TIME MACHINE SOFTWARE
Optimizing Production Processes

# SmartAnalyzer®for DMS – Facing Up to the Challenges

In today's complex and volatile business environment, every IT organization faces myriad operational challenges to maintain maximum business readiness – including the requirement of maintaining maximum availability and recoverability of the company's data.

## Identifying the Challenges

The task of maintaining data availability and recoverability is extremely complex due to the enormous number of data sets, processes and facilities involved.

All data centers provide backup for contingency purposes. There is no "right" way to implement backup, nor is there one universal solution. Rather, a number of backup methodologies are implemented by most installations, using multiple software (and sometimes also hardware) facilities.

In a typical data center, tens of thousands of data sets are used each day. These data sets are controlled via multiple data management products and facilities, such as CA-Disk (DMS), DFSMS, and CA-1. Software-controlled data set backup is performed using multiple products and utilities. The results are often *missing* backups, *unusable* backups, *non-standard* backups, and backups taken in a *non-optimal* way.

The **SmartAnalyzer** product has been created to identify exposures and inefficiencies in the way your business data is backed up.

## What Is SmartAnalyzer?

**SmartAnalyzer** is a powerful software product specifically designed to address the issue of onsite application backup.

**SmartAnalyzer** provides comprehensive auditing capabilities for data centers employing the DMS (CA-Disk) disk management product. **SmartAnalyzer** identifies problems and inefficiencies in the way your business data is backed up via DMS.

**SmartAnalyzer** supports all DMS environments, regardless of the level of DFSMS data policy implementation, local backup standards and methodologies used.

**SmartAnalyzer** requires minimal information to be supplied by the user. The online interface is menu-driven and features a fill-in-the-blanks approach to defining requirements.

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## SmartAnalyzer Benefits

- Reduces the organization's financial exposure.
- Minimizes interruption to mission-critical business applications.
- Reduces the backup window.
- Saves hardware, time and costs.

## SmartAnalyzer Strategies

**SmartAnalyzer** applies the following five key strategies to improve the reliability of the current backup procedures:

- **Detect Missing Backups**
  Often there are important or even crucial application data sets which are not backed up by DMS, or which are backed up at a wrong point-in-time (PIT). In case of software or hardware failure, the absence of proper backups may cause valuable time to be lost and, in extreme cases, even impact your business.

  Sample exposures: Active data set not backed up at all; Data set was updated multiple times with no intervening backups.

- **Detect Unusable Backups**
  Sometimes existing backup data sets and volumes contain invalid data which is actually unusable when recovery is required. The impact of this situation is usually equivalent to not having any backup at all.

  Sample exposures: Backup taken for data set with I/O error; Tape backup volume already scratched.

- **Detect Non-Standard Backups**
  Jobs often contain steps to back up data in a non-standard manner, causing resources to be wasted, or valuable time to be lost during recovery.

  Sample exposures: Backup for data set taken via general copy program (e.g., IEBGENER); Backup taken bypassing DFSMS-defined backup policy.

- **Detect Conflicting Backup Policies/Statuses**
  Backup policies defined to the local data management products, or backup statuses maintained in the local data management products, are sometimes not identical, causing data to be lost.

  Sample exposures: Differing expiration date for a backup file (volume) in DMS and in the Tape Management system; Differing catalog status of an archive file in DMS and in the System Catalog.

- **Detect Excessive Backups**
  More backups than actually required are often taken, causing resources to be wasted. Eliminating unnecessary backups can drastically reduce the amount of data being backed up, significantly reducing backup window time and system resources consumption.

  Sample points: Excessive backup performed for data which does not change; Backup taken for insignificant data.

## Hardware and Software Requirements

**SmartAnalyzer** executes on all processors capable of running under supported versions of z/OS and OS/390; DMS (CA-Disk) release 9.0 and later.