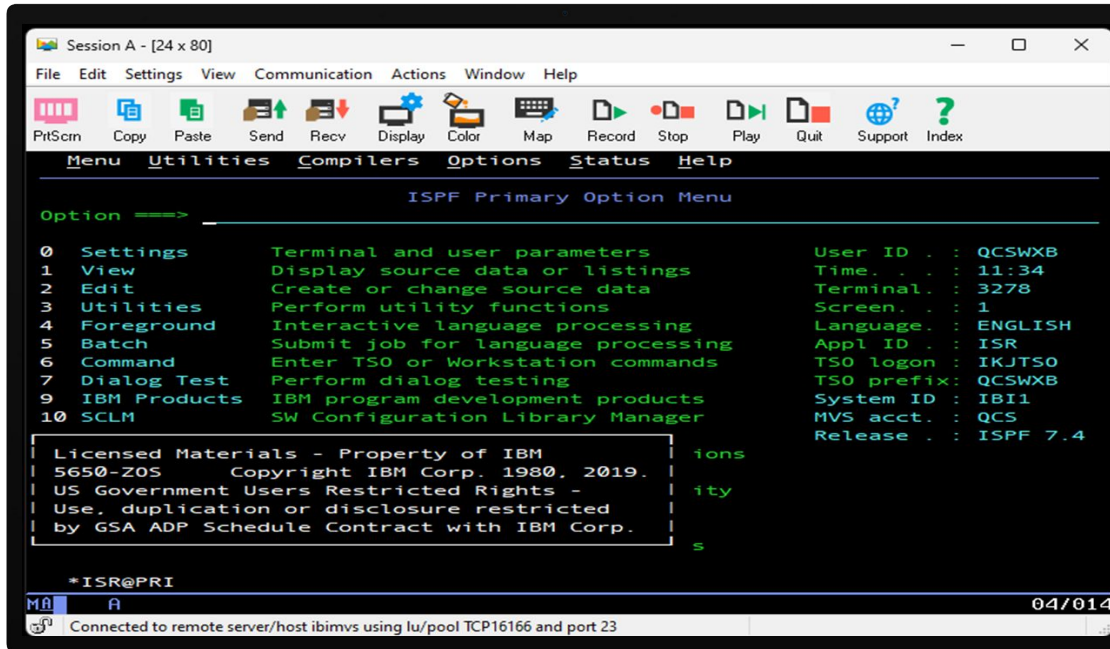
- Run legacy z Systems ibi FOCUS applications from a browser (including CRTFORM)
- Edit your procedures/FOCEXECs using Window's editing functions
- View HTML, PDF and XLSX, AHTML output directly
- Configure adapters via a GUI front end
- Transfer files from your mainframe to your local PC
- See a listing of all the members in your application
- Auto-complete commands when using the editor

ibi FOCUS Studio

Current ibi FOCUS Invocation



Standard access to ibi FOCUS via 3270 emulator and TSO.



ibi FOCUS Studio

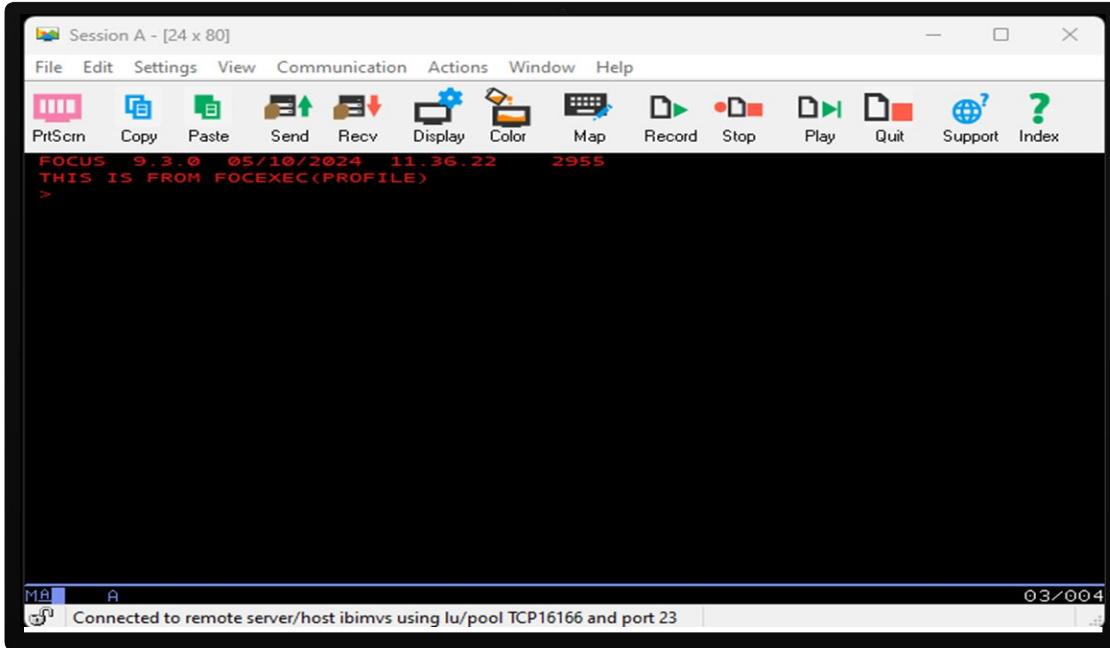
Current ibi FOCUS Invocation



Standard access to ibi FOCUS via 3270 emulator and TSO.

Sign into your mainframe.

Run a CLIST/REXX to start the FOCUS session

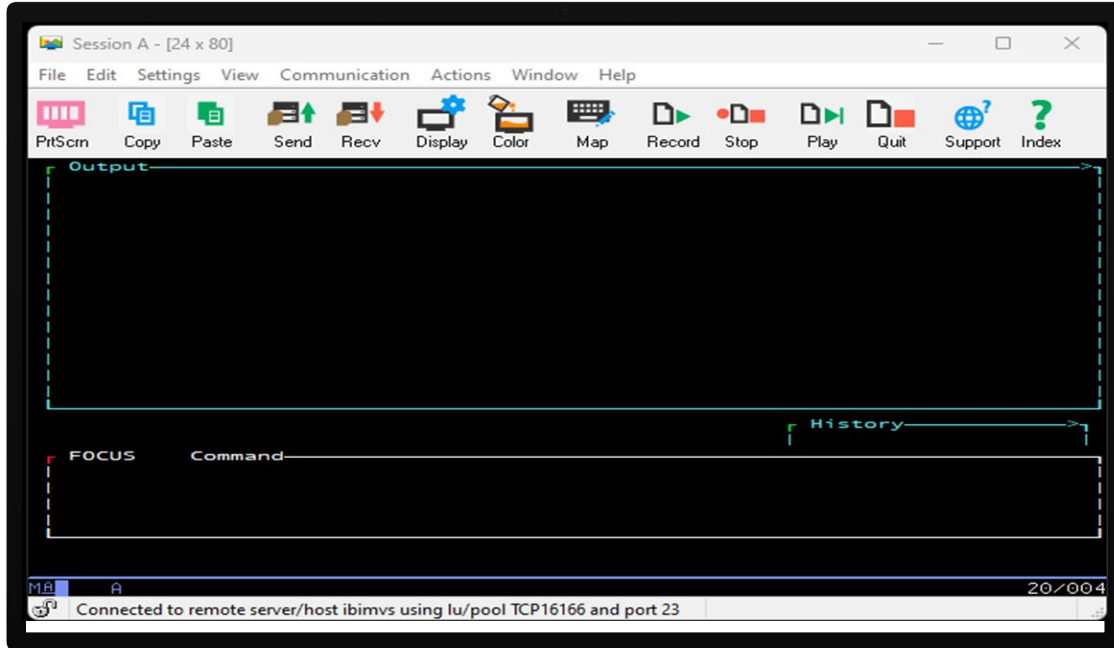


ibi FOCUS Studio

Current ibi FOCUS Invocation



Terminal Operator Environment (TOE)

