



Case Study



Icreon

Database Optimization Services

Our client, a software solutions provider, based in the UK, required a solution that would enable them to acquire specialized skills and services, to meet their software needs, at an optimum cost. Their requirements were for specialized services in the area of database optimization, which included tasks to optimize databases, stored procedures and other database related activities, in order to improve and enhance the performance of the software solutions developed by them. Based on their requirements, Icreon suggested the Full Time Equivalent (FTE) engagement model wherein some of our staff, possessing the relevant knowledge, would be solely dedicated to our client's project alone. The specialized services that Icreon provides to our client, on an ongoing basis, includes implementation and optimization of various database related tasks such as optimization of existing queries and stored procedures, creation of queries and new stored procedures, generation and implementation of various DTS packages and database migration services.

Customer Profile

Our client is a UK based software solutions provider specializing in developing solutions for mail order fulfillment and multi-channel retail businesses. In order to cater to the sales operations requirements for mail order, web and multi-channel retail, our client has designed and developed various off-the-shelf products that can be used on a stand alone basis or can be customized to suit individual requirements.

Business Requirements

Our client wanted a solution that would enable them to avail of specialized services in the field of database optimization at an optimum cost. In order to improve the performance of the software products developed by them, our client required regular database optimization services to be performed such as SQL query and stored procedure optimization, database migration etc.

Our client desired resources possessing specialized database knowledge and who would perform the necessary services on a regular basis, but did not want to go through the lengthy and costly process of hiring and training personnel.

Virtual staffing to avail of database optimization services

Based on the requirements of our client, and in order to do away with process of hiring and training personnel, Icreon suggested the FTE engagement model. The FTE engagement model enables our client to extend their staff to Icreon's own offshore development center. Such staff augmentation is a tried and tested method and one of the best mechanisms to ensure that all software solution requirements are holistically managed, maintained and delivered by personnel, solely dedicated to our client's project alone.

The advantages of the FTE engagement model, for our client, include:

- **Cost Effectiveness:** All tangible and non-tangible metrics such as office paraphernalia, employee management etc, is managed by Icreon.
- **Time Efficiency:** Our virtual employees are dedicated individuals with expertise and experience in their respective areas.
- **Direct Contact:** The client has direct access to these resources and can directly assign work to them.
- **Reserved Copyrights:** All intellectual copyrights of the work done by such resources would remain with the client.

Icreon provides extensive database optimization services for various software products developed by our client. The services provided include:

Optimizing existing SQL queries and stored procedures

SQL statements are used to store, retrieve and manipulate data stored in relational databases. Stored Procedures are a set of SQL statements that form a logical unit, have an assigned name and are stored in the database in a compiled form. A stored procedure is executed through an application program and can accept input parameters and return multiple values in the form of output parameters.

As the volume of data stored in the database increases there is a need to reduce the execution time of queries and stored procedures in manipulating data, in order to improve the speed and performance of the associated applications. Our client's virtual staff, at Icreon's development center, provides SQL query and stored procedure optimization services which involves reviewing and re-writing queries and stored procedures to reduce their execution time leading to enhanced performance.

Creating new SQL queries and stored procedures

In situations where the demand is for writing complex queries and stored procedures, Icreon make use of its specialized domain knowledge to write and create new SQL queries and stored procedures. This involves studying our client's database structure, writing the SQL queries and stored procedures and optimizing them to improve the execution time.

Database Migration

Database Migration services involve migration of stored procedures, schemas and data across multiple database platforms and versions. Migration services range from a simple export of the old database and import it into the new version to complex migration services that involve migration across multiple database platforms.

DTS package generation

Data Transformation Services (DTS) provides a set of tools through which data can be extracted, transformed, and consolidated from disparate sources into single or multiple destinations. The source or destination can be a text delimited file, MS Access Database, Excel spreadsheet, SQL server or any other database such as Oracle etc. Each DTS is known as a package and each

package can include an organized set of tasks that define work to be performed, transformations on data and objects, workflow constraints that define task execution, and connections to data sources and destinations. DTS packages can be created by using the DTS designer and can be customized by manipulating various DTS objects.

As per the requirements of our client, Icreon generates and implements DTS packages in order to perform data transformation task. The process also involves writing of SQL statements to manipulate the transformed data.

Technologies used in developing this application are:



Summary

Icreon personnel, dedicated to our client, provide various database optimization tasks to improve and enhance the performance of the software product, developed by our client, on an ongoing basis. Through the FTE model, our client is able to make use of Icreon's specialized knowledge and services, at comparatively lower costs, without having to go through the process of hiring and training staff themselves.