"azure are snapshots of data that help in

[Business](#), [Strategy](#)

" Azure Redis Cache is an open-source Redis cache.

" (Rob Boucher, Docs. microsoft. com. , 2017). The cache is managed by the company and helps in easier maintenance. Also, the cache is easily accessible from the application. Azure Redis Cache is available in the premium feature, where cache provides better performance, better security, bigger workloads, and disaster recovery.

The features provided with the cache are – Redis allows the data to be stored on cache, which allows faster access to data. There are snapshots of data that help in backing up the data and help in recovery in cases of failure. " Also, Redis Cache helps the application to become responsive as the customer load increases." (Rob Boucher, Docs. microsoft. com.

, 2017). It takes the high-output features of Redis engine. " The separation of cache layer allows the data tier to work autonomously from the other resources in the application layer." (Rob Boucher, Docs. microsoft. com. , 2017). Azure Redis Cache manages and monitors the health and performance of the cache through Azure portal.

Additionally, replication of the cache helps in maintaining the availability of cache across different cache failures. (Docs. microsoft. com , 2017)Rob Boucher, Docs. microsoft. com.

(2017). Azure Redis Cache FAQ. online Available at: https://docs. microsoft. com/en-us/azure/redis-cache/cache-faq Accessed 10 Dec. 2017. HDInsightAzure Blob storage is used for storing unstructured object data,

that can be accessed from anywhere. Blob storage helps in making the data accessible publicly and enables storing data privately.

The CDS system can store unstructured data with the help of Azure Storage with HDInsight. The data has to be stored in the form of blobs and containers. Azure also enables HDInsight clusters that are used for interpretation and analysis of unstructured data. Azure storage is a storage solution that can be integrated with HDInsight. (Docs. microsoft.

com., 2017). " HDInsight uses a container in Azure Storage as a file system for the cluster". (Jonathan Gao, Docs. microsoft.

com., 2017). Additionally, through a Hadoop distributed file system (HDFS) interface, the user can get the set of components that can operate directly on unstructured data that are stored in the form of blobs. (Docs. microsoft. com., 2017).

Azure Storage Blobs stores the binary data as an alternative to actual data for more effectiveness. This approach helps in accessing the documents from multiple servers. (Docs. microsoft. com., 2017)Jonathan Gao, Docs. microsoft. com.

(2017). Query data from HDFS-compatible Azure storage – Azure HDInsight. online Available at: https://docs. microsoft. com/en-us/azure/hdinsight/hdinsight-hadoop-use-blob-storage Accessed 10 Dec.

2017. Microsoft Azure Offline Data SyncFor synchronization in the offline mode, the task is to update the data when the device is offline or not connected to a network. The synchronization in pieces is done by downloading the new items. The OfflineDb path filename is set before creating the offline tables.

Offline tables use a local SQLite store the data and the operations are performed via the local SQLite store instead of remote server. (Docs. microsoft. com., 2017). In the offline mode, the application changes are saved to the central repository when you are connected to the network again. When the application is back online, the data is synchronized and local changes are saved to your Azure Mobile Application. (Docs.

microsoft. com., 2017).

The feature also includes capabilities to detect conflicts of multiple changes, when there is a change in same record on both client and backend level. (Docs. microsoft. com.

, 2017). The application data will be stored in Azure in Relational Database format and we will continue to do the same for EDS and CDS systems. Docs. microsoft.

com. (2017). Working with the App Service Mobile Apps managed client library (Windows. online Available at: https://docs. microsoft.

com/en-us/azure/app-service-mobile/app-service-mobile-dotnet-how-to-use-client-library Accessed 10 Dec. 2017. For the synchronization task, the

different empty member databases are declared and are assigned to one hub database. (Azure, 2017). The Data Sync service provisions the sync by making the member databases copy the schema from the hub database. (Azure, 2017). When you setup the synchronization group, you declare the hub database and assign as many empty member databases as you want.

Similarly, the changes made to a member database gets synced to the hub and are tracked. There are several foreign key references present in the hub, but are not copied to the member databases while performing the synchronization. (Azure, 2017). Azure, M. (2017). Introduction to Data Sync Service for SQL Azure.

online Azure. microsoft. com.

Available at: https://azure. microsoft. com/en-us/blog/introduction-to-data-sync-service-for-sql-azure/ Accessed 10 Dec.

2017. For the data alignment strategy for telematics data, we use a telematics data alignment process that will serve the process of converting the telematics data available in different formats and contains different formats to a specific format that can be interpreted. (Ntrs. nasa. gov., 2017). Additionally, in EDS, data is stored in relational databases. Any kind of data transfer between applications is using web services.

The querying and accessing of data is using the HDInsight on Azure platform. In CDS, for structured data there is Relational (AzureSQL) and for unstructured databases (HDInsight). Data can be accessed using SQL or Hive and Spark. Ntrs. nasa. gov.

(2017). Available at: https://ntrs. nasa. gov/archive/nasa/casi. ntrs.

nasa. gov/20040040086. pdf Accessed 10 Dec. 2017