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Cloud Migration Solution: Correction, Synchronization, and Migration of Databases

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Enterprise organizations may maintain data in the form of databases in database servers. For example, an enterprise organization may use databases for maintaining user or client information associated with portals or applications used to service various operations. Server systems may use a network database application to define, create, maintain, and control access to a database. A network database application may be used to define a server, where the server may then be used to service various requests (e.g., query requests, edit requests, etc.) associated with a corresponding database. The network database application may correspond to a relational database management system (RDBMS).

Current existing techniques also do not enable real-time synchronization between different servers. For example, databases in a production server may not be efficiently synchronized with a development server for development and testing purposes. In absence of databases being real-time synchronized to development servers, any errors in production server may perpetuate in the production server or may need to be corrected using inefficient trial and error techniques.

Migrating databases between servers corresponding to different network database applications may be a resource intensive process, both in terms of manpower, time, and computing resources. During the migration process, an enterprise organization may need to parallelly maintain production and development servers for each of the network database applications. Using parallel servers may result in inefficiencies for the enterprise organization. For example, monitoring may need to be done parallelly in both the existing servers and the newservers (e.g., for performance validation of databases migrated to new servers). Further, development processes may need to be completed in the previous server prior to migration of databases to the new server. Separate teams may need to be maintained for each of the servers while the migration is underway and for determining whether the migration to the new servers is successful and beneficial. Further, it may only be possible to determine the performance of the databases in the new server once all the databases have been migrated to the new server.

In legacy systems, migration of databases between different network database applications may comprise simultaneous migration of multiple databases (e.g., corresponding to multiple feed files) from the source server to a destination server. Further, multiple servers (production servers, development servers, QA servers, etc.) may need to be maintained for the databases corresponding to both the previous network database application and the new network database application (e.g., as described with reference to FIG. 2C) for considerable periods of time while the development

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and testing is completed in the servers corresponding to the new network database application. Various procedures described herein may enable incremental migrating of a feed file (e.g., in real time) to the destination server databases as and when it is loaded in the source server databases. The system may determine performance of a database corresponding to the feed file loaded to the destination server and compare it with the performance of a database corresponding to the feed file loaded to the source server. Determining the performance may comprise determining the latency associated with the data loaded in the destination server, a memory occupied by the data, etc. This may avoid migration, development, and testing of all databases moved from the source server to the destination server in a collective manner which may result in increased resource usage. A developer team associated with the source server may monitor performance of an individual feed file as loaded to the

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destination server, and further perform development and testing, as and when a feed file is moved to the destination server. This may enable a smoother transition to a new network database application that is associated with the destination server without waiting for significant periods of time for monitoring performance and performing development and testing of multiple databases in the new network database application.

In some arrangements, the computing platform, after loading the feed file to the database associated with the destination server, may load the parent feed file to the database associated with the source server. Further, the computing platform, after loading the parent feed file to the database associated with the source server, may load the feed file to the database associated with the source server. In some cases, the one or more first performance statistics may comprise one or more of memory resources required for the feed file loaded at the destination server, or a latency associated with the feed file loaded at the destination server.

In some arrangements, the source server and the destination server may be associated with different relational database management systems (RDBMSs). In some arrangements, the source server and the destination server may be associated with different versions of a same relational database management system (RDBMS).

WHAT IS CLAIMED IS:

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1.　　A computing platform for migrating databases between a source server and a destination server, the computing platform comprising:

　　　at least one processor.

　　　a communication interface communicatively coupled to the at least one processor; and

　　　a memory storing computer-readable instructions that, when executed by the at least one processor, cause the computing platform to:

　　　　　configure the source server with a first source folder and a first destination folder.

　　　　　configure the destination server with a second source folder and a second destination folder.

　　　　　receive a plurality of feed files at the first source folder.

　　　　　load the plurality of feed files at the first source folder to a database associated with the source server.

　　　　　move the plurality of feed files to the first destination folder.

　　　　　copy a feed file, of the plurality of feed files, to the second source.

　　　　　load the feed file to a database associated with the destination server; and

　　　　　determine one or more first performance statistics associated with the feed file at the destination server.

　　　　　send an indication of the one or more first performance statistics to a user computing device.

