



ARTIFICIAL INTELLIGENCE IN WEB TECHNOLOGIES FOR DATA MIGRATION

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ABSTRACT

Information relocation is a movement that includes moving of the information from the heritage source framework to target frameworks. A few associations like to move their current inheritance application to the cloud application as a result of certain issues looked by them while embracing new methodology, guidelines, innovations and stages. To procure highlights and advantages of cloud, the inheritance frameworks are required to move towards the cloud, and the information will be open on the web with the goal that a tremendous assortment of individuals can approach it according to the necessity. In this exploration paper, we intend to talk about relocation strategy and to investigate the difficulties and issues for movement of the electronic application, to the cloud.

Keywords: *Data Migration, Web application, Cloud Computing, Migration Techniques*

INTRODUCTION

Data migration perform transformation of data between storage units or entire computer systems [1]. It provides the way to move data from existing database to a newer one[2].

The old one is called as a legacy or source database which is migrated to the newer database, referred to as target or destination database [3].

The process of data migration has becomes a most critical challenge when origin and destination databases are separate in their central structures [4]. Therefore, simple import/export procedures will not work. Thus the activity of data migration is better to do using automated ETL tools than performing manually [5] [6].

Data migration task involve all with regards to data [7]. It make sure that the newer database is up and working without any problems [8]. It mainly having all the existing data generally present in the existing database, and that data must be migrated to right tables and columns [9].

This paper is categorized into these sections: Section 1 describes introduction to data migration. Section 2 contains cloud migration benefits. Section 3 contains cloud migration challenges. Section 4 includes the process of data migration and Section 5 includes Data Migration Utility.

BENEFITS OF CLOUD MIGRATION

Unlimited Scalability -The cloud migration provides the flexibility to expand the IT infrastructure based on the needs of enterprise. This indicates that the enterprise need not to worry on the future needs because of the IT infrastructure they required can be equipped at lesser time.

Reduced cost- Cloud migration can minimize the payment of capital and operating expense as resources are only obtained when required and are only paid for when utilized. The resources in the cloud environment are controlled by the third party, which helps in up-gradation and maintenance of resources.

Increased storage -Several amount of cloud providers are accessible in cloud to provide storage like a service. It allows you to store greater amount of data on the cloud rather than on a personal network.

Even, if you require more it's quite easy to take that additional storage from the cloud providers.

Automation-The IT peoples no longer requires to worry about that an application is up to the minute as that is the task of cloud providers. And they are already aware that they must stay up-to-date else they will begin losing customers.

Flexibility -You are having much more flexibility along with a cloud solution. Applications are easily tested as well as deployed [1]. You can easily acquire application as a service from cloud service provider, and if the application is not getting the task done, you can easily shift to other cloud provider. In case of moving towards the cloud solution, the flexibility of being able to see your company files anywhere using the Internet.

Better mobility -The service of cloud is accessible using internet, so that the users from anyplace can easily access the cloud using an internet connection. This is important for telecommuters or those who require to use the system afterwards office hours.

CHALLENGES IN CLOUD MIGRATION

Most of the organizations want to shift their previous legacy application to the cloud application. Some of the issues and challenges are as follows [10].

Less agility-An effort is needed to do changes to previous application so that such kind of applications will be synchronized with latest one.

Longer time to market-It takes much time to roll out latest services and features to provide support on business expansion.

Maintenance cost-Over the years, it is very costly to maintain employees for running system maintenance and day-to-day updates.

Problem in Integration- Integrating the existing application with the latest one and current standards-based applications specific tools, and services are required, which is very difficult to achieve.

Upgrade Issue-Existing applications mainly client and server applications need client based software that must be installed on desktop PC so that user can approach the applications.

Security- Security to sensitive data and other computing resources is a main concern at the time of moving to the Cloud. In fact, migration is important if this data cracks at the time of migration, it can affect on damage to the company or organization reputation [2] [3].

So, data migration from existing to the cloud-based server is a difficult task and needed many skill to control and manage the things [4] [15].

Portability-Portability is having a capability to run several components or the systems written for an environment in other environment. Therefore, in cloud domain the software that you like to move should be portable with another cloud one.

DATA MIGRATION PROCESS

The process of data migration is categorized into the following phases [5]:

Feasibility Analysis: This phase is used to identify the find that whether cloud migration is technically viable or not.

Requirement Analysis & Migration Planning: Its main goal is to understand the applications that are appropriate for moving into cloud, which part of the application to be migrated, which cloud provider to use and which of the service to use.

Migration execution: In this phase, migration of data and application will be done. The process like data extraction, cloud migration are actually implemented [6].

Testing and Migration validation: Testing and execution will be done in this phase to migrate the validate system.

Monitoring & maintenance: This phase is used to maintain and monitor the migrated system.

DATA MIGRATION UTILITY

The Migration Utility is designed for data migration from SQL Database to Data Warehouse [18] [7].

Migration Utility Execution Steps

Create a Part Number
Create a migration User

Import a new Fulfillment into the system

Ensure that SQL script is executed in the Database.

Ensure table include the data as per the earlier script executed in the database.

Execute script

Update the file path with the Database 1 and Database 2 from which one database is migrated to another. Also, set the Log File and Error File path to a feasible location in the local machine (where Log file can be created).

Execute the MigrationUtility.exe Utility

Migration is completed when the end Line in the Migration Log is Migration Completed Successfully.

Verify that ErrorLogFile is of size 0Kb, which ensure that Migration process was successful.

Migration Completed.

The Migration process maintains the old customer data along with the present migrated data. The migration is the most critical part of this project as we have to perform the migration without hampering the old data and simultaneously inserting the new data in newly formed tables. The reason to create a new migration utility is due to complex nature of data involved in migration [8]. The Migration utility helps us to migrate the data to the current format into the desired tables. Therefore, migration of data is done from web-based to cloud-based project using Migration Utility [9].

CONCLUSION

Information Migration is utilized to portray the method of moving information among frameworks or information organizations or information stockpiling frameworks. The movement is the most basic piece of this venture as we need to play out the relocation without hampering the old information and at the same time embeddings the new information in recently shaped tables.

The fundamental end is that in this paper, we are introducing ETL approach, its significance and Migration Utility which is intended to move the information from SQL Database to Data stockroom. The motivation to make another relocation utility is because of complex nature of information associated with movement. The Migration utility causes us to relocate the information to the current arrangement into the ideal tables.

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