Database implementation is one of the biggest challenges for an organization and a database administrator.

One of the reasons for this is that at the beginning of the implementation, there are already some critical installation options that need to be addressed. These installation options include drive and database physical structure selection which are not easy to change after the database is hosted.

There are also some parameters like authentication and network communication port configuration which need to be considered. These are essential to check in the database production environment to overcome the security loopholes.

Other things to consider are memory, CPU, database recovery model and compatibility level parameters which all affect database performance if they are not tuned during the initial phases of database implementation.

Given all the said database implementation considerations, it will be difficult for a database administrator to check and create an inventory of all the database parameters which are used and configured. Maintaining the database in accordance to best practice will surely become a challenge. This will especially become painful for a new database administrator who needs to figure out the implementation parameters of all previous SQL Server instances and databases.

With the said challenges, the group aims to produce a database evaluator that will diagnose and check the basic implementation parameters of SQL Server Instances and Databases. The database evaluator will target all versions of SQL Server starting with SQL Server 2008 and SQL Server 2012. Older versions of SQL server will not be supported.

A database administrator can make use of the developed tool to generate reports about the configured database parameters. This tool will become very useful in case you have multiple SQL Server instances installed. A report will be generated for each instance and these reports will show details about mismatched parameters. From these reports, a database administrator can take necessary actions to improve their database implementation. In addition, the tool can also be used to audit SQL Server instances and databases on regular time intervals for database maintenance purposes.

The project will run under a Software Engineering methodology, which will produce a high quality product and has no associated costs or risks in the implementation. The project also has several management controls built in, this is to minimise the risk areas and improve the quality of the product. There are the standard advisor meetings, timecard, diaries and audits. Also, change request controls are used to control the processes used to develop and change the project.

The final products of the project are as follows: a) the client application that will produce a dump file of the client’s database, b) the product website where a customer can download the client application and upload the database dump files, and c) the database evaluator tool that will generate reports from the dump files uploaded by customers. The dump files contain information about database of the client. It is planned that these dump files will be encoded for security purposes. The client application is free to download from the product website and profit will be generated instead when customers choose to avail of the database evaluation services.