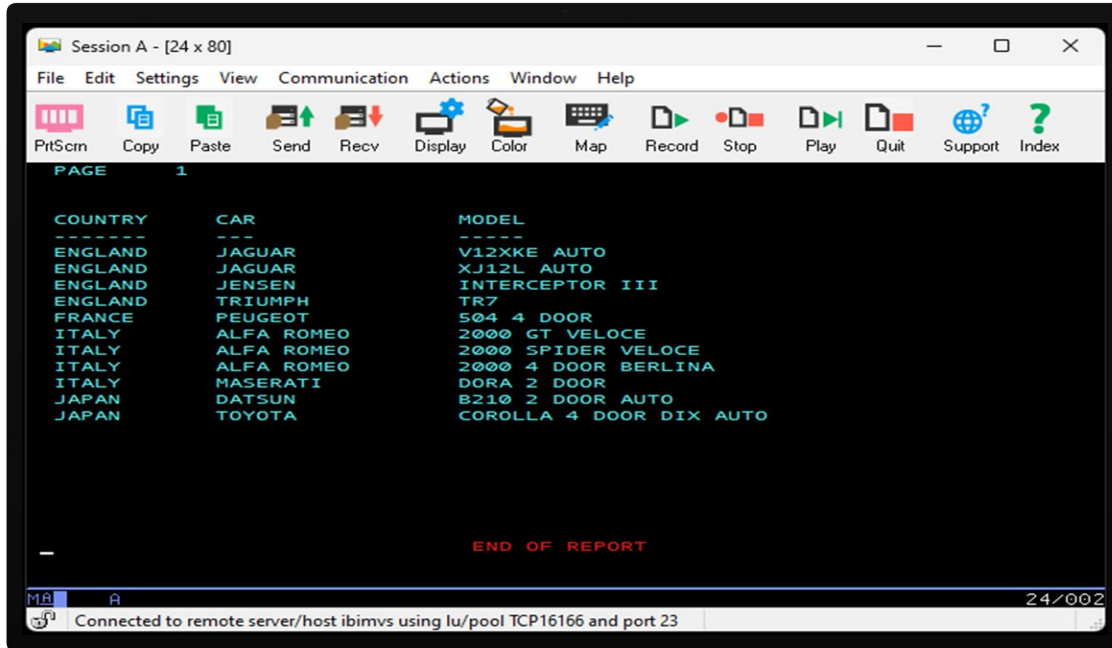


ibi FOCUS Studio

Current ibi FOCUS Invocation



HOTSCREEN



ibi FOCUS Studio

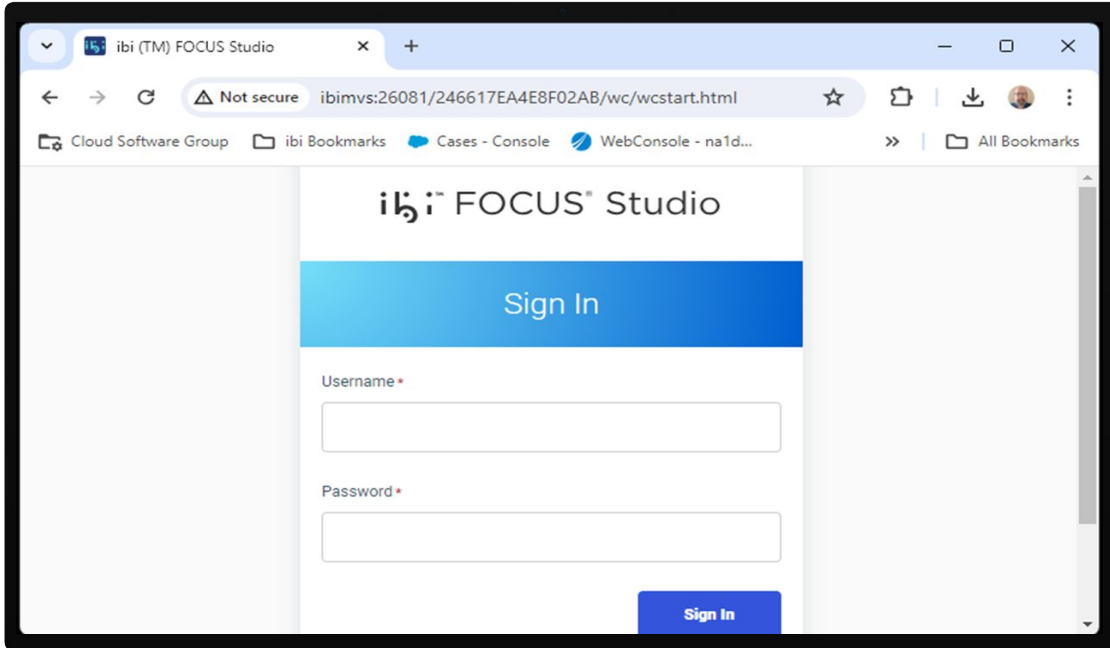
The future using FOCUS Studio



Accessible via a browser.

Uses Mainframe userids.

Full z Systems security is in place.

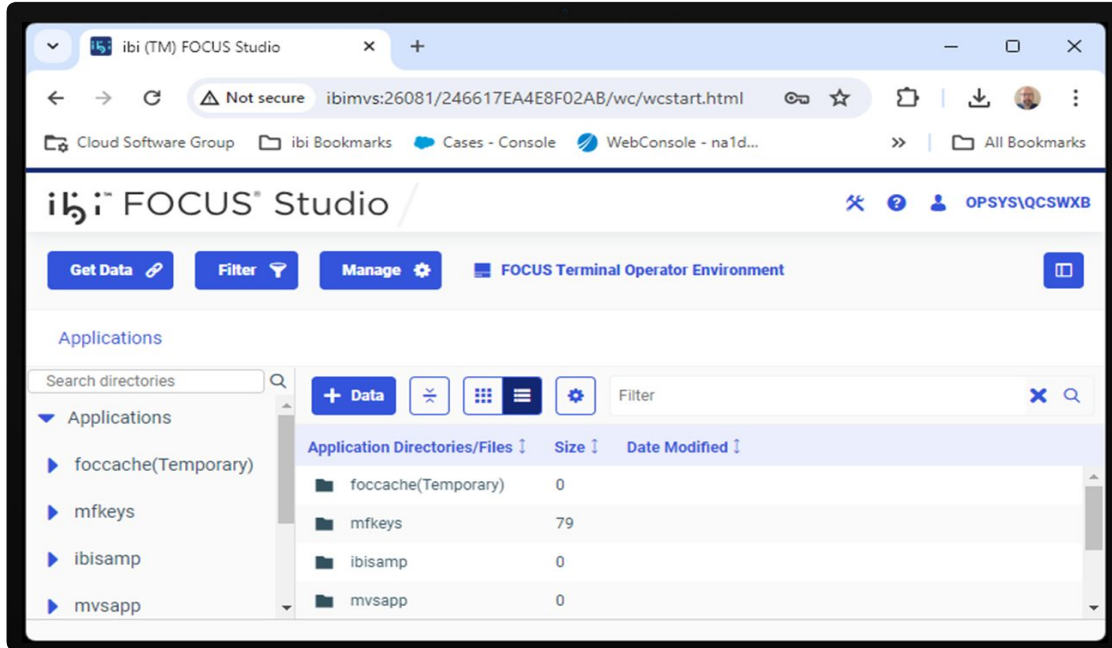


ibi FOCUS Studio

The future using FOCUS Studio

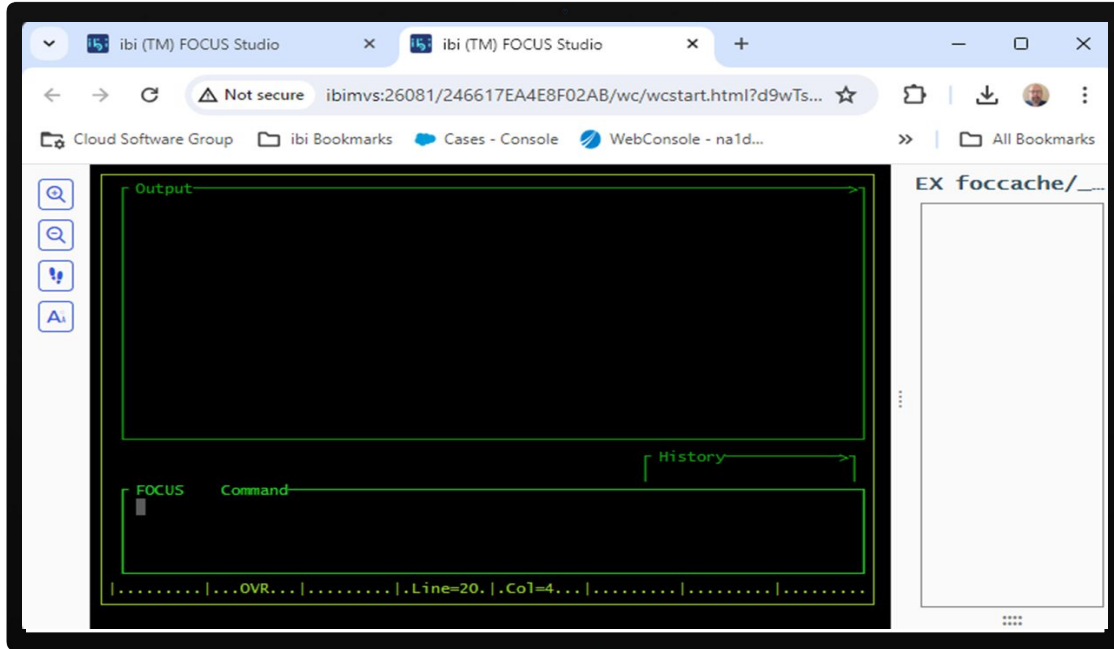


Console



ibi FOCUS Studio

The future using FOCUS Studio



Terminal Operator Environment (TOE)

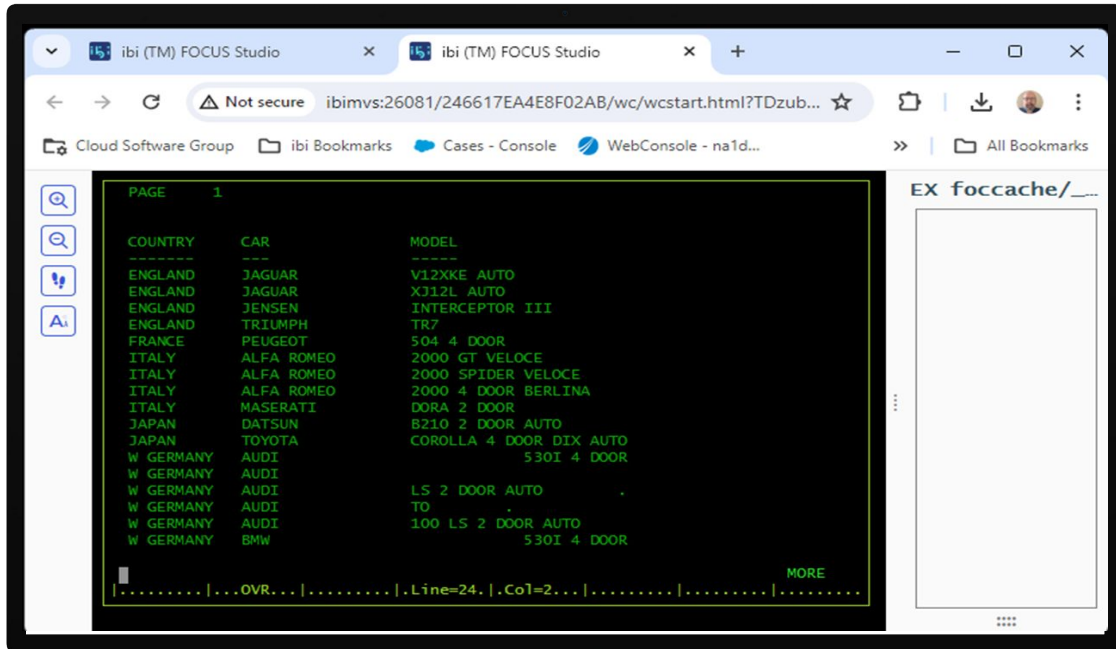
This time via the browser.

