



CU2 Global Pty Ltd
The Global Data Conversion Experts



ConvertU2 Technologies
The Data and Software Conversion Experts



Consolidating many hundreds of Access databases in to a Single Multi-tenant Environment.

2SQL Multi-Tenant.

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Introduction

Many organizations, either through natural growth, takeovers, amalgamations, mergers, or simply through the desire for co-operation with sister or complementary agencies, face the need to merge their corporate data assets in to a single, secured and manageable data repository. In the case where Microsoft Access databases proliferate through-out an organization(s), the opportunity to consolidate in to a Multi-tenant SQL Server environment bears serious consideration.

A program of consolidation of an Access database population, tackled manually, would require months to years of effort depending on the number and complexity of the Access databases. As an example, a recent analysis of an Access database from a US Law enforcement agency yielded a conversion effort estimation of 8,700 man hours, and this being for a single Access database.

High levels of process automation, utilizing the 2SQL program, will dramatically reduce the bulk of the workload. Accounting for the complex but highly repetitious conversion and migration tasks, organizations are left to focus on the critical end-user engagement model and system wide design issues.

Shared Databases through Multi-tenant Structures

'Multi-tenant' fundamentally refers to the capability to service multiple users or groups of users securely in a shared database structure. Each 'user' or 'user group' interacts with 'their own' data, unaware and unable to access data and functions belonging to other users of the shared database environment unless authorized to do so.

In this way advantage can be taken of the obvious benefits of co-location, shared operations management, application of consistent security policy, etc. as well as leveraging high value uses over the entire corporate data asset. These uses may include data mining, application of Business Intelligence functions, corporate wide process co-operation and/or re-engineering, to name a few.

Combining hundreds, if not thousands, of individual Access databases in to a single corporate data asset is a daunting undertaking for any organization. Each Access database needs to be individually converted to a Multi-tenant SQL Server structure. Once converted their progressive inclusion in to the new corporate database environment needs to occur with minimal disruption to normal user operations.

Typically manual conversion programs of this profile span multi-year timeframes. They use specialist tactical resources, either not normally found within the organization's available resource pool or not in the numbers required.

2SQL Multi-tenant

Automation of the conversion and migration processes drives down the number and requirement for specialist resources, and importantly reduces implementation

timeframes and costs. 2SQL's automation capability typically delivers in excess of an 80% reduction in project timeframes with cost reductions approaching 75%.

The 2SQL program spans three fundamental phases involved in any such program of works:

1. **Analyze the data environment**; collecting detailed meta data on the database population. This supports the decision process of what needs to be converted and in what order; what can be discarded; and what can remain in its current state.
2. **Convert & Migrate databases targeted for conversion**: perform detailed analysis on both the software and data that together constitute a particular application; find, analyse, construct solutions, and resolve all conversion and migration issues. Provide detail of issues required to be resolved manually and support Bench and User Acceptance tests.
3. **Deploy the new application and database** in to the Multi-tenant SQL Server environment.

By automating in excess of 95% of the **Convert & Migrate** phase and the **Deploy** phase, and accounting for approximately 50% of the work effort involved in the **Analyze** phase, implementation timeframe reductions in excess of 80% are achievable with 2SQL.

“Shared Database – Shared Table Schema” is the most efficient target design for multi-tenant structures. However the ability to determine this is critically dependent upon the collection and analysis of detailed information on each Access database. Automated collection of detailed metadata on a company's Access database population is a critical feature of the 2SQL program.

Multi-tenant structures provide the opportunity for 2SQL to automate specific functionality unique to such environments. These include reducing conversion complexity by creating Queries that replace the original tables, lowering and simplifying the conversion effort required for Queries, Forms, Reports, Modules and Macros; automating the highly repetitive task of populating Tenant Keys in new Table structures needed to identify 'users' or 'user groups'; construction of new primary keys as a composite key of the former primary key and new tenant key; and the automatic renaming of newly created Tables.

Summary

Consolidation of many tens or hundreds of separate and disparate Access databases in to a “Shared Database – Shared Table Schema” multi-tenant structure is a common corporate goal. Normalizing table schemas during the process provides additional opportunity to simplify support and ongoing development, as well as laying a foundation for the introduction of new business and process functionality not available beforehand.

The adoption and usage of 2SQL, the world leader in Access database conversion automation, significantly reduces demand for tactical expertise and drain on corporate resource pools, and delivers unmatched outcomes in terms of timeframes and investment levels required.