



## June 2011 Newsletter

### DB2 9 for z/OS Schedule (July-Sept)

#### July

- 11<sup>th</sup> DB2 for z/OS:Using QMF
- 13<sup>th</sup> DB2 9 for z/OS: Monitoring & Tuning Applications' Performance
- 18<sup>th</sup> DB2 9 for z/OS: Introduction, Concepts & Facilities
- 20<sup>th</sup> DB2 9 for z/OS: SQL for Query Users

#### September

- 12<sup>th</sup> DB2 9 for z/OS: Database Design & Administration – Advanced Topics
- 26<sup>th</sup> DB2 9 for z/OS: Introduction, Concepts & Facilities
- 28<sup>th</sup> DB2 9 for z/OS: SQL for Query Users
- 26<sup>th</sup> DB2 9 for z/OS: Operations & Recovery
- 29<sup>th</sup> DB2 9 for z/OS: Changes & New Features

### Updated Virtual Training Schedule

**August 29<sup>th</sup>**-z/OS Fundamentals Boot Camp

**Sept 12<sup>th</sup>**- VSAM Essentials Workshop

### Public Schedule Highlights

This is not the complete schedule, if you can't find what you seek on [techknowledge.com](http://techknowledge.com), call your Education Rep at 410-891-1707

#### June

- 13<sup>th</sup> UNIX Boot Camp **GTR**

#### July

- 5<sup>th</sup> HSM Implementation & Customization
- 11<sup>th</sup> CICS/TS 3.2 Debugging Workshop-Advanced
- 25<sup>th</sup> SMP/E for Installation & Maintenance

#### August

- 1<sup>st</sup> RACF Administration Workshop
- 8<sup>th</sup> z/OS MVS Internals Fundamentals
- 8<sup>th</sup> z/OS System Fundamentals Part 1 – zArchitecture
- 15<sup>th</sup> z/OS System Fundamentals Part 2 – z/OS Infrastructure & Services
- 15<sup>th</sup> Using z/OS Assembler
- 15<sup>th</sup> WebSphere Application Server 7.0 Administration on Linux
- 22<sup>nd</sup> Storage Management Boot Camp
- 29<sup>th</sup> z/OS Concepts & Facilities
- 31<sup>st</sup> TSO/ISPF Users' Workshop
- 29<sup>th</sup> Storage Management Administration & Exploitation **MSAE\***

#### Enroll Me Now!

Contact [Carol Rutkowski](#) to obtain your course outline and enroll your personnel today.

### Schedule A Private Class

All courses are available as a private class. Whether at your facility or our facilities in Maryland, TechKnowledge private classes offer flexible, cost effective training options to meet your needs. TechKnowledge experienced instructors provide instruction in Web Sphere, Linux, Solaris, even Advanced Function Printing (to name a few). Our subject matter experts can help you hone in on what you need, and offer course customization options if needed.

### “Bring a Friend” Discount Continues

Numerous organizations continue to take advantage of the significant savings you may receive through use of this discount.. Enroll in any public class scheduled **through September 30, 2011**. When your “buddy” enrolls, each of you receives a 10% discount off the cost of tuition!



### Instructor's Corner

#### DB2

By: **Joe Luthman**

The history of relational database begins with a white paper written in 1969 by Dr. E. F. Codd of IBM. He used relational calculus to describe a software system capable of maintaining data parent-child relationships so that code presently in various COBOL programs would not need to be updated just because a business change was required. Rigid mathematical operations between logically defined relationships allow data designers to avoid anxiety about maintaining the physical ties between tables.

As DB2 evolved, more and more data characteristics were assumed by the software. Some examples follow: (how they were effected in parens)

1. Bonuses cannot exceed \$20,000 (table check constraint)
2. No overtime for those whose salaries exceed \$70,000 (trigger)
3. Data must be unique (index)
4. Improved web support (pureXML – V9 enhancement)

Version 6 DB2 permitted very complicated business rules to be promoted from local maintenance to DB2 system code with the introduction of triggers, functions, and user defined data types. One method to view the history of all relational databases is to mark all the code additions that allow elevating local maintenance code into vendor code in such a way that data maintenance failure is a system bug, not a locally coded problem.

There are three main programs that always run when DB2 is started. The master address space (ex. DB2PMSTR) handles DB2 logging, trace functions, and calls to DB2. Locking needs are handled by system routines that first came into being for IMS (ex. DB2PIRLM). In pre-V8 versions of DB2, these data locks could be stored in the MVS Extended Common Storage Area (ECSA). But since ECSA is used by all MVS running tasks, and since the space available has a finite limit, this approach, though needed, was always suspect. The advent of 64-bit addressability at the operating system level (zOS in 2000) allowed DB2 V8 IRLM to force locks to be held in its own address space.

Finally, the third address space, DBM1, is the workhorse of most DB2 systems. This is where all user programs, with the exception of stored procedures and user defined functions, run. Additionally, bufferpools and EDM pool are stored in this address space.

While it certainly helps to understand the MVS operating system in which DB2 runs, you can do some of this research using the keywords you find in this article. And when you begin working as a DBA, introducing yourself to, and cultivating a good working relationship with, your MVS systems programmers is a recommended professional way to ensure that both MVS and DB2 run well.

For information about some of the courses available for improving your DB2 skills, please see the accompanying references in this newsletter.