2.　　The computing platform of claim 1, wherein the computer-readable instructions, when executed by the at least one processor, cause the computing platform to:

　　　determine one or more second performance statistics associated with the feed file at the source server; and

　　　send an indication of the one or more second performance statistics to a user computing device.

3.　　The computing platform of claim 1, wherein the one or more first performance statistics comprise one or more of:

　　　memory resources required for the feed file loaded at the destination server; or

　　　a latency associated with the feed file loaded at the destination server.

4.　　The computing platform of claim 1, wherein the computer-readable instructions, when executed by the at least one processor, cause the computing platform to:

　　　after loading the feed file to the database associated with the destination server, copy a second feed file of the plurality of feed files, to the second source folder;

　　　load the second feed file to the database associated with the destination server.

5.　　The computing platform of claim 4, wherein:

　　　the loading the feed file to the database associated with the destination server is based on receiving a first instruction from the user computing device; and

　　　loading the second feed file to the database associated with the destination server is based on receiving a second instruction from the user computing device.

6.　　The computing platform of claim 1, wherein the source server and the destination server are associated with different relational database management systems (RDBMSs).

7.　　The computing platform of claim 1, wherein the source server and the destination server are associated with different versions of a same relational database management system (RDBMS).

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8.   The computing platform of claim 1, wherein the computer-readable instructions, when executed by the at least one processor, cause the computing platform to:

determine a job account used to copy the feed file to the second source folder.

determine one or more scripts based on the job account.

load the feed file to the database associated with the destination server by causing loading the feed file based on the one or more scripts.

9.   The computing platform of claim 8, wherein the one or more scripts are associated with an individual user if the job account is an account associated with the individual user.

10.   The computing platform of claim 8, wherein the one or more scripts are associated with the source server if the job account is a service account.

11.   The computing platform of claim 8, wherein one or more scripts indicate a table in the database associated with the destination server to which the feed file is loaded.

12.   The computing platform of claim 1, wherein the feed file is associated with a key columns file indicating one or more columns of the feed file, wherein the computer-readable instructions, when executed by the at least one processor, cause the computing platform to load the feed file to the database associated with the destination server by causing loading the one or more columns of the feed file and not loading other columns of the feed file.

13.   A method for migrating databases between a source server and a destination server, the method comprising:

configuring the source server with a first source folder and a first destination folder.

configuring the destination server with a second source folder and a second destination folder.

receiving a plurality of feed files at the first source folder.

loading the plurality of feed files at the first source folder to a database associated with the source server.

moving the plurality of feed files to the first destination folder.

copying a feed file, of the plurality of feed files, to the second source folder.

loading the feed file to a database associated with the destination server; and

determining one or more first performance statistics associated with the feed file at the destination server.

sending an indication of the one or more first performance statistics to a user computing device.

14.   The method of claim 13, further comprising:

determining one or more second performance statistics associated with the feed file at the source server; and

sending an indication of the one or more second performance statistics to a user computing device.

15.   The method of claim 13, wherein the one or more first performance statistics comprise one or more of: memory resources required for the feed file loaded at the destination server; or a latency associated with the feed file loaded at the destination server.

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16.   The method of claim 13, further comprising:

after loading the feed file to the database associated with the destination server, copying a second feed file of the plurality of feed files, to the second source folder;

loading the second feed file to the database associated with the destination server.

17.   The method of claim 16, wherein:

the loading the feed file to the database associated with the destination server is based on receiving a first instruction from the user computing device; and

the loading the second feed file to the database associated with the destination server is based on receiving a second instruction from the user computing device.

18.   The method of claim 13, wherein the source server and the destination server are associated with different relational database management systems (RDBMSs).

19.   The method of claim 13, wherein the source server and the destination server are associated with different versions of a same relational database management system (RDBMS).

20.   A non-transitory computer readable medium storing computer executable instructions that, when executed by a processor, cause:

configuring a source server with a first source folder and a first destination folder.

configuring a destination server with a second source folder and a second destination folder.

receiving a plurality of feed files at the first source folder.

loading the plurality of feed files at the first source folder to a database associated with the source server.

moving the plurality of feed files to the first destination folder.

copying a feed file, of the plurality of feed files, to the second source folder.

loading the feed file to a database associated with the destination server; and

determining one or more first performance statistics associated with the feed file at the destination server.

sending an indication of the first performance statistics to a user computing device.