ibi FOCUS Studio

The future using FOCUS Studio



HOTSCREEN

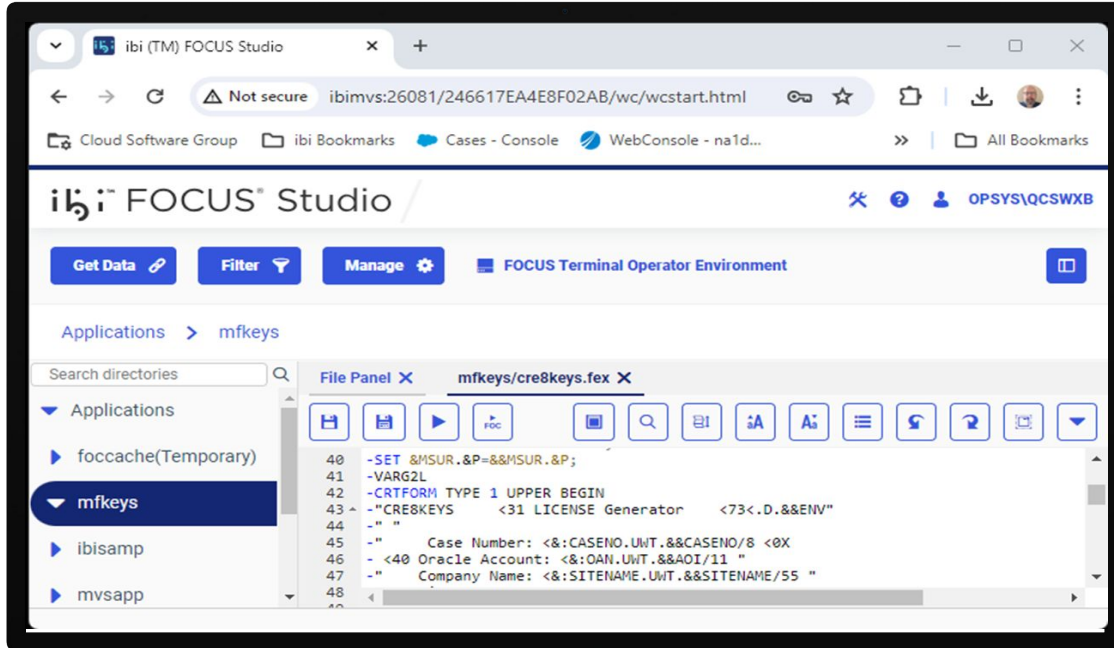


ibi FOCUS Studio

The future using FOCUS Studio



Supports CRTFORM and -CRTFORM

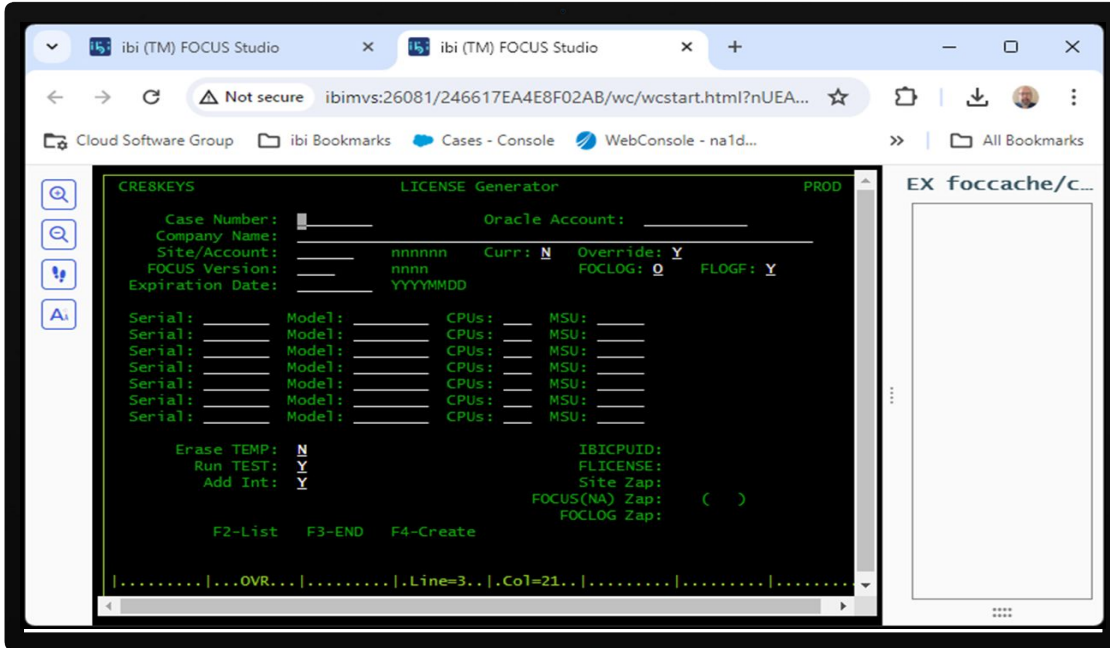


ibi FOCUS Studio

The future using FOCUS Studio



Supports CRTFORM and -CRTFORM



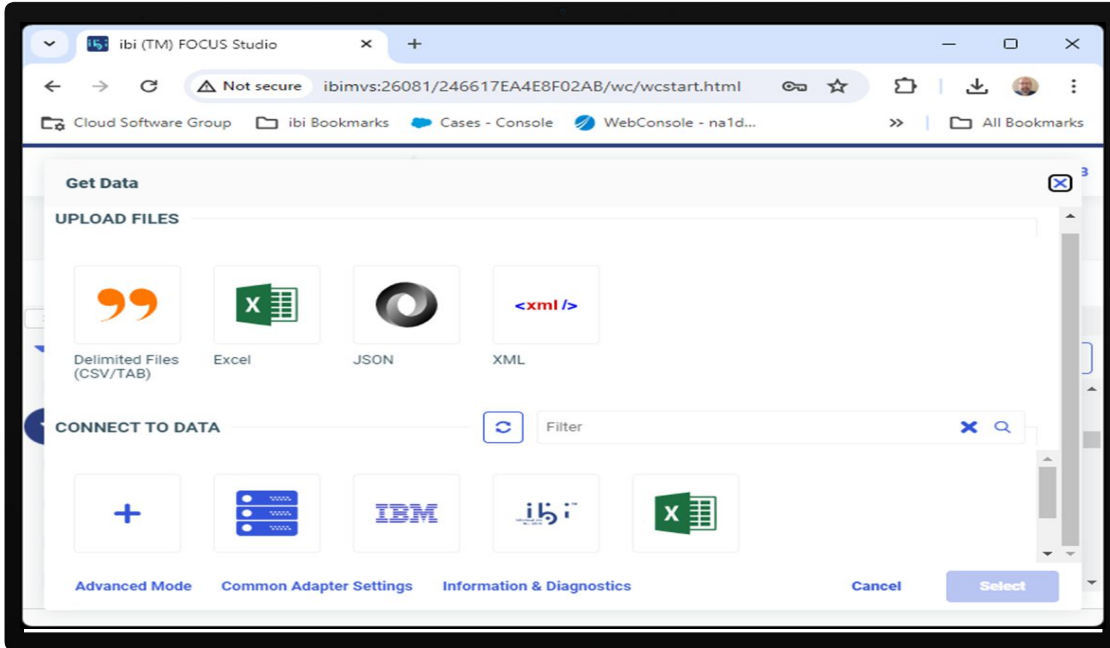
ibi FOCUS Studio

The future using FOCUS Studio



Easier Data Adapter Management

For Data Sources that need a userid/password combination, the password is stored encrypted.



FOCLOG Overview



FOCLOG

Why should you use it?



- Provides insight into ibi FOCUS usage with small footprint
- Information collected:
 - Users
 - Data
 - Output
 - CPU run times
 - JOB statistics (batch vs online)
- Built in Usage Reporting

FOCLOG

Do I Have FOCLOG?



- FOCLOG is shipped as part of ibi FOCUS versions 7.6.1 and higher.
- Older versions, 7.0.8R through 7.3.12, need it to be installed.
- Any new license keys will be shipped with the licensing files as well as the files necessary to install FOCLOG. The FOCLOG installation only needs to happen once.

FOCLOG

FOCLOG Reporting Menus



User level reporting.

MAINFRAME FOCUS UTILIZATION ANALYSIS

DIMENSION: USER FILE PROCEDURE USAGE CUSTOM ADHOC

- 101 - DURATION OF ONLINE SESSIONS
- 102 - HIGHEST CPU-CONSUMING USERS AND JOBS
- 103 - MOST ONLINE SESSIONS
- 104 - TOTAL MSO SESSIONS
- 105 - TOTAL FOCUS USERS
- 106 - ATTEMPT TO GROUP USERS BY 4-CHAR PREFIX
- 107 - SITE-WIDE FOCUS USAGE TREND
- 108 - BATCH JOB DETAILS
- 109 - ONLINE SESSION DETAILS
- 120/121 - FOCEXEC USAGE COUNTS - BATCH/ONLINE BY USERID
- 122/123 - MASTER USAGE COUNTS - BATCH/ONLINE BY USERID

SELECT:

F3=EXIT F7=PREVIOUS SCREEN F8=MORE REPORTS F12=HELP

FOCLOG

FOCLOG Reporting Menus



File level reporting.

MAINFRAME FOCUS UTILIZATION ANALYSIS

DIMENSION: USER FILE PROCEDURE USAGE CUSTOM ADHOC

- 201 - POSSIBLE EXTRACT FILES BEING USED
- 202 - FILES ORIGINATING LARGE HOLD FILE EXTRACTS
- 203 - FILES USED BY USERS
- 204 - BATCH AND ONLINE FILE USAGE
- 205 - REPORTS AND TRANSACTIONS AGAINST DATA SOURCES
- 206 - FILES USING THE MOST CPU ON REPORTS
- 207 - DATA SOURCE TYPES ACCESSED BY FOCUS
- 208 - MOST RECORDS EXTRACTED DURING ONLINE SESSIONS

SELECT:

F3=EXIT F7=PREVIOUS SCREEN F8=MORE REPORTS F12=HELP

FOCLOG

FOCLOG Reporting Menus



Procedure level reporting.

MAINFRAME FOCUS UTILIZATION ANALYSIS

DIMENSION: USER FILE PROCEDURE USAGE CUSTOM ADHOC

- 301 - MOST FREQUENTLY RUN PROCEDURES
- 302 - FOCUS COMMAND USAGE
- 303 - PROCEDURE RUN DETAILS
- 304 - CANDIDATE PROCEDURES FOR POOLED TABLES ADAPTATION

SELECT:

F3=EXIT F7=PREVIOUS SCREEN F8=MORE REPORTS F12=HELP

FOCLOG

FOCLOG Reporting Menus



Usage level reporting.

