

## Db2 Batch Analyzer

### Find Bad Batch SQL

- **Find Expensive Db2 SQL & Batch Bottlenecks**
- **Quickly Identify the Source of Db2 Resource Contention Problems**
- **Find Jobs with Long Rollback Times**

### Business Challenges

As corporate Db2 databases grow and companies continue to experience pressure to provide continuous data availability to customers, it becomes increasingly challenging for companies to complete their nightly batch processes on time. The most common solution is to purchase more powerful CPUs and speed up batch processing. Unfortunately, these upgrades can be very expensive and are often cost prohibitive.

Alternatively, companies can attempt to make their existing applications more efficient by searching for poorly performing Db2 batch jobs and investigating the source of performance problems. However, because most application developers cannot obtain batch performance information about their applications on their own, this time-consuming process is typically only performed by Database Administrators (DBAs).

#### More Batch. Less Time

SoftBase's Db2 Batch Analyzer provides a far more cost-effective and reliable solution to shorten your batch run times than purchasing expensive CPU upgrades or having a DBA sift through massive amounts of data.

SoftBase Db2 Batch Analyzer can examine thousands of production batch jobs that execute each evening and quickly identify expensive Db2 SQL statements, Db2 timeouts and deadlocks, and Db2 programs that might potentially ROLLBACK for extended lengths of time. Unlike other high-overhead Db2 monitoring solutions, Db2 Batch Analyzer can gather all this critical information with very little impact to your production applications.

Identifying and understanding your high impact jobs is critical to maintaining a healthy database. By analyzing and reporting batch job statistics in real time, Db2 Batch Analyzer provides accurate and reliable information to application developers and DBAs enabling them to make more informed decisions about application tuning.

#### Valuable Tool for Developers and DBAs

Db2 Batch Analyzer provides value to a variety of people who work on Db2 applications.

Application Developers can quickly locate which Db2 SQL statements run longest in programs they are writing or changing. They can instantly locate statements using excessive resources that might cause problems in production. Developers can quickly identify many application problems without needing to take a DBA's valuable time.

Database Administrators can utilize Db2 Batch Analyzer to find the most expensive statements running in batch each night that consume the most Db2 resources. These hidden expensive SQL statements will always be your best tuning candidates. If a developer encounters a problem with their application that requires a DBA, Db2 Batch Analyzer saves the DBA time by providing valuable initial background information on the problem and its location.

## Db2 Batch Analyzer

# Improve Db2 Application Deployment

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Candescent SoftBase Db2 Batch Analyzer Version 1.1.0
Candescent SoftBase Batch Analyzer Version 3.3.1
==== Batch Throughput Analysis (Jobs) ====
Command ==> | Scroll ==> CSR
Filter: ON Intervals: ON From: 01/01/17 To: 08/18/17 Locn: DBCG

