

HP NonStop Server customers upgrading to NonStop SQL without reprogramming!

What do the nations largest "Do-it-yourself" retailer, the nations largest casino & resort operator, the largest provider of e-911 services, one of the world's largest software companies and HP's NonStop Enterprise division Software Release Tools Group have in common? They all use NonStop server systems from HP and they are among the majority of NonStop server customers whose programs are written using Enscribe, the original flat-file system running on the NonStop Kernel operating system.

The difference for these users is that they have **upgraded from Enscribe to NonStop SQL** and accomplished this **without changing their existing programs**.

Everywhere you turn the press and industry pundits are talking about heterogeneous data access, data marts, data warehouses and using technology like ODBC, JAVA and products like CrystalReports and Oracle to access your data. Unfortunately for most Nonstop server users, this has been possible only in their dreams because their data is stored in Enscribe files. This is also true for their programs that are written for Enscribe and cannot be converted to a relational database, such as NonStop SQL, without rewriting them from the ground up. At least, not until now!

A small group of former Tandem employees has been taking the Enscribe user base by storm. The company, Carr Scott Software Incorporated (www.CarrScott.com), formed in 1995 by Dr. Richard Carr and Harry Scott have created a product called Escort⁺SQL that is a dream come true for Enscribe customers.

Escort SQL, converts Enscribe applications and files to the NonStop SQL industry standard relational database, without requiring any changes to existing programs (i.e. no source code changes or even recompiles are necessary). You get all the benefits of having done a hand conversion to SQL without the work, time or risk involved.

So how are Home Depot, Mirage Resorts, SCC Communications, HP's NonStop division and others using this technology to their benefit ?
Read on. . .

How Escort⁺SQL works:

- 1) File Conversion and Loading - transforming the data into your desired form & loading it into SQL.
- 2) Enscribe/SQL emulation - intercepting the Enscribe calls and performing efficient SQL.

File Conversion and Loading:

In many cases, today's Enscribe files were not originally designed as the "clean", normalized databases that we all would prefer. Escort SQL gives you a second chance to change all those things you don't like about your existing files in the process of converting them to SQL. Expand or eliminate fields. Reformat compressed data (i.e. an example is dates with current YYMMDD or other formats being expanded into fully millennium compliant dates). Finally, normalization of redefines or variants in existing Enscribe files into normalized SQL tables (i.e. Escort SQL allows normalization of one Enscribe file to any number of SQL tables - this is a database design issue of what you want and we don't place any unnecessary limits on what you can do). The end result is SQL tables that are designed to support your business now and into the future. Our high-speed parallel database loader loads the existing Enscribe data into the new SQL tables very efficiently, using all the rules you have supplied about how the data is to be transformed. Once your production data is loaded into the tables, these same transformation routines will be used at runtime to successfully READ and WRITE the data.

HP's NonStop Division - Software Release Tools Group

HP's NonStop division software release group manages over 1400 software products for all of the NonStop Server platforms. To issue a Software Update Tape (SUT) that contains all of the NonStop Kernel products for a particular customer's system, many things have to happen. A team of highly skilled people has undertaken a complete system revamp and the end result will be beautiful. One of the interim steps that they have taken is to standardize all data across all platforms using relational databases as the standard to ease management and access to data across multiple platforms. Unfortunately for the team (and probably any team trying to upgrade a system written by others over 10 years ago), the intricacies of upgrading the existing files to a SQL database seemed impossible.

The team was then introduced to Escort SQL. The team project leader has said on numerous occasions, "My initial thought after hearing about Escort SQL was that if it could ever do what they say it can, this will make our project." After a few months of testing, the Release Tools Group (RTG) replaced their Enscribe files with SQL tables and never missed a beat (or a SUT deadline). **"It's really true! Our programs can't tell that the Enscribe files have been replaced by NonStop SQL tables. Even our ENFORMs work, except now they are executing against SQL tables, thanks to Escort SQL."**

Home Depot

You may know that Home Depot is the world's largest "Do-It-Yourself" retailer, with annual revenues exceeding US\$30.2 billion growing at approximately 25 percent annually and they have about 850 retail outlets nationwide adding a new store every three days.

What you might not know is that Home Depot depends on NonStop Server systems from HP to control the returns and refunds at each store, and to handle real-time check approval using the Total Payments System from BancTec one of our Alliance partners.

Thanks to their phenomenal growth, their NonStop server systems were beginning to feel the strain. While an upgrade to S-series systems had made a huge difference, Home Depot was seeing other issues that they knew needed to be addressed. Tom Larson, Senior Manager of Technical Services for Home Depot knew that a number of their Enscribe files were approaching the 2GB Enscribe file size limit. The Enscribe file size limits were limiting the amount of data that Home Depot could keep on-line. With their rapid expansion and value of the data itself, Home Depot's goal was to keep more data and make it more accessible to

How Escort SQL works: (cont.)

