

DATABASE AUDIT AND MAINTENANCE

PRACTICAL
CHAPTER 1
Part 2

DATABASE ADMINISTRATION AND MANAGEMENT (IT-507)

Database Maintenance

- Database maintenance is a set of procedures followed to ensure that a database operates properly.
- Database management solutions such as Oracle and SQL Server necessitate regular updates to align with new technology and security risks.

Examples of database maintenance

- Backups.
- Data export/import operations.
- Index reviews.
- Object auto runs or removals.

Export / Import Operations

- One form of database task is data export/import operations. This is critical since it allows you to recover from issues that have affected your systems, such as data corruption or hardware failures. It enables you to back up or migrate pieces of your database to another system for backup needs.

IMPROVE MAINTENANCE

- Databases are used to keep a library of valuable information, especially with a well-organized database index that speeds up record retrieval. Changes occur regularly as data is discarded, added, or moved from one location to another. Changes can also be made to the database's parameters.

BENEFITS

- Data maintenance is crucial for every network owner or administrator. There are many advantages of having a good data maintenance routine. This explains why leading organizations do not neglect to implement a good maintenance plan.

BENEFITS

1. Keeps Companies Up to date

Innovations in technology are moving so fast, and organizations are trying so hard to keep up. And that's because being current gives them a firmer footing. If you fail to adapt to the latest trends, whatever you're offering becomes stale and unfit for present-day standards

With regular database maintenance, your data is as current as it gets. You are in a better position to cater to your audience.

BENEFITS

2. Promotes Efficient Database

Database maintenance improves database efficiency by deleting redundant or useless data. On some systems, this may result in less processing overhead.

It is critical to ensure that databases are operating at peak performance. Process in the system will slow down your workflow and increase operational costs.

BENEFITS

3. Simplifies Data Recovery

No matter how careful you try to be, sometimes, accidents occur. You may lose your data at any point due to an attack or a mishap. This could affect you and your business badly.

Database maintenance generates archival backups of critical data to enhance the data recovery process, making it easier for IT personnel to recover from disasters that damage their system.

BENEFITS

4. Protect Against Malicious Threats

Your system may be prone to cyber threats without your knowledge. The smallest of threats could escalate if you don't nip them in the bud on time.

Conducting database maintenance regularly assists in reducing downtime and guarding against malicious assaults. Not only does it help you to discover the threats, but it also gives you insights into how to resolve them.

BENEFITS

5. Saves Time

You could use the time you spend on database administration activities towards other things, such as developing your company's business or marketing strategy.

The most effective database maintenance techniques are automated. Once you initiate them, they work to clean up your system. You have more time on your hands to execute other productive tasks.

How to Maintain Your Database

To get the best result of database maintenance, you have to do it effectively. Otherwise, it might miss some critical details.

Accuracy is vital in implementing data. Without effective database management, the accuracy of your data is questionable.

Keep the following suggestions while maintaining your database.

How to Maintain Your Database

1. Store Data in a Single File

Having your data clustered makes database management more difficult. It is better to have it in one-fold for easy access and control.

Keep all of your data in a single program or file. This will save you from looking for it all over the place when you need to update data files.

How to Maintain Your Database

2. Use Descriptive Titles

Clear, descriptive titles, definitions, and data tabs provide insight into the data. This will assist you in identifying pieces of data quickly. You can, for example, find finished campaigns, target groups, and relationship types.

Make it mandatory for all your team members to enter information directly into the system rather than saving it somewhere else. For example, you can consolidate all of your business connections into a single file that everyone on the team can easily access when needed.

How to Maintain Your Database

3. Consolidate Data With Regular Updates

Make sure your database is updated by regularly changing the database's tables. If you subject your system to frequent inserts and updates to all table structures, this will accumulate inefficient data pages when searched for.

How to Maintain Your Database

4. Draft a Database Maintenance Plan

Database maintenance is so important that it requires strict adherence to a maintenance plan for efficiency.

The database maintenance plan is a proactive cybersecurity strategy regularly implemented on the database system to ensure risk prevention and optimal performance.

Database Maintenance for Efficiency

- Protecting your data against attackers and other intruders is highly recommended in a society prone to cyberattacks. As a network administrator, you need to implement adequate cybersecurity measures to keep cybercriminals at bay.
- But in case your cybersecurity defenses fail, database maintenance comes to the rescue by mitigating the impact of an attack. With its data recovery feature, you can retrieve most of your data, if not all of it.
- Besides the cybersecurity benefits of database maintenance, it also enhances the user experience on your network.