MAINFRAME FOCUS UTILIZATION ANALYSIS

DIMENSION: USER FILE PROCEDURE USAGE CUSTOM ADHOC

- 401 - ALL LPARS RUNNING FOCUS
- 402 - OUTPUT FORMATS USED BY REPORTS
- 403 - DAILY USER ACTIVITY DETAIL
- 404 - TREND OF DAILY FOCUS SESSIONS (REPORT AND GRAPH)
- 405 - HOURLY CPU USAGE (ACCUMULATED) (GRAPH) - MULTI-SCREEN OUTPUT
- 406 - POSSIBLE LARGE PAPER-OUTPUT REPORTS (100+ PAGES)
- 407 - DAILY BATCH/ONLINE CPU UTILIZATION BY SHIFT
- 408 - LONG-RUNNING SESSIONS (ELAPSED TIME)
- 409 - FOCUS QUARTERLY LICENSE REPORT

SELECT:

F3=EXIT F7=PREVIOUS SCREEN F8=MORE REPORTS F12=HELP

FOCLOG

FOCLOG Reporting Menus



MAINFRAME FOCUS UTILIZATION ANALYSIS

DIMENSION: USER FILE PROCEDURE USAGE CUSTOM ADHOC

- 501 - CUSTOM REPORT 1
- 502 - CUSTOM REPORT 2
- 503 - CUSTOM REPORT 3
- 504 - CUSTOM REPORT 4
- 505 - CUSTOM REPORT 5
- 506 - CUSTOM REPORT 6
- 507 - CUSTOM REPORT 7
- 508 - CUSTOM REPORT 8
- 509 - CUSTOM REPORT 9
- 510 - CUSTOM REPORT 10

SELECT:

F3=EXIT F7=PREVIOUS SCREEN F8=MORE REPORTS F12=HELP

Custom level reporting.

Allows creation of custom standard reports

FOCLOG

FOCLOG Reporting Menus



MAINFRAME FOCUS UTILIZATION ANALYSIS

DIMENSION: USER FILE PROCEDURE USAGE CUSTOM ADHOC

ENTER 'OK' TO CONTINUE TO COMMAND-LEVEL FOCUS,
OR PRESS ENTER/F7/F8 TO RETURN TO REPORT LIST.

SELECT:

F3=EXIT F7=PREVIOUS SCREEN F8=MORE REPORTS F12=HELP

Adhoc reporting.

Allows creation of single use reports using the ibi FOCUS language.

FOCLOG

FOCLOG Reporting Menus



MAINFRAME FOCUS UTILIZATION ANALYSIS

**** REPORT SELECTED: 120 ****

SELECT DATE RANGE OF REPORT (YYYY/MM/DD): 2025/05/01 TO 2025/08/26

AGGREGATE BY (Q)UARTER, (M)ONTH OR (W)EEK: M

SEND REPORT TO (S)CREEN, (P)RINTER OR (H)OLD? S
IF (H)OLD, SELECT HOLD FORMAT: AS

CHOOSE OPTIONAL SORT FROM (NONE AVAILABLE) : N

RUN LIMITED DATA TO VIEW REPORT LAYOUT (Y/N): N

ENTER=RUN REPORT F3=BACK TO REPORT SELECTION F12=HELP

Parameters Screen

Date range

Aggregation (Quarter, Month, Week)

Output (File, Online)

FOCLOG

FOCLOG Reporting Menus



```
MAINFRAME FOCUS UTILIZATION ANALYSIS
STATE OF MISSOURI
MARCH 14, 2024 -      MAY 20, 2025
DURATION OF ONLINE SESSIONS
```

SESSION DURATION	NUMBER OF SESSIONS
<1 HR	2

```
PAGE      1                2025/08/28 09.26.36      FLRPT101
                                END OF REPORT
```

101 - Duration of Online Sessions

FOCLOG

FOCLOG Reporting Menus



105 - Total FOCUS Users

```
MAINFRAME FOCUS UTILIZATION ANALYSIS
STATE OF MISSOURI
MARCH 14, 2024 - MAY 20, 2025
TOTAL FOCUS USERS
```

MONTH	ACTIVE FOCUS USERS	TOTAL JOBS RUN BY USERS	TOTAL CPU USAGE HH:MM:SS	TOTAL ZIIP ON CP HH:MM:SS	TOTAL ZIIP USAGE HH:MM:SS
2024, MARCH	2	17	00:01	00:00	00:00
2024, APRIL	1	6	00:00	00:00	00:00
2024, MAY	2	17	00:01	00:00	00:00
2024, JUNE	1	106	00:20	00:00	00:00
2024, JULY	2	17	00:01	00:00	00:00
2024, AUGUST	1	20	00:01	00:00	00:00
2024, SEPTEMBER	4	22	00:02	00:00	00:00
2024, OCTOBER	1	8	00:00	00:00	00:00
2024, NOVEMBER	2	16	00:01	00:00	00:00
2024, DECEMBER	1	3	00:00	00:00	00:00
2025, JANUARY	1	1	00:00	00:00	00:00

```
PAGE 1 2025/08/28 09.26.36 FLRPT105
```

MORE

FOCLOG

FOCLOG Reporting Menus



```
MAINFRAME FOCUS UTILIZATION ANALYSIS
STATE OF MISSOURI
MARCH 14, 2024 - MAY 20, 2025
FILES USED BY USERS
```

USER	MONTH	FILE NAME	FILE TYPE	RECORDS EXTRACTED (/1000)	LINES OF OUTPUT (/1000)	CPU USAG HH:MM:S
CSSWXB	2024, MARCH	CAR	OTHER	0	0	00:0
	2024, SEPTEMBER	CAR	FOCUS	0	0	00:0
TOTAL			0	0	00:00	00:00
QCSAJB	2024, MAY	CAR	OTHER	0	0	00:0
	2024, JULY	CAR	FOCUS	0	0	00:0
			OTHER	0	0	00:0

```
PAGE 1 2025/08/28 09.26.36 FLRPT20
MORE =>
```

203 - Files Used By Users

FOCLOG

FOCLOG Reporting Menus



MAINFRAME FOCUS UTILIZATION ANALYSI
STATE OF MISSOURI
MARCH 14, 2024 - MAY 20, 2025
PROCEDURE RUN DETAILS

STARTYYMTR	PROCEDURE	# TIMES EXECUTED	DURATION HH:MM:SS	% OF MTH	CPU USAGE HH:MM:SS	% OF MTH
2025, APRIL	*ADHOC*	1	02:57	39.1%	02:34	45.0
	CRE8FIL2	1	03:43	49.3%	02:31	44.1
	F\$\$PROF	1	00:00	0.0%	00:00	0.0
	MYCODE	1	00:52	11.6%	00:37	10.9
2025, MAY	*ADHOC*	1	00:00	11.3%	00:00	14.1
	F\$\$PROF	1	00:00	88.2%	00:00	84.9

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MORE =>

303 - Procedure Run Details

FOCLOG

FOCLOG Reporting Menus



303 - Procedure Run Details

```
S
```

	ZIIP ON CP HH:MM:SS	ZIIP USAGE HH:MM:SS	EXCPS/1000
	-----	-----	-----
%	00:00	00:00	26
%	00:00	00:00	68
%	00:00	00:00	0
%	00:00	00:00	30
%	00:00	00:00	0
%	00:00	00:00	3

FLRPT303

<= MORE

FOCLOG

FOCLOG Reporting Menus



401 -All LPARS Running FOCUS

```
MAINFRAME FOCUS UTILIZATION ANALYSIS
STATE OF MISSOURI
MARCH 14, 2024 - MAY 20, 2025
ALL LPARS RUNNING FOCUS
```

STARTYYMTR	LPAR RUNNING FOCUS	DURATION HH:MM:SS	CPU USAGE HH:MM:SS	ZIIP ON CP HH:MM:SS	ZIIP USAGE HH:MM:SS
2024, MARCH	TIB03	00:18	00:01	00:00	00:00
2024, APRIL	TIB03	00:04	00:00	00:00	00:00
2024, MAY	TIB03	00:04	00:01	00:00	00:00
2024, JUNE	TIB03	01:03	00:20	00:00	00:00
2024, JULY	TIB03	00:13	00:01	00:00	00:00
2024, AUGUST	TIB03	00:13	00:01	00:00	00:00
2024, SEPTEMBER	TIB03	00:13	00:02	00:00	00:00
2024, OCTOBER	TIB03	00:07	00:00	00:00	00:00
2024, NOVEMBER	TIB03	00:39	00:01	00:00	00:00
2024, DECEMBER	TIB03	00:00	00:00	00:00	00:00
2025, JANUARY	TIB03	08:26	00:00	00:00	00:00

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FLRPT401

MORE

FOCLOG

FOCLOG Reporting Menus



402 -Output Formats Used By Reports

```
MAINFRAME FOCUS UTILIZATION ANALYSIS
STATE OF MISSOURI
MARCH 14, 2024 - MAY 20, 2025
ALL LPARS RUNNING FOCUS
```

STARTYYMTR	LPAR RUNNING FOCUS	DURATION HH:MM:SS	CPU USAGE HH:MM:SS	ZIIP ON CP HH:MM:SS	ZIIP USAGE HH:MM:SS
2024, MARCH	TIB03	00:18	00:01	00:00	00:00
2024, APRIL	TIB03	00:04	00:00	00:00	00:00
2024, MAY	TIB03	00:04	00:01	00:00	00:00
2024, JUNE	TIB03	01:03	00:20	00:00	00:00
2024, JULY	TIB03	00:13	00:01	00:00	00:00
2024, AUGUST	TIB03	00:13	00:01	00:00	00:00
2024, SEPTEMBER	TIB03	00:13	00:02	00:00	00:00
2024, OCTOBER	TIB03	00:07	00:00	00:00	00:00
2024, NOVEMBER	TIB03	00:39	00:01	00:00	00:00
2024, DECEMBER	TIB03	00:00	00:00	00:00	00:00
2025, JANUARY	TIB03	08:26	00:00	00:00	00:00

