

# Michigan Db2 Users Group

## Quarterly Newsletter, March 2018

Website: [www.mdug.org](http://www.mdug.org)  
Email: [admin@mdug.org](mailto:admin@mdug.org)

### MARCH 14TH MEETING AGENDA

- 8:15** Check In and Breakfast
- 9:00** McCarthy
- 10:10** Break
- 10:30** Wingfield
- 11:45** Lunch (Provided)
- 12:45** Lawson Session 1
- 2:00** Break
- 2:15** Lawson Session 2
- 3:30** Closing Comments

### Susan Lawson

Susan Lawson is an internationally recognized consultant and lecturer with a background in Db2 z/OS system and database administration for 29 years. She currently works with several large clients to help design, develop, implement and tune some of the worlds' largest and most complex Db2 databases and applications. She also performs performance/availability audits and health checks for many clients to help reduce costs through proper performance tuning and to help ensure availability and stability. Her other activities include authoring articles and white papers, presenting at user group meetings, and developing/teaching a variety of Db2 z/OS courses. She is an IBM GOLD Consultant and an IBM Analytics Champion. She has authored the IBM 'DB2 11 for z/OS DBA Certification Guide' and has previously authored several books on certification and performance. Susan will be presenting the following topics:

- Reducing CPU and Maximizing Db2 z/OS Application/SQL Performance
- Db2 z/OS Table and Index Design for Performance and Availability

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**Registration Contact:**  
[reservations@mdug.org](mailto:reservations@mdug.org)

**Please Include:**  
*Your membership type  
and the full name of all  
attendees*

**Registration Deadline:**  
*March 8<sup>th</sup>*

**Attendee Fees:**  
*See Page 4*

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### Mike Wingfield (Compuware)

Mike Wingfield has been in IT for over 35 years and has been working with DB2 since Version 1.1 in 1987 as a programmer, DBA, Tech Support, Data Modeler, Data Architect, and for the last 20 years as a DB2 Performance and Tuning Specialist. Mike has been utilizing Strobe since 1991 and has documented mainframe operating cost savings of over 50 million dollars using Strobe from 1994 through 2001. Mike retired from U S WEST (which became Qwest Communications and now Century Link) after 30 years of service.

As a Strobe Solution Consultant for the last 14 years in Compuware's Field Technical Support, Mike takes part in Application Performance Assessments for many Strobe customers throughout North & South America, Asia/Pacific, and Europe analyzing Batch, Onlines, Stored Procedures, and DDF performance with Strobe and iStrobe and providing recommendations for runtime and response time improvements. Mike will be presenting on the following topic:

- DB2 Performance & Tuning - It's All About The SQL!

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## Mike McCarthy (IBM Corporation)

Mike McCarthy is a consulting software technical specialist at IBM focusing on IBM data management technology, including the Db2 family on-premises and cloud offerings. He works mainly with data warehouse and analytics solutions and has delivered training and sales support to hundreds of IBM and IBM Business Partner professionals over the past fifteen years. Mike serves as a member of the Michigan DB2 User Group board of directors. Mike will be presenting on the following topic:

- Db2 Family: New Capabilities - Mainframe to Cloud

Abstract on page 3

## Presentation Abstracts

*Susan Lawson*

### Reducing CPU and Maximizing Db2 z/OS Application/SQL Performance

This seminar will cover many best practices for our applications in order to achieve performance and reduce CPU in Db2 z/OS. Many techniques to minimize overhead and locking will be explored. We will also take a look at techniques for coding efficient SQL and minimizing the amount of data we bring back to process in our applications via optimal predicates, less repetition and better use of indexes. We will also look at how to best utilize the dynamic statement cache and to use it in performance tuning efforts along with several Explain tables. All features discussed are current with Db2 11 and 12.

