

Virtual Db2 User Group Presentation

## Oh, The Things I've Seen! Db2 Stories and Best Practices

In today's digital age, the evolution of database management systems is a crucial topic, especially for those deeply embedded in the tech industry. One such system that has stood the test of time is IBM's Db2. Recently, a virtual user group session delved into the intricacies of Db2, featuring Craig Mullins, a seasoned expert in database systems. This blog post will explore the highlights and insights from that session, shedding light on best practices and common pitfalls in managing Db2 databases.

The session, hosted by Amanda Hendley, was sponsored by IntelliMagic and aimed to provide a comprehensive overview of Db2's complexities. Craig Mullins, with over three decades of experience, shared his unique perspective through a session titled "Oh, the Things I've Seen: Db2 Stories and Best Practices." Mullins adopted a Dr. Seuss-inspired approach to narrate his experiences, making it both entertaining and educational for the audience.

One of the core topics discussed was the importance of RUNSTATS, a utility in Db2 that updates metadata about database objects. Mullins highlighted common issues, such as outdated RUNSTATS, which can significantly impact performance. Many organizations fall into the trap of neglecting this utility, leading to inefficient database operations. The session underscored the necessity of regular RUNSTATS execution to ensure optimal database performance and prevent unexpected issues.

**Most Common Reason for RID Failures**

- RUNSTATS!
  - Never Run
  - Inaccurate
  - Outdated

Another significant challenge addressed was lock escalation, a phenomenon where locks on database resources escalate from a lower level (like row locks) to a higher level (like table locks). This can cause significant performance bottlenecks, especially in high-transaction environments. Mullins provided insights into detecting and resolving lock escalations, emphasizing the importance of having a robust commit strategy to mitigate these risks.

**One Stats, Two Stats, Old Stats, New Stats**  
Dealing With Outdated RUNSTATS

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**NEXT VIRTUAL MEETING | November 19, 2024**

**Oh, The Things I've Seen! Db2 Stories and Best Practices**  
Continued

**Lock Escalation!**

In Db2 land,  
so big and so wide,  
Lived apps that locked,  
oh, how they'd collide!  
When queries ran,  
all eager and quick,  
Locks would escalate,  
creating quite the shtick.

The session also touched on the human element of database management. Mullins discussed the reliance on DBAs to review SQL statements, highlighting the impracticality of expecting human experts to manually sift through extensive lines of code. He advocated for automated solutions and emphasized the importance of empowering developers to take responsibility for their code, thereby reducing the burden on DBAs and enhancing overall efficiency.

**A Few More Details**

- They had hired other experts for the other parts of the application
- Wanted me to focus on their Db2 SQL
- I reviewed access paths and tuned many statements
  - Had to be implemented by programmers
- Regular tests of the entire application conducted
  - Small performance gains

Beyond technical challenges, Mullins shared a cautionary tale about the importance of looking beyond immediate database issues. He recounted an experience where a performance problem, initially attributed to Db2, was actually rooted in neglected VSAM files. This anecdote served as a reminder to maintain a holistic view of the IT environment and to consider all potential factors in performance troubleshooting.

To round off the session, Mullins shared best practices for maintaining a healthy Db2 environment. These included keeping software maintenance up to date, automating routine tasks, ensuring regular backups, and fostering proactive problem-solving approaches. His closing remarks, inspired by a Dr. Seuss quote, encouraged continuous learning and adaptation in the ever-evolving landscape of database management.

**High Level Best Practices**

- Keep maintenance up-to-date
- Ensure that appropriate RUNSTATS are being run
  - And kept up-to-date
- Automate as much as you can
  - May require tools
- Make sure backups are taken for all database objects (RTOs)
  - And test your backups
- Make sure every program has a COMMIT strategy in place!
- Document!
  - And make the doc accessible!
- Be proactive.

In summary, the virtual session on Db2 was an enlightening exploration of both the technical and human aspects of database management. Craig Mullins' insights serve as valuable guidance for database professionals striving to optimize their Db2 environments. By embracing best practices and maintaining a proactive stance, organizations can navigate the complexities of Db2 with greater confidence and efficiency.



**Access the Recording**



- Sponsorship opportunity—We are looking for additional co-sponsors for the Virtual Db2 user group. The user group has been in existence since 2022 and is gaining respect among users of Db2. The user group gives its sponsors an opportunity to show that they are working with, and helping to build, the Db2 user community. Contact [virtualusergroups@gmail.com](mailto:virtualusergroups@gmail.com) for more information.
- Save the date for our next session on November 19.

### About the Virtual Db2 User Group

The Virtual Db2 user group is an independently-operated vendor-neutral site run by and for the mainframe Db2 user community. This is a mainframe Db2 information website, not in any way related to, sponsored, or approved by IBM, which is the legitimate owner of the trademark, and any use of the mark in the URL or the body of the site is for information, education, and opinion expression purposes. The Virtual Db2 user group was established as a way for individuals using IBM's Db2 for z/OS database to exchange information, learn new techniques, and advance their skills with the product. Anyone with an interest in Db2 for z/OS is welcome to join the Virtual Db2 user group and share in the knowledge exchange.

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