



Maximizing Availability

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Top IT Priorities



Cost Optimization

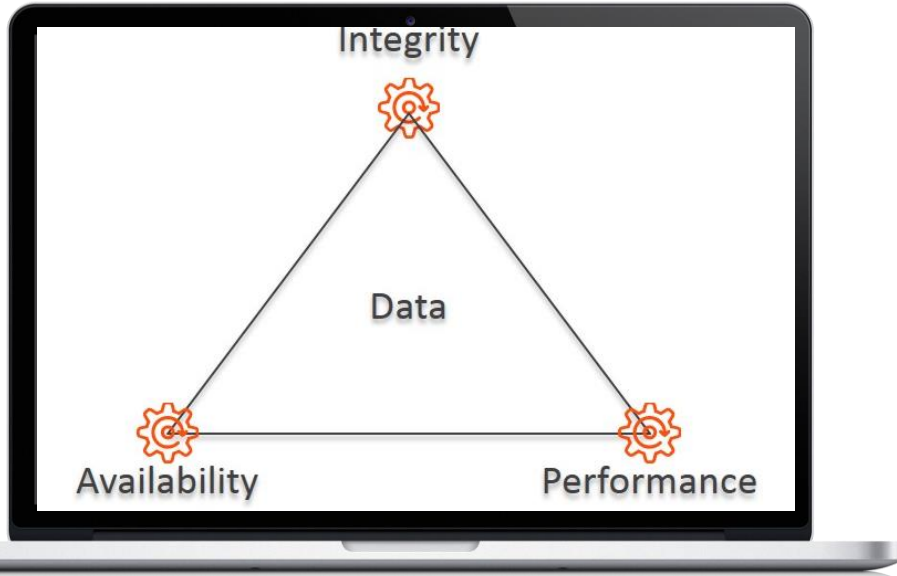


Application Availability



Skill Loss

Availability - requirements vary



Driven by business needs



Cost varies by business

Plan to maximize availability

- **Implement a proactive database management plan**
- **Determine thresholds acceptable to your business**
- **Act on the database objects that are violating thresholds**
- **Fine tune your thresholds as needed**

Benefits of planning



Workload Avoidance

You save money



Minimize Outages

No surprise outage



Plan for your Outage

Work with your application team



Minimize Need for Outages



Extend time between outages - Defragment databases

- Identify hotspots
- Consolidate the database record
- Works for all Full Function databases
- Advantage – zero outage for your data
- Defragmentation will speed up your traditional reorganization

IMS HALDB Online Reorg

Allows you to reorganize data without an outage

- Limited structure changes
- Not a replacement for a traditional reorg
- Logging and Recovery issues to be considered

Fast Path out of space

Your requirement:

- Prevent transactions from failing with FS return code

Consider a solution:

- Extends your FP Area in real time

Your action:

- Install the tool

The tool executes:

- Detects out of space conditions
- Dynamically extends the DEDB IOVF to keep the transaction going

Alter commands with IMS V13

HALDB Alter

- Increase the length of a segment
- Add new fields to existing undefined space at the end of a segment
- Executed via the Type-2 OLREORG command
- Works for entire HALDB 10 parts at a time
- Requires an outage at the end of the process

DEDB Alter

- Change the Area definition – Size, UOW, Root
- Change the Randomizer
- Must have a two stage randomizer
- Must not have SDEPs

HALDB – Partition schema maintenance

Your requirement:

- Add new partitions or rebalance data across HALDB
- Change randomizer or free space parameters

Consider a solution:

- Localizes the change to affected parts
- Maximizes your data availability

Your action:

- Provide a list of DBRC control cards to reflect desired changes

The tool executes:

- Re-distributes the data and updates your RECON datasets
- All with a single small outage at the end of the process

Fast Path – Area schema maintenance

Your requirement:

- Add or remove Areas from your FP database
- Change randomizer parameters

Consider a solution:

- Automates and localizes the changes for you
- Maximizes your data availability

Your action:

- Provide the desired changes

The tool executes:

- Re-distributes the data and optionally updates your online control blocks
- All with a single small outage at the end of the process

Database Structure changes

Your requirement:

- Convert from one database type to another
- Reformat certain data content based on business logic

Consider a solution:

- Provides a plugin to automate the process
- Provides a window for user defined data migrations

Your action:

- Provide the desired changes

The tool executes:

- Implements the structure change
- All with a single small outage at the end of the process

Copy production data

Copy production data for test purposes

- Use production image copies and recover to test dataset names
- Get a consistent copy of your production databases without outage

IMS Database Quiesce and Image Copy

Normal Image Copy Process

- Stop database updates
 - Close and leave allocated for read only
 - Any in-flight applications gets an error
- Image Copy the database
- Start database updates

IMS Database Quiesce and Image Copy

Image Copy Process using Manual database quiesce

- Issue type-2 command to start quiesce “mode”
 - Allows for a “clean” image copy
 - Any in-flight applications are held in a wait state
- Image Copy the database
- Issue type-2 command to stop quiesce “mode”
 - Any held applications are resumed
- Requires careful coordination

IMS Database Quiesce and Image Copy

Image Copy Process using automatic database quiesce

- Use a tool to automate the DBQUISCE
 - Automatically issues type-2 command to start quiesce “mode”
 - Allows for a “clean” image copy
 - Any in-flight applications are held in a wait state
- Image Copy the database
 - Automatically issues type-2 command to stop quiesce “mode”
 - Any held applications are resumed

Monitoring time between Warm Starts

PRILOG record size dictates IMS Warm Starts

Monitor the size of your PRILOG Record

- Use your database monitoring tool to track the growth rate
- Forecast how long you can go before hitting the limit

When Availability is Critical, Recovery is Crucial!

Unplanned downtime is an unfortunate fact of life

Majority of unplanned downtime is caused by software or human error

Majority of recovery time is “think time”

Recovery Assets – Ensuring coverage

How do you REALLY know recovery assets are available?

- DBRC
 - Register your databases
 - Check RECONS for assets
- Verify assets are cataloged
 - Just because DBRC knows about it doesn't mean the dataset still exists!
- Develop procedures which validate in both the DBRC RECONS & MVS Catalog that your recovery assets will be available when/if you need them
- Consider a tool that monitors your recovery assets
- Consider a tool that helps determine recovery points

Thank You

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