+--- RUN TIME ---+
CSBC* Job Start | Job DB2 % | Deadlock Comt Chg Commit
Jobname Timestamp | Elapsed of Et | DB2 CPU I Timeout Cnt Pct Freqncy
-----+-----+-----+-----+-----+-----+-----+-----+-----+
CSBCCMRF 03/08 19:59 00:00:08 0.0 00:00:03 2 0 0 0.0 NO CMT
CSBCTMRF 03/08 20:04 00:00:01 68.9 ~ 0:00 3 0 0 0.0 NO CMT
CSBCTMRF 03/08 20:05 00:00:02 80.6 ~ 0:00 3 0 0 0.0 NO CMT
CSBCTMRF 03/08 20:07 00:00:19 30.8 00:00:11 3 0 1 65.5 00:00:19
CSBCTMRF 03/08 20:12 00:00:07 0.0 00:00:03 3 0 0 0.0 NO CMT
CSBCCMRF 03/08 20:18 00:00:02 27.5 ~ 0:00 3 0 0 0.0 NO CMT
CSBCCMRF 03/08 20:34 00:00:04 0.1 00:00:02 3 0 0 0.0 NO CMT
CSBCTMRF 03/08 20:35 00:00:08 0.0 00:00:03 3 0 0 0.0 NO CMT
CSBCTMRF 03/08 20:36 00:00:18 24.4 00:00:11 3 0 1 60.3 00:00:18
CSBCTMRF 03/08 20:37 00:00:04 0.1 00:00:02 3 0 0 0.0 NO CMT
CSBCTMRF 03/08 20:39 00:00:02 31.0 ~ 0:00 3 0 1 12.5 00:00:02
CSBCCMRF 03/09 11:25 00:00:06 0.0 00:00:02 3 0 0 0.0 NO CMT
CSBCAUT1 03/09 11:30 00:00:03 34.6 ~ 0:00 3 0 10 10.8 <1
CSBCAUT2 03/09 11:38 00:00:05 36.6 ~ 0:00 3 0 10 17.6 <1
CSBCCMRF 03/09 11:47 00:00:07 0.0 00:00:03 3 0 0 0.0 NO CMT
CSBCTMRF 03/09 11:52 00:08:23 0.1 ~ 0:00 3 0 4 25.8 00:02:05
CSBCTMRF 03/09 12:01 00:00:36 2.3 ~ 0:00 3 0 3 12.4 00:00:12
CSBCCMRF 03/09 12:07 00:00:04 0.1 00:00:03 3 0 0 0.0 NO CMT
CSBCTMRF 03/09 14:20 00:29:31 0.1 00:00:02 3 0 1747 33.9 00:00:01
CSBCTMRF 03/09 16:12 00:00:02 0.2 00:00:01 3 0 0 0.0 NO CMT
CSBCTMRF 03/09 16:14 00:00:02 0.6 ~ 0:00 3 0 0 0.0 NO CMT
CSBCTMRF 03/09 16:17 00:00:02 0.4 00:00:01 3 0 0 0.0 NO CMT
CSBCTMRF 03/09 16:22 00:00:02 0.3 ~ 0:00 3 0 0 0.0 NO CMT
    
```

Db2 Batch Job Summary Report

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CSBCTMRF 03/09 16:14 00:00:02 0.6 ~ 0:00 3 0 0 0.0 NO CMT
CSBCTMRF 03/09 16:17 00:00:02 0.4 00:00:01 3 0 0 0.0 NO CMT
CSBCTMRF 03/09 16:22 00:00:02 0.3 ~ 0:00 3 0 0 0.0 NO CMT
    
```

Db2 Batch Throughput Analysis Report

### Find Expensive Db2 Jobs, Programs, and SQL Statements

Identifying the most frequently executed and expensive SQL statements hiding within the thousands of Db2 batch programs that run each night is an almost impossible task for most Database Administrators and Application Developers. Conventional Db2 monitors are often ineffective at identifying which SQL statements should get your attention and tuning efforts first as they only display current tasks running on Db2.

SoftBase Db2 Batch Analyzer can instantly spot your most expensive batch job, job step, and SQL statement among thousands of nightly batch jobs and quickly show you which job, job step, and SQL statement needs tuning.

Db2 Batch Analyzer presents SQL performance information in a revolutionary new way - it lists the longest running Db2 batch jobs anywhere in your shop and then identifies whether Db2 data access is what caused each job to execute for so long. Db2 Batch Analyzer can identify which of your batch jobs have Db2 performance problems, and then immediately isolate which SQL statements should be tuned first.

### Simple Hierarchal Interface

Because Db2 Batch Analyzer displays all batch performance information summarized by Db2 batch jobs and programs, costly SQL can immediately be tied back to the application development groups responsible for these SQL statements.

Db2 Batch Analyzer performance reports are presented in a simple format that both DBAs and Application Developers will immediately understand. In fact, Db2 Batch Analyzer will allow Application Developers to locate their own problem Db2 programs and costly SQL statements without having to contact their DBAs at all. Developers can then review before and after analysis of whether their SQL adjustments have improved Db2 batch performance and noticeably shortened batch run times.

### Locate and Eliminate Db2 Contention Problems

When batch jobs fight for valuable Db2 resources, critical batch processing time is lost waiting for control of production data. Db2 Batch Analyzer quickly locates batch jobs experiencing costly deadlocks and timeouts.

Db2 Batch Analyzer can also identify Db2 batch programs that do not COMMIT database changes on a regular basis. These programs waste valuable Db2 resources that can slow down your batch processing significantly.

### Identify Jobs with Excessive Rollback Times

Batch jobs that do not regularly COMMIT their changes to Db2 risk excessive rollback times should they fail. Then, even after Db2 removes all work applied by the failing job, the original program must be rerun in its entirety after all problems have been corrected.

SoftBase Db2 Batch Analyzer quickly locates Db2 batch programs that are at high risk for excessive Db2 ROLLBACKS.