PAGE 1

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FLRPT401

MORE

Open Data Hub for Mainframe

Use cases - How We Save Money/Time

Benefits of z Systems

Use Cases and Benefits

- Customers who require access to a diverse range of mainframe data sources via multiple BI tools
 - Benefits:
 - Many customers have WebFOCUS along side Power BI and other tools
 - ibi technology as critical to the operations of all reporting and BI
- Customers who have made a decision to migrate reporting off of the mainframe environment
 - Benefits
 - No need to ETL data to Windows or Linux
 - Data can be accessed in-place
 - No need to modify secure mainframe-based processes for managing transactions and staging data

Open Data Hub for Mainframe

Benefits of z Systems

Benefits of z Systems

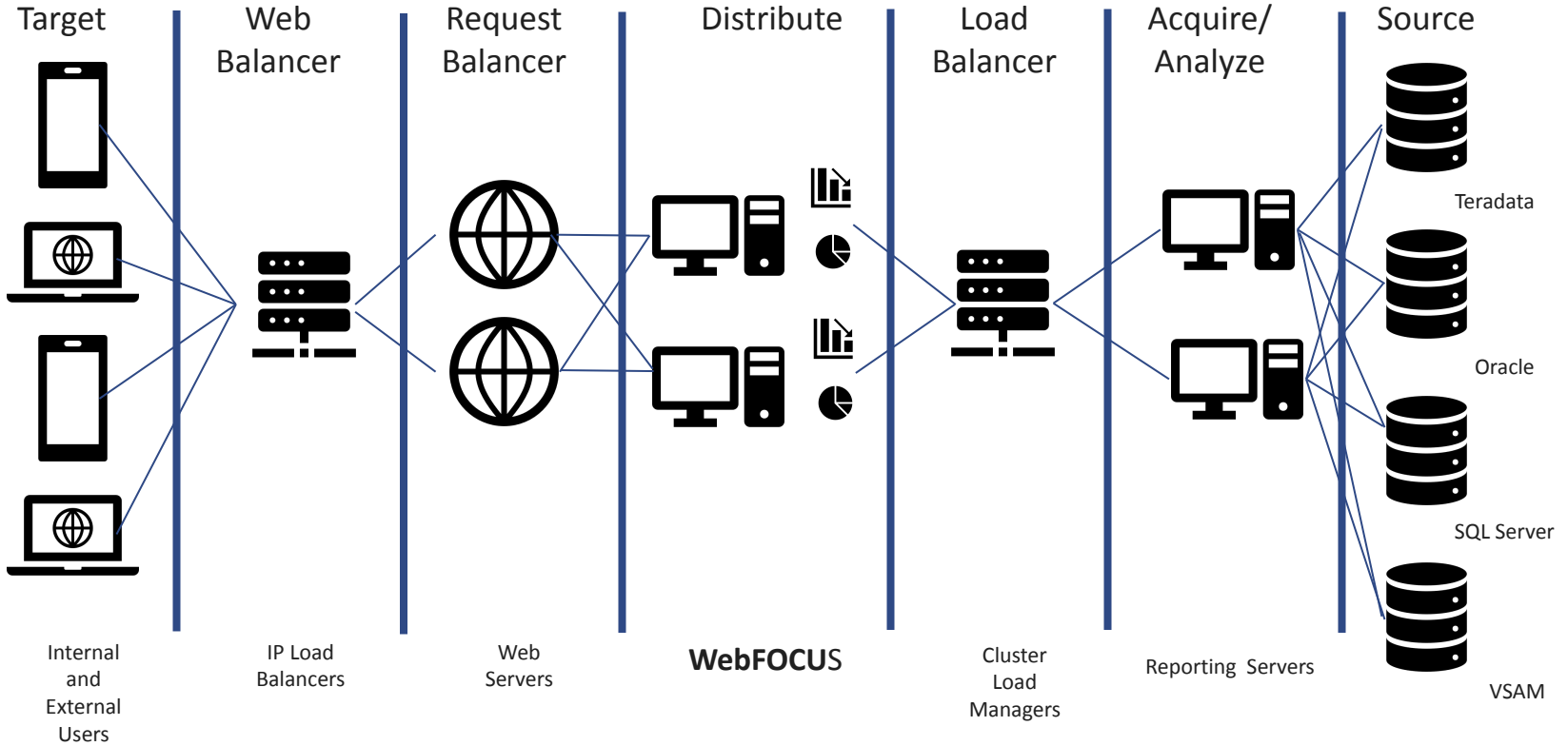
- Reliability - “z” stands for “zero downtime model” for all mission-critical apps
- Speed - the fastest processors to handle large amounts of data
- Security - high-level security and system integrity using SAF, RACF, ACF2, TopSecret, and data encryption
- Mainframe systems remain the choice of enterprise customers in financial services, Federal govt., and other industries

Benefits of Open Data Hub for Mainframe

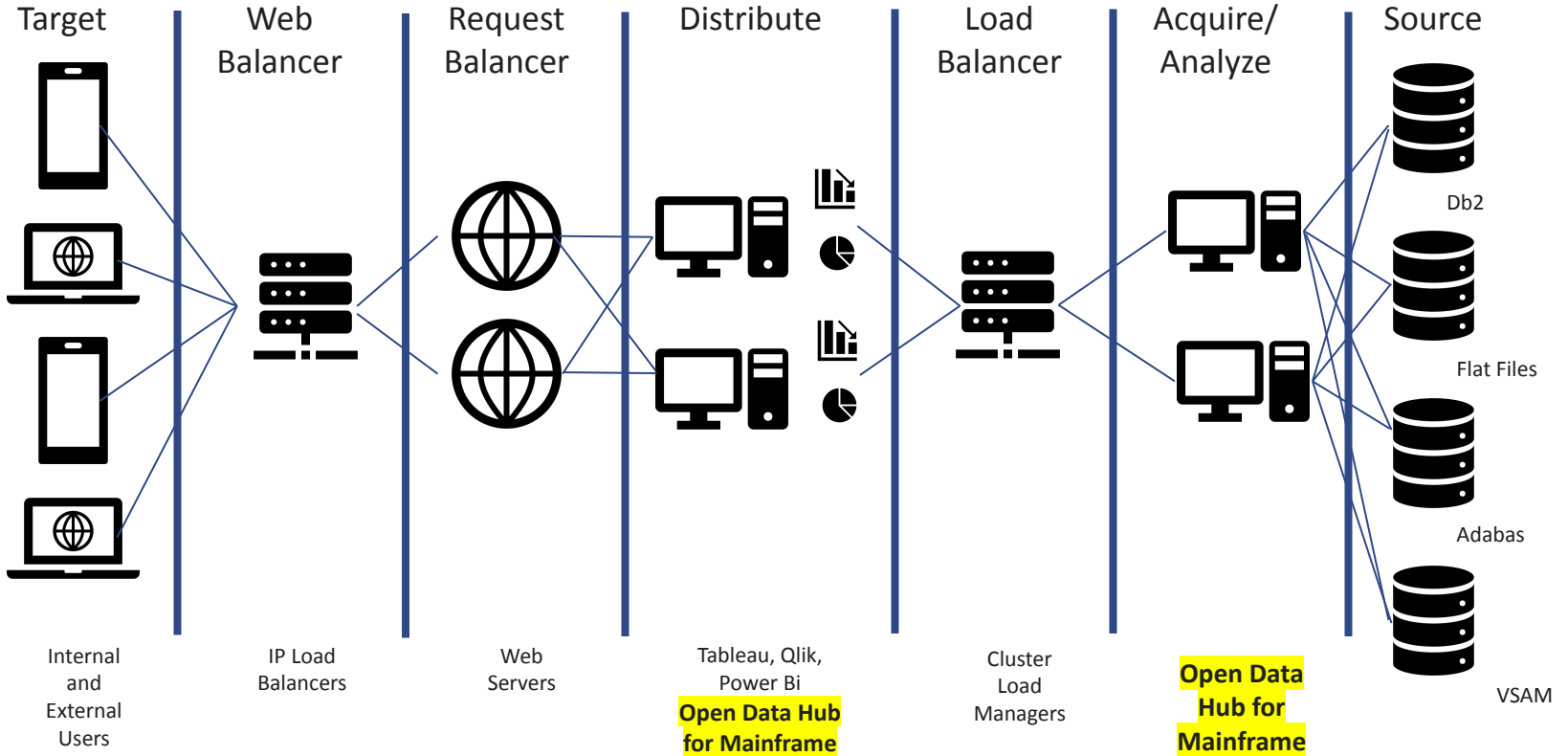
- Reporting Server uses code native to z Systems
- Utilizes zIIP specialty engine during processing
- Provides savings to our customers by minimizing the usage of general-purpose CP
- Native adapters for all mainframe data sources
- Support for current and back releases of zOS

Today's Topology Tomorrow's Vision

Sample Architecture Clustered for Scalability



Sample Architecture Clustered for Open Data Hub Scalability



Demo

- Leveraging z/OS
- WebFOCUS - simplify access
- Open Data Hub - no barriers



Visualization Tools

Typical Mainframe Look and Feel

1	2	3	4	5	6
42001	10	0000	0	210	D
				21,170.43	
45003	10	0000	0	310	D
				4	
20562	10	0000	0	000	D
				1.8	
42001	10	0000	0	550	D

