SoftBase Db2 Tools

SoftBase
A Fresche Solutions Brand

Db2 DeadLock Advisor

Identify Deadlock Timeouts

- **Display Source of Batch Deadlock Timeouts and Resource Unavailable Conditions in Joblog**
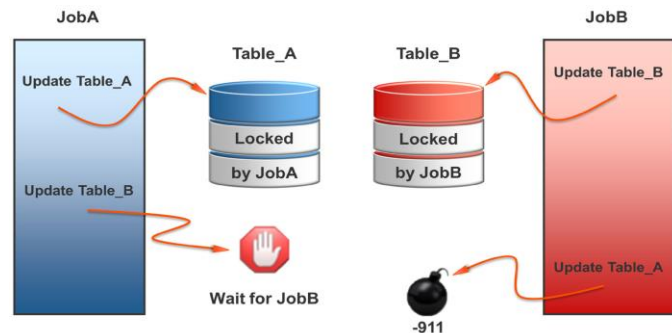- **Application Developers Can Troubleshoot Their Jobs Without Asking a DBA**

Business Challenges

Determining the root cause of deadlocks, deadly embraces, and resource unavailable events has been the task of DBAs, who must search through various Db2 logs and other sources to attribute a specific deadlock timeout to an offending transaction and then to determine whose application code contributed to the deadlock timeout. This can be a tedious process and, because of its transient nature, finding an errant deadlock is often akin to finding a needle in a haystack...until now. When the -911 occurs, messages are written to the Db2 Log. With Db2 DeadLock Advisor those messages are written to the joblogs of both jobs.

SoftBase Db2 Deadlock Advisor

Db2 DeadLock Advisor is the first Db2 tool to identify the source of deadlock timeouts and resource unavailable conditions and present that information on the offending and offended batch job's log. With DeadLock Advisor, programmers can quickly identify the cause of deadlocks by examining the joblog of the affected application. Db2 DeadLock Advisor places a message in the joblog of every batch job that experiences a deadlock timeout or resource unavailable condition. Further, for conditions involving two batch jobs, even though typically only one job receives a negative SQL code such as -911 (and neither job receives a message), Db2 DeadLock Advisor places a message in joblogs. The deadlock (or resource unavailable) condition is then instantly visible to any involved party. No other Db2 tool available pinpoints the source of deadlock timeouts in this manner.

Deadlock Advisor's sister product, Db2 Batch Analyzer, will highlight deadlocked (and resource unavailable) situations directly in the display of your batch window. Db2 Batch

Analyzer can also display these occurrences over a window of time. And Db2 Batch Analyzer can even point to the exact SQL statement in the process terminated by the unavailable resource. Db2 DeadLock Advisor can be installed in as little as 10 minutes and can save valuable time when trying to troubleshoot the root causes of contention.

Identify Deadlock Timeouts

Db2 DeadLock Advisor provides messages in the joblog of both the holder of the lock (the participant) and the job receiving the -911 (the victim). This information can be used as a starting point to determine what contention occurred and the resources involved.

The Participant

```
10.38.32 SOFTBASE  SBST376I SOFTBASE DeadLock Advisor  985
   985      ***************************************************************
   985      * Job: CSBCLCK1. DB2 Subsystem DBBG. Plan LOCKTABL has timed out plan *
   985      * LOCKTABL in CSBCLCK2 (DB2CALL). This job (CSBCLCK1) is *NOT*         *
   985      * affected, but has caused CSBCLCK2 to receive a timeout condition.   *
   985      ***************************************************************
```

The Victim

```
10.38.32 SOFTBASE  SBST501I SOFTBASE DeadLock Advisor  987
   987      ***************************************************************
   987      * Job: CSBCLCK2. A lock request for DBID/OBID 00000265.00000003 could *
   987      * not be granted, and the request waited for a period longer than the *
   987      * maximum specified by the installation.                     *
   987      * This job (CSBCLCK2) will receive a negative SQLCODE.        *
   987      ***************************************************************
```

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