### Db2 z/OS Table and Index Design for Performance and Availability

This seminar will discuss many issues surrounding alternative table and index designs for performance and availability current with Db2 12 for z/OS. We will look at many different alternatives to help design tables and indexes for the best performance possible for the type of application process and how to achieve high availability. There are many issues to consider for high volume insert and update transactions, and a balancing act to be achieved for responsiveness to readers. Table issues such as denormalization, non-column attributes, indicator columns, repeating columns, derived data, aggregated columns, table flipping, identify columns, surrogate keys, horizontal and vertical partitioning. We will also look at issues with designing VLTBs (Very Large Tables) and XVLTBs (eXtremely Large Tables), the rules have changed! Index issues such as minimizing indexes, using NPSIs or DPSI, and using indexes for best possible performance will be discussed. This seminar also focuses on utilizing features that have been introduced in the latest DB2 releases.

## Presentation Abstracts (Continued)

*Mike Wingfield*

### **DB2 Performance & Tuning - It's All About The SQL!**

Throwing hardware at Mainframe performance issues is not enough anymore. Application response times and runtimes need to be tuned to run as efficiently as possible to reduce the Rolling 4 Hour Average (to lower the Monthly License Costs) and often times when it's DB2 in the application, most of the performance opportunities will be found there. CICS, Batch, and DDF DB2 tuning opportunities will be examined; analyzing SQL Text, DB2 Access Paths, and the DB2 Catalog Objects involved.

#### **Bullet Points:**

- What's Using CPU and Causing Wait in Mainframe Applications
- Analyzing Online and DDF SQL for Optimal Response Times
- Investigating DB2 Batch Jobs to Reduce Overall Runtimes
- Exploring Access Path Efficiency by Examining the Explain
- Scrutinizing Information Contained in the DB2 Catalog

*Mike McCarthy*

### **Db2 Family: New Capabilities - Mainframe to Cloud**

DB2 has been around for nearly 35 years, being first released by IBM in 1983 for MVS mainframes. Throughout the 1990's and beyond, DB2 became available on many operating systems including OS/2, AIX, HP-UX, Sun Solaris, Windows, Linux and even smartphone systems. Today, rebranded as IBM Db2, it supports OLTP, data warehouse, and analytics applications via deployments from mainframe to cloud. This presentation will look at Db2 deployment options, including mainframe, Windows, Linux, and Cloud. Customers looking to build new-age applications using OData, REST apis, and JSON or provide mobile access to data, can continue to use Db2 to meet new requirements.

## Seminar Logistics

### Day of the Seminar:

Seminar will be held at the Four Points by Sheraton Hotel in Novi. Onsite check in begins at 8:15 am with a continental breakfast provided and sessions will begin at 9:00 am. Continental breakfast and lunch at the conference are included and covered by your membership fees.

### Presentation Handouts:

Seminar presentations will be made be available in soft copy format prior to the seminar and will be posted on the MDUG web site at [www.mdug.org](http://www.mdug.org) as they are received by the MDUG Board. Speakers will not be bringing hard copies to the seminar. Please check the web site for the presentations prior to the seminar.

Presentations for past seminars are available online at: [www.mdug.org](http://www.mdug.org) under the “Past Seminars” section.

### Registration:

You can register yourself and/or your site/Company attendees by sending an email with your full name, company name, and registration count (if making reservations for more than yourself) to [reservations@mdug.org](mailto:reservations@mdug.org). Please include the name of all attendees in the email message and the type of membership (corporate, individual, shared, or vendor) that you will be attending under. Confirmation is available upon request only. Early registration for the seminar will be taken until the end of the day on March 8<sup>th</sup> (Thursday before the seminar). Late registrations may be taken until noon on Friday, March 9<sup>th</sup>, if seating is still available. Please respond as early as possible to guarantee yourself a spot.