Enscribe/SQL Emulation:

The second part of what Escort SQL does is provide what can be thought of as an Enscribe API for NonStop SQL. What does that mean? Specifically, your Enscribe programs can execute unchanged against either Enscribe files or SQL tables (i.e. assuming that you have supplied to Escort SQL the rules for doing the data transformations, which is done as part of the database design/loading phase). If Escort SQL has successfully loaded the data into the SQL tables, we will be able to perform all the Enscribe operations that your programs will execute (i.e. this is because your production database is a history of all the operations that your programs have done - that's how the data got into the database in the first place!). When an Enscribe program requests to open a file, if a special error occurs on the open, an error 1028, which says you just attempted an Enscribe operation against a SQL table, Escort SQL then kicks into action. Escort SQL checks its in memory table to see if we have the mapping rules for this table, if so, then Escort SQL will do all I/O to that file on behalf of that program from that time on. As mentioned before, the program can't tell that the file(s) have been changed to SQL. This means you can change one file to SQL or change them all. Escort SQL does all the heavy work for you.

their employees. Given the challenges of keeping this much data on-line and managing it, the decision was made to convert to NonStop SQL. Investigating how to convert from Enscribe to SQL, HP NonStop specialist Walt Sanders found Carr Scott Software and introduced Home Depot to Escort SQL. "Escort SQL allowed Home Depot to quickly and easily convert from Enscribe to SQL without having to ask their software vendor, BancTec to re-write their software or to take on the maintenance of the software package themselves." The ease of conversion also impressed Sanders and Home Depot. "One of the Carr Scott Software people came to Home Depot to demonstrate Escort SQL and [by the end of the first day, they had the main files converted to SQL and the BancTec software using the NonStop SQL/MP tables, without changing a single line of code.](#)"

Intrado - Leader in emergency 911 software

Not surprisingly, HP NonStop Server systems are at the core of the nation's emergency 9-1-1 (a.k.a. e-911) infrastructure. Intrado is the largest and fastest-growing provider of emergency 9-1-1 services and information technology systems for the public safety and telecommunications markets in North America. Intrado's products are utilized directly or indirectly by more than 160 million people around the world and most of it runs on NonStop server systems from HP.

While their programs are still all written for Enscribe, they are now using NonStop SQL/MP for their core data thanks to Escort SQL. According to Intrado's Vice President of Software Development and Operations, "Not only does the Escort SQL product from Carr Scott Software make the conversion from Enscribe to SQL virtually painless, [the performance of our applications after the conversion is better than when the files were Enscribe.](#)" Having their central files in SQL allows SCC to have better management control over their data. Intrado's VP says "Our systems are literally involved with life and death situations throughout the day, having our data in NonStop SQL vs. Enscribe means we can do online reorganizations and manage our environment online, which means far fewer reasons for needing scheduled down-time. In some businesses up-time means profits, we think of it in terms of saving lives."

To read more about Intrado's conversion, see the article entitled "Making E-911 services stand the test of time" by David Oberto of Intrado in TelephonyOnline.com, Jun 17 2004, http://telephonyonline.com/infocus/web/telecom_making_services_stand/index.html

Mirage Resorts

With 1997 revenues in excess of US\$1.5 billion, Mirage Resorts is the world's leading developer and operator of casino-based resorts. But Mirage is far from standing still. They are opening new properties that will effectively double their size within the next 18 months. With this kind of growth, it should not be surprising that Mirage Resorts relies on NonStop servers for some of their central functions. The software for their systems was partially written in-house and partially by Alliance Partner, Transaction Software Incorporated (TSI) of Las Vegas. TSI Vice President John Edwards (<mailto:john@transactionsoftware.com>) says "The software running at the Mirage is very advanced but 100% written using HP's Enscribe file system. Further, many of the files contained dates stored in the YYMMDD form, not in the millennium compliant format (i.e. YYYYMMDD). Carr Scott's Escort SQL, combined with NonStop SQL

from HP's NonStop Enterprise division allowed us to transform all the dates to fully millennium compliant form and modify only the few programs that actually do date calculations. For all the other programs, Escort SQL simply does the conversion from the non-compliant form to the compliant on behalf of the program, without it having to be changed." Now that Mirage Resort's data is stored in a relational database, the data is much more accessible and valuable to them as an organization." Russ Nelson of Mirage Resorts states that "with our key data now converted to the NonStop SQL/MP relational database from HP, we can share the data among our other systems and access it using industry standard tools, simply and easily like wasn't possible before when we were using Enscribe. [Both NonStop SQL/MP & Escort SQL are fantastic products and we couldn't be happier to have upgraded.](#)"

Summary

The benefits of converting to NonStop SQL are enormous. From faster application development, to better on-line data management and standard data access via industry standard interfaces such as ODBC and JDBC, the consensus is clear, "real" databases should be using NonStop SQL.

If one of your customers is considering upgrading to NonStop SQL, take it from the late, great, John Borden a Tandem Consulting Analyst. In his June 1998 white-paper titled "Enscribe to SQL Conversion Considerations: Issues, Tools and Project Management", he writes "This [Escort SQL] is the only product on the market that I am aware of designed to specifically address the Enscribe to SQL migration issue. Escort SQL is the ideal tool to assist in a one-to-one conversion whether that is the extent of the conversion or if it is the first step in a two step plan."

One thing is very clear, the migration from Enscribe to NonStop SQL has never been easier or more risk free thanks to Escort SQL. With all his travel out talking to existing Enscribe customers, Harry Scott (<mailto:harry.scott@carrscott.com>) from Carr Scott Software has one common theme, "Thanks to Escort SQL and NonStop SQL from HP's NonStop Enterprise Division, there's never been a better time to own a NonStop!"



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