



**CDB Software, Inc.**

# **Sarbanes-Oxley Compliance for DB2<sup>®</sup> z/OS<sup>™</sup>**

February 13, 2004

## Sarbanes-Oxley Act

The purpose of the Sarbanes-Oxley Act (Sarbox) of 2002 is “to protect investors by improving the accuracy and reliability of corporate disclosures made pursuant to the securities laws, and for other purposes”. With the deadline for compliance approaching, companies are forced to implement and review internal controls for data and procedures that affect company performance. Although the SEC has not defined what “internal controls” under Section 404 will include, it is certain that mission-critical data that affects business results will be affected. Data such as customer orders, supply chain or inventory tracking must be controlled and audited. Changes made to this data must be monitored, and the ramifications of those changes must be available for real-time disclosure. Every public corporation doing business in America is required to comply regardless of the location of corporate data. Corporate data outsourced and/or processed outside America must be in compliance.

CDB facilitates compliance with Sarbanes-Oxley through its auditing, data propagation, replication and recovery solutions for DB2 z/OS.

### Auditing

CDB/Audit provides an audit trail through corporate data. This audit trail provides the information necessary for management review to determine if any transactions have occurred which must trigger reporting under Sarbox. For example, if a high-volume customer order is placed which will affect the company’s profitability, management will see that information in the audit report. Similarly, if a large amount of inventory is depleted in a single day, it will be reflected in the audit report. The Audit facility allows reporting of all transactions during a given time period or the report may be filtered on

a range of criteria. There may be a need to generate separate audit reports for separate applications or for specific users. Both Summary and Detail reports are available, with the Detail reports showing the actual data changed by the transaction.

### Data Propagation

CDB/Delta provides powerful data propagation facilities that simplify Sarbox compliance. Under Sarbox, historical records must be maintained. CDB/Delta generates a change file for transmission to another system, such as a historical data warehouse system. The changes can be in either flat file format or SQL format, allowing for compatibility with historical sites maintained on different platforms. The changes can be all transactions for a given time period or can be filtered on a range of criteria. The changes for different applications can be generated separately for transmission to multiple historical data bases. As an example, Human Resources data is warehoused separately from Customer Tracking data, and the Human Resources data needs to be copied weekly while Customer Tracking data must be copied daily. CDB/Delta generates the changes to meet these requirements.

### Data Replication

Operating under Sarbox compliance, there may be a need to copy a set of applications (or an entire subsystem) to a new subsystem for reporting purposes. This may be done so that the reporting occurs without the overhead of all other application transaction in the system or may be done to generate reports as of a particular past moment in time. In either case, CDB/Clone clones the set of applications or entire subsystem with a single command. The clone is done without affecting the source system with Stops or Quiesces. Currently, Month-End or Year-End Reporting places a heavy load on



the production transaction system. Through CDB/Clone, this load can be moved to an entirely different subsystem, resulting in better production application response time as well as quicker reporting. This becomes critical in the “real-time” reporting required with Sarbox.

## Data Recovery

Data availability is a requirement for compliance. If the data is not available, the evaluation and reporting of that data cannot be completed. There are times when data must be recovered due to a failing application or system problem. The traditional recovery solutions are either extremely slow (backup-restore-log apply) or extremely complex and expensive (hardware mirroring). The Backup-Restore-Log Apply process is the only method that guarantees absolutely no data loss in a DB2 environment. Under Sarbox, risks must be assessed and minimized. CDB/System Recovery eliminates the risk of lost transactions or data from mission-critical systems by providing a Backup-Restore-Log Apply process that is extremely fast and easy to use

CDB/System Recovery simplifies the Backup process by producing SHRLEVEL REFERENCE Image Copies “offline” without having to Stop or Quiesce the tablespace to create the copies. The new copy is produced by applying logged changes to a prior SHRLEVEL REFERENCE copy. DB2 Archive Log tapes are not required during the creation of the copy.

CDB/System Recovery uses CDBs Advanced Log Processing to pre-process the DB2 Log data while the Active Logs are being archived. The data is processed and saved in the CDB Repository in a compressed form (taking approximately 10-30% of the size of the Log) so

that the DB2 Log Archive tapes are never needed during a recovery. CDB manages this Repository, purging data as it becomes obsolete. CDB/System Recovery brings applications back online with no manual intervention. This automated process facilitates Sarbox compliance for “best practices” with internal controls. The user specifies which applications are to be recovered, and CDB/System Recovery does the rest. CDB/System Recovery recovers (Restore and Log Apply) a system or application and all associated indexes in a fraction of the time required by IBM utilities. Intelligent processing has been integrated for large partitioned objects to allow for parallel recovery and intelligent non-partitioning index rebuild. Entire applications can be recovered in parallel for greater timesavings. CDB/System Recovery determines which copy should be used as a base and automatically applies all changes since that copy.

CDB provides a simple solution to very complicated requirements for Sarbox compliance. With CDB/ADrec, your DB2 system is protected and audited – a major component to Enterprise compliance with Sarbanes-Oxley.

## About CDB Software

CDB Software, Inc. is a leader in data management solutions for DB2 z/OS. CDB focuses its business on DB2 for z/OS to provide unique and innovative solutions that enable companies to expand their DB2 system to meet business needs while controlling the overall cost of the mainframe. Founded in 1985, CDB is a privately held corporation based in Houston, Texas with offices worldwide.

**For more information visit:**  
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