### MDUG Membership:

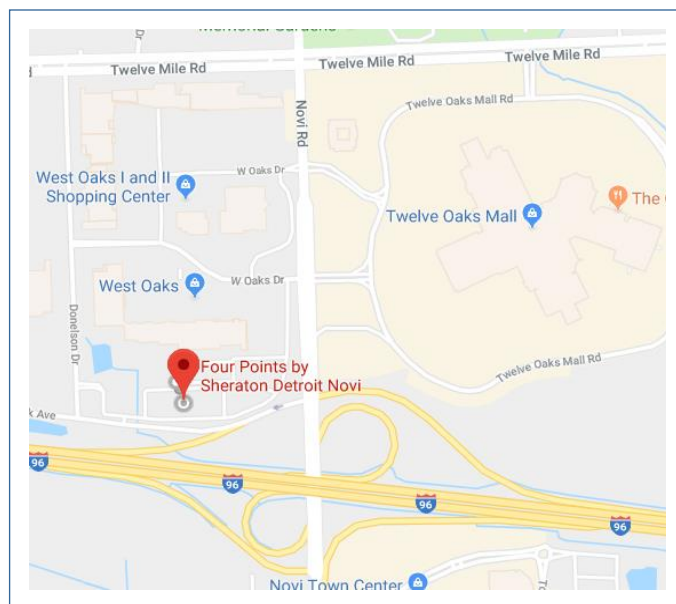
There are four types of memberships; Individual, shared, corporate, and vendor. Membership details are posted on the web site: [www.mdug.org](http://www.mdug.org).

Memberships are annual and run from the first seminar of the year through December and allow for attendance at all seminars for the year. MDUG accepts payment directly in cash or check on site at a seminar. Checks should be made payable to Michigan Db2 User Group (MDUG). Credit cards are accepted only through PayPal. All memberships are contingent on payment of the annual membership fee.

Membership forms along with membership details and instructions on paying via Paypal can be downloaded from the MDUG web site [www.mdug.org](http://www.mdug.org) by clicking on the Membership and Fees. Inquiries on the status of corporate/company memberships should be sent to the MDUG email box at [finances@mdug.org](mailto:finances@mdug.org).

### 2018 Session Dates:

We are planning four sessions in 2018. 2018 sessions will be held on March 14<sup>th</sup>, June 6<sup>th</sup>, September 12<sup>th</sup>, and December 5<sup>th</sup>.



*Four Points by Sheraton  
27000 S. Karevich Drive, Novi, MI 48377*

### *2018 Membership Fees*

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<i>Individual - \$140</i>
<i>Shared - \$180</i>
<i>Corporate - \$540</i>
<i>Vendor - \$540</i>
<i>Meeting - \$50</i>

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*December 2017 Session Feedback*

<i>Presenter/Presentation Topic</i>	<i>Topic Value</i>	<i>Session Content</i>	<i>Speaker</i>	<i>Material Covered</i>	<i>Handouts</i>	<i>Visuals</i>
Craig Mullins – It's Not Your Daddy's Db2	4.76	4.82	4.94	4.88	4.81	4.82
Craig Mullins - Understanding the Rolling Four Hour Average (R4HA) for DB2 Cost Reduction	4.24	4.53	4.88	4.63	4.69	4.63
Ulf Heinrich - Db2 for z/OS Lies, Damn Lies, and Statistics	4.35	4.41	4.71	4.47	4.25	4.41
Ulf Heinrich - Db2 Catching, Tuning, Trending for SQL Workloads – a resource and cost saving approach	4.27	4.27	4.60	4.33	4.36	4.40

## Current Events

### Db2 z for DevOps: Application development, agility and quality

Companies today are looking for new ways to take advantage of their mainframe-based data and processes that have been the backbone of their business for decades. These companies recognize the need to transform to a digital economy and are considering all options.

The question is how to move forward? Many companies know that their ability to define and innovate is dependent upon their success in recognizing the business value that exists in mainframe applications and data. These companies want to capitalize on those assets as they transform. One of the common themes identified is the fact that modern application development can no longer wait for IT. Agility, speed, quality and efficiency are paramount. This webcast looks at how mainframe customers are updating their application development processes while continuing to leverage mainframe strengths that are vital to their business.

