

# Distributed Database Types And Its Application

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**ABSTRACT:** This document can provide a summary of Distributed database. It supports a massive storage of data using some techniques that distributed on different multiple computers for processing. The purpose of this paper is to study how we can access the information by using Distributed database from the local and remote database. Various Applications of Distributed for accessing the data from the different computers located on different networks. We will study the various types of Distributed data base. In which we study how we create a duplicate copy of source database and modify the duplicate copy without affecting the original copy. We also study use of partitioning the large record into number of records and partitioned Index that provide the table availability of the records. Various applications of the distributed database in a different field the objective of distributed data base.

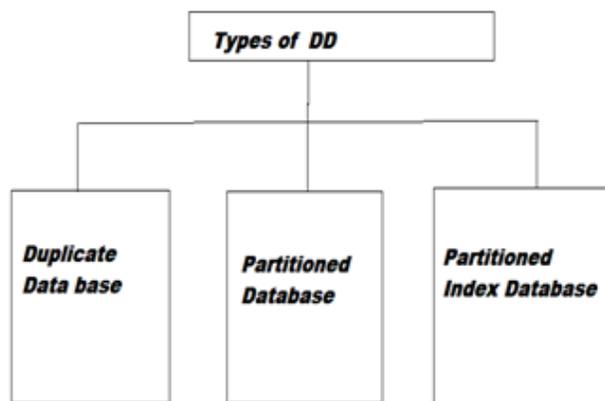
## 1 INTRODUCTION

The Proliferation and advances in computer network have led to increase Distributed database system. In Distributed Database Different users are connected for accessing the data. In distributed database the data from the single local computer can be transferred or distributed on various computers connected at the same physical location. The Data from the database can be distributed to the multiple physical location. It is a powerful technology with great potential to help companies focus on how to transfer information by their main branch to the different sub-branch or collected data from their sub branch to their main branch. This is not the easy as we see there is different types of corrupted data on the remote computers. There is also possibility of problem in physical location. The network must be failed in between data transfer. There is also possibility of hacking data in between transferring. There is some techniques used by Distributed Database for handling this types of problems during information transferring over the different networks.

## 2. Distributed Database

Distributed database is the study of how the communication can be build by creating the data on the local computer and distributed that information on different computers connected to the same physical location. With the involution of the Distributed database in the rapid growth of the Internet can develop the link between the Local computer and remote computer. Different companies having different sub branches can be easily distributed the information within time consuming. Distributed data base can play the major role in the growth of the new technology.

## 3 TYPES OF DATABASE



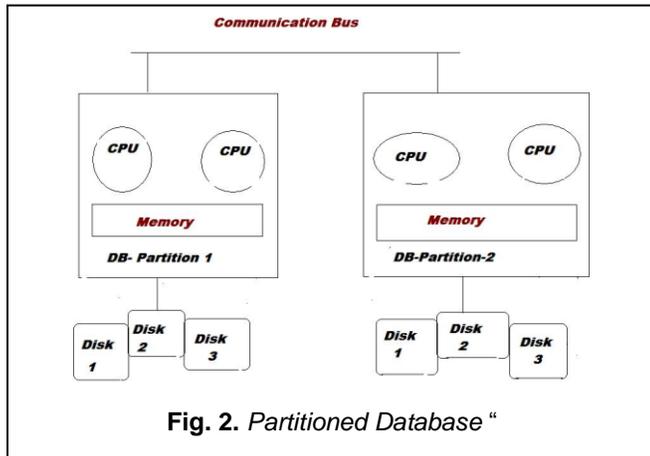
### 3.1 DUPLICATE DATABASE

The purpose of the Database duplication is to create a separate data base from the original database. It contains the copy of the original database from the source database. The purpose of this duplication is that we can take the back up of the original database and modify and update the data. We can test the duplicate data before transferring to the remote user. The duplicate Database can work differently and independently from the source database. There is two user which can perform action on the source data base and duplicate database. The source host can host the source database and destination host can host the duplicate database.

### 3.2 PARTITIONED DATABASE

Partitioning Database is helpful for maintaining large records of the database in distributed database. It can divide the main data base into number of database. It is helpful for the local user to spread or distributed their database across multiple disk. Partitioning the database improve the performance and maintaining the distributed database. The main purpose of Partitioning the database is to reduce the amount of data treat for the particular SQL operation. So that the response time will be reduced. Distributed database can maintain the various task such a rebuilding in-

dexes or backing up and can run more quickly.