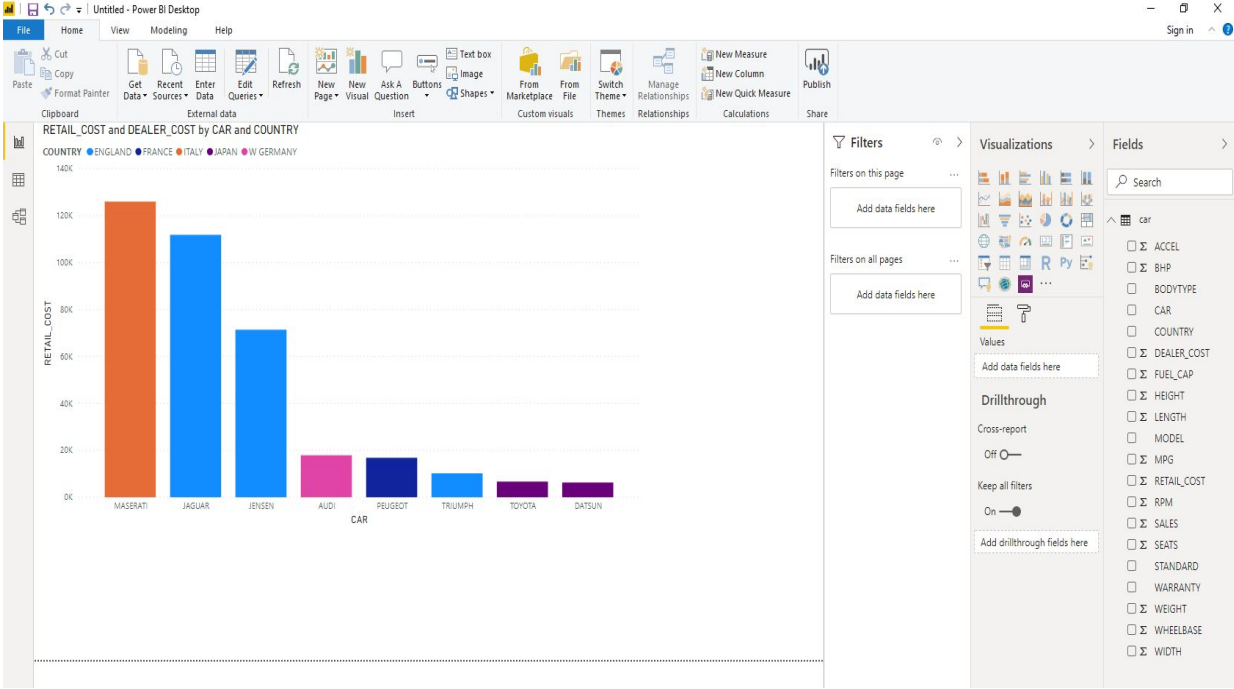
3	4	5	6	7	8
GENERAL ACCOUNTING DEPARTMENT					
L	EFFECT.			JOURNAL	JOURNAL
	DATE		CONTROL TOTAL	SOURCE	DESCRIPTION
	11-16	17	38	39-53	55-63
	64-79				
	MM DD YY				
	09302021	E	G		

Open Data Hub for Mainframe => Power BI

The screenshot shows the Power BI Desktop interface. A Navigator window is open, displaying a table of car data. The table has the following columns: COUNTRY, CAR, MODEL, BODYTYPE, and SEATS. The data is as follows:

COUNTRY	CAR	MODEL	BODYTYPE	SEATS
ENGLAND	JAGUAR	V12XKE AUTO	CONVERTIBLE	
ENGLAND	JAGUAR	V12XKE AUTO	CONVERTIBLE	
ENGLAND	JAGUAR	V12XKE AUTO	CONVERTIBLE	
ENGLAND	JAGUAR	V12XKE AUTO	CONVERTIBLE	
ENGLAND	JAGUAR	V12XKE AUTO	CONVERTIBLE	
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	
ENGLAND	JENSEN	INTERCEPTOR III	SEDAN	
ENGLAND	JENSEN	INTERCEPTOR III	SEDAN	
ENGLAND	JENSEN	INTERCEPTOR III	SEDAN	
ENGLAND	JENSEN	INTERCEPTOR III	SEDAN	
ENGLAND	TRIUMPH	TR7	HARDTOP	
ENGLAND	TRIUMPH	TR7	HARDTOP	
JAPAN	DATSUN	B210 2 DOOR AUTO	SEDAN	
JAPAN	DATSUN	B210 2 DOOR AUTO	SEDAN	
JAPAN	TOYOTA	COROLLA 4 DOOR DIX AUTO	SEDAN	
JAPAN	TOYOTA	COROLLA 4 DOOR DIX AUTO	SEDAN	
ITALY	MASERATI	DORA 2 DOOR	COUPE	
ITALY	MASERATI	DORA 2 DOOR	COUPE	
ITALY	MASERATI	DORA 2 DOOR	COUPE	

Open Data Hub for Mainframe => Power BI



Open Data Hub for Mainframe => Tableau

The screenshot displays the Tableau Desktop interface. On the left is a dark blue sidebar with a 'Connect' menu. The main area shows the 'Open' dialog with a search bar and a list of data sources including 'sqlmss_10000' and 'teradata'. An 'Other Databases (ODBC)' window is open on the right, showing configuration options for connecting to a database. The 'Connect Using' section has 'DSN' set to 'TABLEAU' and 'Driver' set to 'IWAY 99 DM Clientxfoc ODBC Driver'. The 'Connection Attributes' section has 'Server' and 'Port' empty, 'Database' set to 'edadba', 'Username' set to 'tableau', and 'Password' empty. A 'String Extras' text area is also present. A 'Sign In' button is at the bottom right of the ODBC window.

Connect

- Search for Data
 - Tableau Server
- To a File
 - Microsoft Excel
 - Text file
 - JSON file
 - Microsoft Access
 - PDF file
 - Spatial file
 - Statistical file
 - More...
- To a Server
 - Vertica
 - Web Data Connector
 - Other Databases (JDBC)
 - Other Databases (ODBC)
 - More...
- Saved Data Sources
 - Sample - Superstore
 - World Indicators

Open

sqlmss_10000 teradata

Other Databases (ODBC)

Connect Using

Generic ODBC requires additional configuration for publishing to succeed. Select DSN (data source name) for cross-platform portability. A DSN with the same name must be configured on Tableau Server.

DSN: TABLEAU

Driver: IWAY 99 DM Clientxfoc ODBC Driver

Connect

Connection Attributes

Server: Port:

Database: edadba

Username: tableau

Password:

String Extras:

Sign In

Sample Workbooks

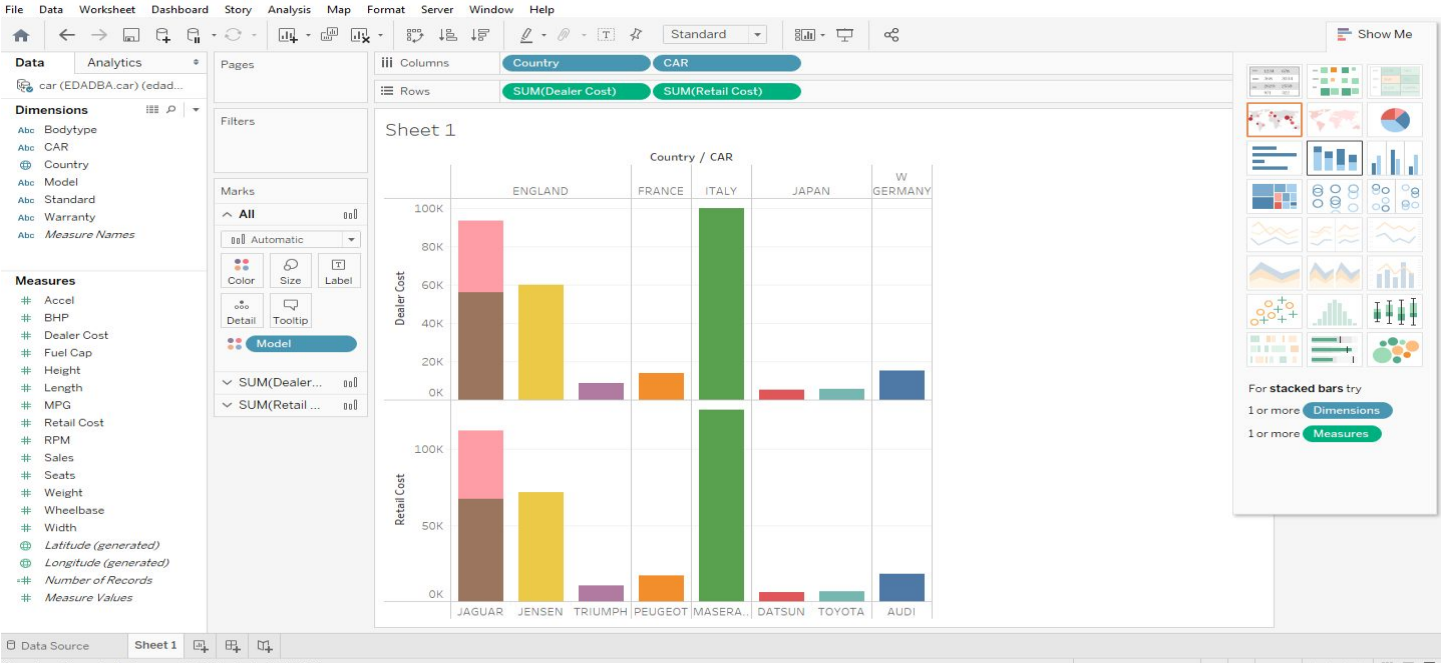
Superstore Regional World Indicators

Open Data Hub for Mainframe => Tableau

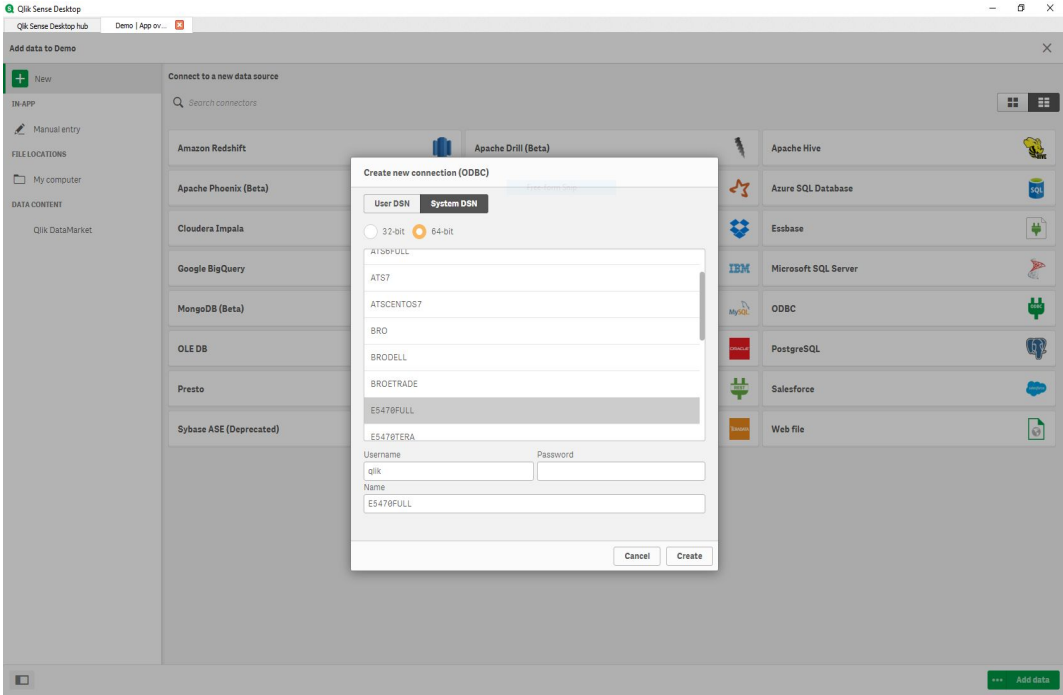
The screenshot displays the Tableau Desktop interface. The top menu bar includes File, Data, Server, Window, and Help. The main workspace shows a connection to 'car (EDADBA.car) (edadba)' with options for 'Live' and 'Extract' connections. The left sidebar contains a 'Connections' pane with 'TABLEAU (ODBC)' selected, a 'Database' pane with 'edadba', and a 'Table' pane with 'car' selected. Below the 'Table' pane, a list of tables is shown, including 'car (EDADBA.car)', 'car2 (EDADBA.car2)', 'car_file (EDADBA.car_file)', 'carinstfedex (...carinstfedex)', 'carlimited (E...A.carlimited)', 'carolap (EDADBA.carolap)', 'carrec (EDADBA.carrec)', 'carrec_test (E...A.carrec_test)', and 'carsoap (EDADBA.carsoap)'. The main workspace displays a table with the following fields:

Field Name	Table	Remote Field Name
Country	car	COUNTRY
Abc CAR	car	CAR
Abc Model	car	MODEL
Abc Bodytype	car	BODYTYPE
# Seats	car	SEATS
# Dealer Cost	car	DEALER_COST
# Retail Cost	car	RETAIL_COST
# Sales	car	SALES
# Length	car	LENGTH
# Width	car	WIDTH
# Height	car	HEIGHT
# Weight	car	WEIGHT

Open Data Hub for Mainframe => Tableau



Open Data Hub for Mainframe => Qlik Sense



Open Data Hub for Mainframe => Qlik Sense

The screenshot shows the Qlik Sense Desktop interface. On the left, there is a navigation pane with sections for 'New', 'IN-APP', 'FILE LOCATIONS', 'DATA CONNECTIONS', and 'DATA CONTENT'. Under 'DATA CONNECTIONS', an ODBC connection named 'E6478FULL' is selected. The main area displays a data table for the 'car' table in the 'EDADBA' database. The table has 30 rows and 11 columns: COUNTRY, CAR, MODEL, BODYTYPE, SE..., DEALER_C..., RETAIL_C..., SA..., LENG..., and WID. The data includes various car models from different countries like England, Japan, Italy, and Germany.

COUNTRY	CAR	MODEL	BODYTYPE	SE...	DEALER_C...	RETAIL_C...	SA...	LENG...	WID
ENGLAND	JAGUAR	V12XKE AUTO	CONVERTIBLE	2	7427	8878	0	189.6	66
ENGLAND	JAGUAR	V12XKE AUTO	CONVERTIBLE	2	7427	8878	0	189.6	66
ENGLAND	JAGUAR	V12XKE AUTO	CONVERTIBLE	2	7427	8878	0	189.6	66
ENGLAND	JAGUAR	V12XKE AUTO	CONVERTIBLE	2	7427	8878	0	189.6	66
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	5	11194	13491	12000	198.8	69.7
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	5	11194	13491	12000	198.8	69.7
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	5	11194	13491	12000	198.8	69.7
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	5	11194	13491	12000	198.8	69.7
ENGLAND	JAGUAR	XJ12L AUTO	SEDAN	5	11194	13491	12000	198.8	69.7
ENGLAND	JENSEN	INTERCEPTOR III	SEDAN	4	14940	17850	0	188	69
ENGLAND	JENSEN	INTERCEPTOR III	SEDAN	4	14940	17850	0	188	69
ENGLAND	JENSEN	INTERCEPTOR III	SEDAN	4	14940	17850	0	188	69
ENGLAND	JENSEN	INTERCEPTOR III	SEDAN	4	14940	17850	0	188	69
ENGLAND	TRIUMPH	TR7	HARDTOP	2	4292	5100	0	164.5	66.2
ENGLAND	TRIUMPH	TR7	HARDTOP	2	4292	5100	0	164.5	66.2
JAPAN	DATSUN	B210 2 DOOR AUTO	SEDAN	4	2626	3139	43000	163	60.8
JAPAN	DATSUN	B210 2 DOOR AUTO	SEDAN	4	2626	3139	43000	163	60.8
JAPAN	TOYOTA	COROLLA 4 DOOR DIX AUTO	SEDAN	4	2886	3339	35030	165.2	61.8
JAPAN	TOYOTA	COROLLA 4 DOOR DIX AUTO	SEDAN	4	2886	3339	35030	165.2	61.8
ITALY	MASERATI	DORA 2 DOOR	COUPE	2	25000	31500	0	177	69.6
ITALY	MASERATI	DORA 2 DOOR	COUPE	2	25000	31500	0	177	69.6
ITALY	MASERATI	DORA 2 DOOR	COUPE	2	25000	31500	0	177	69.6
ITALY	MASERATI	DORA 2 DOOR	COUPE	2	25000	31500	0	177	69.6
W GERMANY	AUDI	100 LS 2 DOOR AUTO	SEDAN	5	5063	5970	7800	187.2	69
W GERMANY	AUDI	100 LS 2 DOOR AUTO	SEDAN	5	5063	5970	7800	187.2	69
W GERMANY	AUDI	100 LS 2 DOOR AUTO	SEDAN	5	5063	5970	7800	187.2	69
FRANCE	PEUGEOT	504 4 DOOR	SEDAN	5	4631	5610	0	182.4	66.7
FRANCE	PEUGEOT	504 4 DOOR	SEDAN	5	4631	5610	0	182.4	66.7
FRANCE	PEUGEOT	504 4 DOOR	SEDAN	5	4631	5610	0	182.4	66.7

Open Data Hub for Mainframe => Qlik Sense

Qlik Sense Desktop

Qlik Sense Desktop hub *Demo - My ne... x

Save Demo Data Analysis Story

Search for fields or master items.

Fields

- ACCEL
- BHP
- BODYTYPE
- CAR
- COUNTRY
- DEALER_COST
- FUEL_CAP
- HEIGHT
- LENGTH
- MODEL
- MPG
- RETAIL_COST
- RPM
- SALES
- SEATS
- STANDARD
- WARRANTY
- WEIGHT
- WHEELBASE
- WIDTH

Results: 9 (generated: 9)

sum(RETAIL_COST) by COUNTRY

COUNTRY	sum(RETAIL_COST)
ENGLAND	~200,000
FRANCE	~20,000
ITALY	~130,000
JAPAN	~10,000
WGERMANY	~20,000

Hide Add to sheet

Top STANDARD by sum(RETAIL_COST) for COUNTRY and CAR

COUNTRY CAR Values

COUNTRY	FirstSortedValue([STANDARD], - Aggr(sum([1] [RETAIL_COST]), [COUNTRY], [CAR], [STANDARD])))	Max(Aggr(sum([1] [RETAIL_COST]), [COUNTRY], [CAR], [STANDARD])))
ENGLAND	-	22369
FRANCE	-	5610
ITALY	-	31500
JAPAN	-	3339
WGERMANY	-	5970

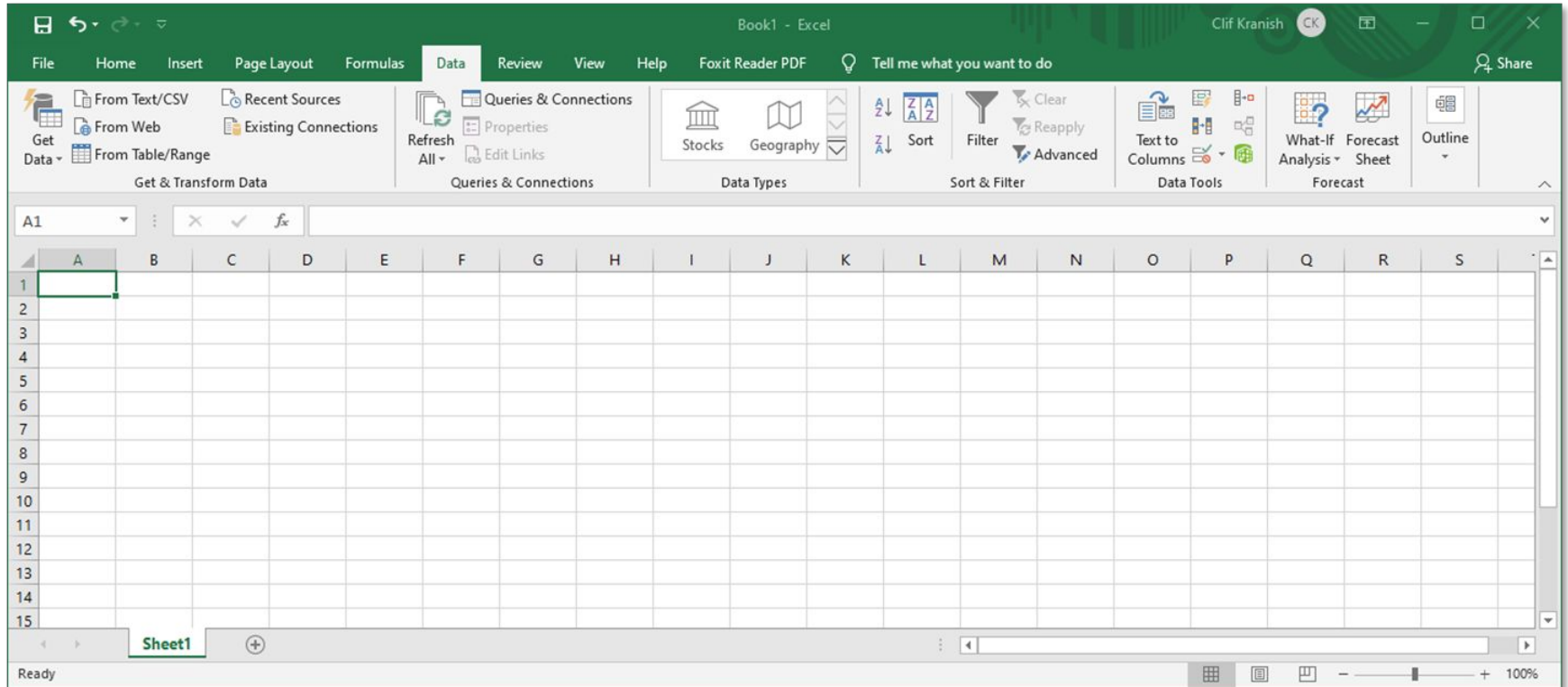
Hide Add to sheet

sum(RETAIL_COST) by BODYTYPE, MODEL, and STANDARD

SEDAN			COUPE	
AIR CONDITIONING	LEAS JET AM/FM 8 TRK STEREO	100 L.S 2 DOOR AU.	5 LITRE SS ENGINE	CAMPAGNOLLO LIGHT ALL.OY WHEELS
INTERCEPTOR III	CHRYSLER 385 CU IN V6 ENGINE	PIRELLI GR70 15 TIRES		
4 WHEEL DISC	RECLININ-	WHITEWA-	606.4 RUDGE	DORA 2 DOOR ALL STEEL BODY MISHLEIN 21-9779-VR15XWX TIRES