Join Haakon Roberts, IBM DE, to find out:

- The driving factors facing both IT and mainframe development to modernize applications
- How to satisfy needs of development while adhering to business rules
- Customer use cases and how they may apply to your environment

[Register here for this Tuesday, February 27<sup>th</sup> Webcast](#)

### Philip Nelson Blog: A RESTful Introduction

The topic for the IDUG Content Committee for February 2018 is “RESTful”.

If you have been watching the progress of Db2 over the last few years then this is a topic which you will have seen mentioned many times. This is particularly true in the Db2 for z/OS space, which appears to be leading the way with direct support for native RESTful services.

We hope to bring you all the latest information of the state of RESTful support across the Db2 family as the month progresses. However, in this short article we'll say a little about what REST is and how it has been possible to provide RESTful support for data in Db2 long before the product had functionality built in.

[Click here to view this blog series](#)

### *December 2017 Topic Feedback*

<i>Votes</i>	<i>Requested Topics</i>
3	Db2 Interconnectivity
3	Db2 Disaster Recovery
2	Db2 Performance and Tuning
2	Connecting to Db2 Data from Cloud Applications
2	Integrating Cloud and Db2 Data
2	Db2 Application Tuning
2	Db2 Utilities
2	Db2 Web Connectivity/Usage
2	Db2 Programming/Application Development
2	Db2 Experiences
2	Db2 Using CICS/IMS
1	Db2 Performance Tools
1	Using Stored Procedures
1	Db2 Supporting Software
0	New Db2 Releases
0	Data Warehousing
0	Supporting Db2

### What's new from the optimizer in Db2 12 for z/OS?

This webcast will be presented by Terry Purcell - IBM Db2 for z/OS STSM and IBM Master Inventor. Terry will be presenting the latest news and updates from the Db2 Optimizer in Db2 12 and covering a very important topic for every CIO, IT architect and Db2 professional :- PREFORMANCE

Learn how DB2 12 for z/OS optimizer delivers significant performance improvements to new query workload patterns, and for improved scalability of your existing applications. This session will highlight the UNION ALL and outer join performance improvements, sort optimizations, improved predicate indexability and tighter integration of the Optimizer and RUNSTATS. And you will learn how these and other enhancements can enable improved exploitation of other DB2 features such as temporal or archive transparency, and allow analytics and other processing on real-time data with minimal impact to your operational systems.

[Register here to Replay this January 30<sup>th</sup> 2018 webcast](#)

### Syncsort and Db2 - How to Get More from Your Db2 Systems

In Syncsort's just released 2018 State of the Mainframe survey report, over 50% of respondents indicated Improving Db2 SLA Performance as their #1 mainframe database priority for the coming year, with migrating from IMS to Db2 as the second highest.

Join us for a webcast in December to hear key mainframe optimization opportunities and use cases spanning Db2 workload optimization, transparent data migration from IMS to Db2, and capacity management. In this session you'll learn:

- How to save up to 50% of Db2 CPU time with workload-centric optimization
- The best approach to migrate IMS data to Db2 and standardize application change & enhancement in SQL
- How transaction capacity management ensures resources are right-sized to meet business requirements

[Register here to replay this December 17<sup>th</sup>, 2017 webcast](#)

### *MDUG Board Members*

**Stella Keesling**  
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Comerica

**Chuck Hill**  
Advisory Support  
Ford Direct

**Matt Brickner**  
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Coordination Director &  
Advisory Support  
One Point Solutions

**Founding Members:**  
IBM Corporation  
Platinum Technology

MDUG is an affiliate of IDUG (international Db2 User Group), and is chartered under the State of Michigan. It promotes the awareness of Db2 in solving business problems by providing a non-profit forum for presenting new functionality, features, ideas, and usage of Db2. This forum is used for communications among Db2 users in the Southeastern Michigan area, as well as bringing together others throughout the state.