### 3.3 Partitioned +index:

It defines partition scheme of a table space. The main purpose of the partitioned Index is that there is no need to modify the base table. Partitioned Index can be ammended independently with havin different name without using the source Index. You can modify and update the information in the Parditioned Index without affecting the source Index. Partitioned Index is useful for managing, availability and performance for Index organised table.

## 4. APPLICATION OF DATABASE FOR DATA SECURITY

### 4.1 Managing the Distributin of Application Data

In Distributed database with the help of Distributed Administrator it will detemrint the best location for storing the data. There are some issues regarding to this-

1. How much transcation are being to be proceed from each loacation.
2. How much load is taken by each node.i.e how much data are stored on each node.
3. The network is connected properly or not or it is reliable network for data transmission.
4. How is the data is organised .
5. Speed of the various nodes connected to the network and capacities of disk.

### 4.2 CONTROLLING CONNECTION ESTABLISHED BY DATABASE LINK

In Distributed database link first established a connection for a session with the remote database by the local user. This Connection is established in between Local user and the remote user. This connection establishe only when the connection has not already been established with the local system. If the connection is not held previously then the remote user ready to connect the local for data transfer. The connection which at no longer required are also terminated from the session . To close the database link connection in your user session, you must have the alter session system previliage.

### 4.3 MAINTAINING REFERENTIAL INTRIGITY IN A DISTRIBUTED SYSTEM

In Distributed Database the connection from local to remote fail in between transcation due to an integrity constraint rotation , the distributed return error message.It is the responsibility of distribut-

ed database administrator that design the application to check for any returned error message that indicate that a portion of the distributed update has failed. If the detection of error occurred you must roll back your transcation before allowing the application to proceed..

## 4.4 TUNING DISTRIBUTED QUERIES

### Tuning Distributd Queries:

In Tuning Database Queries the local system can devide the main Queries into a number of sub-queries for processing on to different remote user. The sub queries which are devided are passes to the remote user for the further execution. So that each remote user can perform their task according to the time limit with small execution and after completion of the task the result is sent back to the local user. Then the loacl node perform any post processing and return to the user or application.

## 4.5 COST BASE OPTIMIZATION

To improve the performance of the distributed queries, you have to set your system to use Cost Based optimization . Before transferring to user the queries should be set by using Cost-Base Optimization technique. The main task of optimization tor rewrite the distributed query.

## 5. VARIOUS APPLICATION OF DISTRIBUTED DATABASE IN DAILY LIFE

- 1) Electric Bill payment
- 2) Call center
- 3) Hospitality management software
- 4) Hotel check out system
- 5) Internet Tour booking Engine.
- 6) College having different branches.

## 6. SECURITY OF DISTRIBUTED DATABASE

SECURITY IS AN IMPORTANT ISSUES IN EVERY DISTRIBUTED DATABASE. MANY REMOTE USER ARE CONNECTED TO EACH OTHER ON SAME PHYSICAL LOCATION. SO EACH NODE WHICH IS CONNECTED ARE TO BE SECURE BY ANY FAULT TOLLERENCE OR NETWORK FAILURE. THERE ARE MANY REMOTE USER WORKING ACROSS THE DIFFERENT LOCATION SO THERE IS POSSIBILITY OF HACKING THE INFORMATION BY THE INTRUDERS AND CORRUPT THE DATA. SO THERE OFFERED AND ENCRYPTION TECHNIQUE , BY USING SECRET KEY ON DISTRIBUTED DATABASE AT REMOTE NODE WE CAN SECURE THE DATA. IF THE NODE HAVING VIRUS INVOLVED OR HACKING ATTEMPT THEN THE REST OF THE SYSTEM BECOME HELPLESS.

## 7. ADVANTAGE OF DISTRIBUTED DATABSE

If one organisation failed it will not stop the other branches working which are connected to the main branch. Each node is given the limited portion or task for execution. Local database still work even if the company network is broken. If we have to extend the node in between , if any new branch occur is is possible in distributed databse.

## 8. DISADVANTAGE OF DISTRIBUTED DATABASE

It is more complicated to set up and maintanance each and every node connected to the local computer. There are many remote node more security purpose is needed at every node. More complec to make secure data and index are not corrupt-ed. Data need to be carefully partitioned at the database be-

fore passing to the different remote user. So that every user get the limited task to performed. With in a given time period.

## 9. CONCLUSION

From the above information which it clear that the Distributed database is very useful in rapid growth of internet in different areas of advance computer. Many remote computer are work at a time at different location. For this reson there is also a technique to be used for precaution of the data at various user

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