Hide Add to sheet

Open Data Hub for Mainframe => Excel



Open Data Hub for Mainframe => Excel

Navigator

SALES

Select multiple items

Display Options

- ODBC (dsn=CENTRE)
 - gsdemo
 - retail_sales
 - ibisamp
 - dmsales_counts
 - dmsales_orders
 - legacy
 - ggsales
 - oggsales
 - sales

No item selected for preview

Search results are limited to already expanded items

Select Related Tables Load Transform Data Cancel

Navigator

SALES

Select multiple items

Display Options

- ODBC (dsn=CENTRE)
 - gsdemo
 - retail_sales
 - ibisamp
 - dmsales_counts
 - dmsales_orders
 - legacy
 - ggsales
 - oggsales
 - sales

retail_sales

REVENUE	COST_OF_GOODS	GROSS_PROFIT	QUANTITY_S
11914.17	5862.15	6052.02	
9591.68	8063.36	1528.32	
10264.4	6322.83	3941.57	
11914.17	9946.66	1967.51	
14547.19	10951.47	3595.72	
10264.4	8961.14	1303.26	
8129.26	5628.55	2500.71	
11914.77	6954.31	4960.46	
9591.68	6656.01	2935.67	
14547.19	11933.54	2613.65	
11914.77	8389.24	3525.53	
19765.64	13862	5903.64	
18575.66	12732.47	5843.19	
15251.53	9398.69	5852.84	
14384.74	11405.73	2979.01	
13471.99	9219.96	4252.03	
13471.99	7552.2	5919.79	
14384.74	8900.05	5484.69	
168	84.64	83.36	
7272.79	3695.52	3577.27	
15251.53	9254.18	5997.35	
7272.79	3875.26	3397.53	
13471.99	10676.7	2795.29	

Search results are limited to already expanded items

Select Related Tables Load Transform Data Cancel

Open Data Hub for Mainframe => Excel

The screenshot displays the Microsoft Excel interface with the following components:

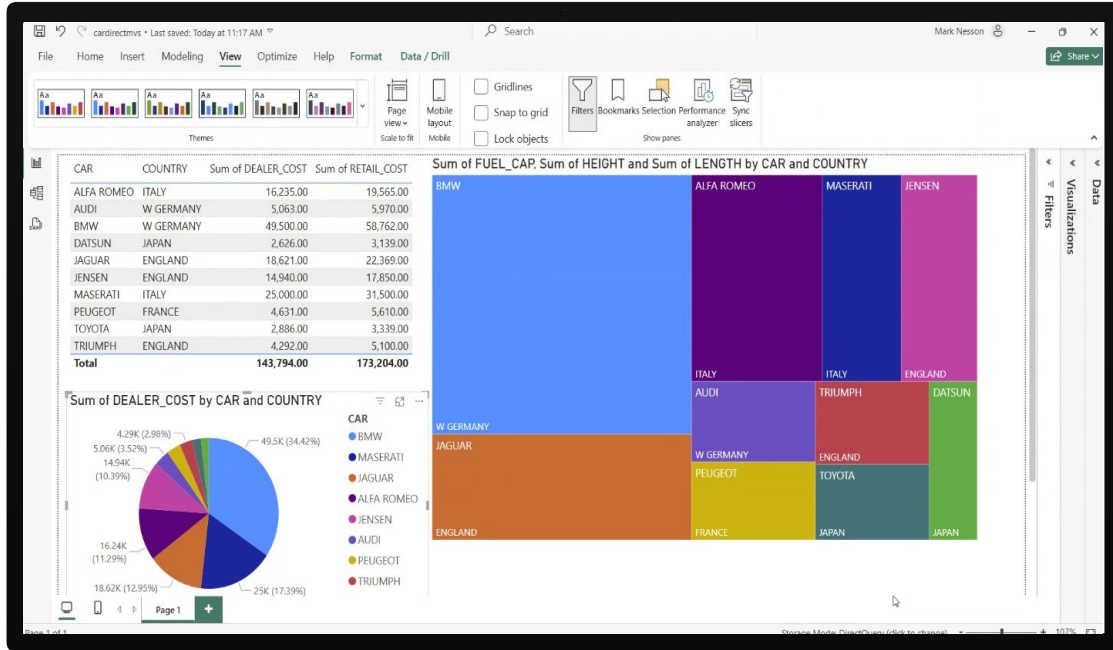
- File Name:** Book1 - Excel
- Language:** Clif Kranish (CK)
- Active Tab:** Data
- Get & Transform Data:** From Text/CSV, From Web, From Table/Range, Recent Sources, Existing Connections.
- Queries & Connections:** Refresh All, Properties, Edit Links.
- Data Types:** Stocks, Geography.
- Sort & Filter:** Filter, Clear, Reapply, Advanced.
- Data Tools:** Text to Columns.
- Forecast:** What-If Analysis, Forecast Sheet.
- Outline:** Outline.

The main data table is as follows:

	REVENUE	COST_OF_GOODS	GROSS_PROFIT	QUANTITY_SOLD	DISCOUNT	COUNTRY	STATE	CITY
2	11914.17	5862.15	6052.02	43	846.92	Canada	British Columbia	Vancouver
3	9591.68	8063.36	1528.32	35	677.18	Brazil	Destrito Federal	Brasilia
4	10264.4	6322.83	3941.57	37	489.6	Netherlands	Noord-Holland	Amsterdam
5	11914.17	9946.66	1967.51	43	846.92	Denmark	Hovedstaden	Copenhagen
6	14547.19	10951.47	3595.72	54	616.2	Poland	Mazowieckie	Warsaw
7	10264.4	8961.14	1303.26	37	489.6	United States	New York	New York
8	8129.26	5628.55	2500.71	29	293.4	Canada	Ontario	Toronto
9	11914.77	6954.31	4960.46	44	696.85	Germany	Berlin	Berlin
10	9591.68	6656.01	2935.67	35	677.18	Spain	Madrid	Madrid
11	14547.19	11933.54	2613.65	54	616.2	Switzerland	Geneva	Geneva
12	11914.77	8389.24	3525.53	44	696.85	Italy	Lazio	Rome
13	19765.64	13862	5903.64	52	708.89	Canada	British Columbia	Vancouver
14	18575.66	12732.47	5843.19	50	498.89	Denmark	Hovedstaden	Copenhagen
15	15251.53	9398.69	5852.84	49	401.3	Poland	Mazowieckie	Warsaw

The Queries & Connections pane on the right shows a query named 'retail_sales' with 43,043 rows loaded.

zOS Made Easy



The screenshot shows a terminal window with the following content:

```
Vista TN3270 Session A
File Edit Font Transfer Macro Options Window Help
ICRT00011 MKTJN LAST ACCESS AT 00:41:40 ON TUESDAY, FEBRUARY 25, 2025
1KJ564551 MKTJN LOGIN IN PROGRESS AT 08:44:39 ON FEBRUARY 26, 2025

*****
*          Z/OS 2.5          *
* THIS IS THE SYSTEM NAMED *
*      ECHO                *
*****
* IBM Z15 MODEL I02      *
* IBM 0562-C03          *
* HARDWARE LOGICAL PARTITION: TIB11 *
*****
* TO BE IN COMPLIANCE WITH THE SECURITY POLICY *

Vista TN3270 Session A
File Edit Font Transfer Macro Options Window Help
Menu Options View Utilities Compilers Help
DB: READY
DSLIST - Data Sets Matching MKTJN.MVS*
Command ==>
Row 1 of 20
Scroll ==> CSR
Command - Enter "/" to select action
Message
Volume
-----
MKTJN.MVS.07700M.HOME.CICS.LOAD          MIGRAT2
MKTJN.MVS.07700M.HOME.CICS.LOAD          MIGRAT2
MKTJN.MVS.07700M.HOME.DATA                MIGRAT2
MKTJN.MVS.07700M.HOME.LOAD                MIGRAT2
MKTJN.MVS.07700M.WFS.DATA                 MIGRAT2
MKTJN.MVS.08001M.HOME.CICS.LOAD          MIGRAT2
MKTJN.MVS.08001M.HOME.CICS.LOAD          MIGRAT2
MKTJN.MVS.08001M.HOME.DATA                MIGRAT2
MKTJN.MVS.08001M.HOME.LOAD                MIGRAT2
MKTJN.MVS.08001M.WFS.DATA                 MIGRAT2
MKTJN.MVS.09000M.HOME.CICS.LOAD          MIGRAT2
MKTJN.MVS.09000M.HOME.CICS.LOAD          MIGRAT2
MKTJN.MVS.09000M.HOME.DATA                MUSER0
MKTJN.MVS.09000M.HOME.LOAD                MUSER0
MKTJN.MVS.09000M.WFS1.DATA                MUSER0
MKTJN.MVS.09000M.WFS2.DATA                MUSER0
MKTJN.MVS.09999M.HOME.CICS.LOAD          MUSER0
MKTJN.MVS.09999M.HOME.CICS.LOAD          MUSER0
0.1 02/26/25.057 11:45AM ibi.mvs.tibco.com 19.2
```

