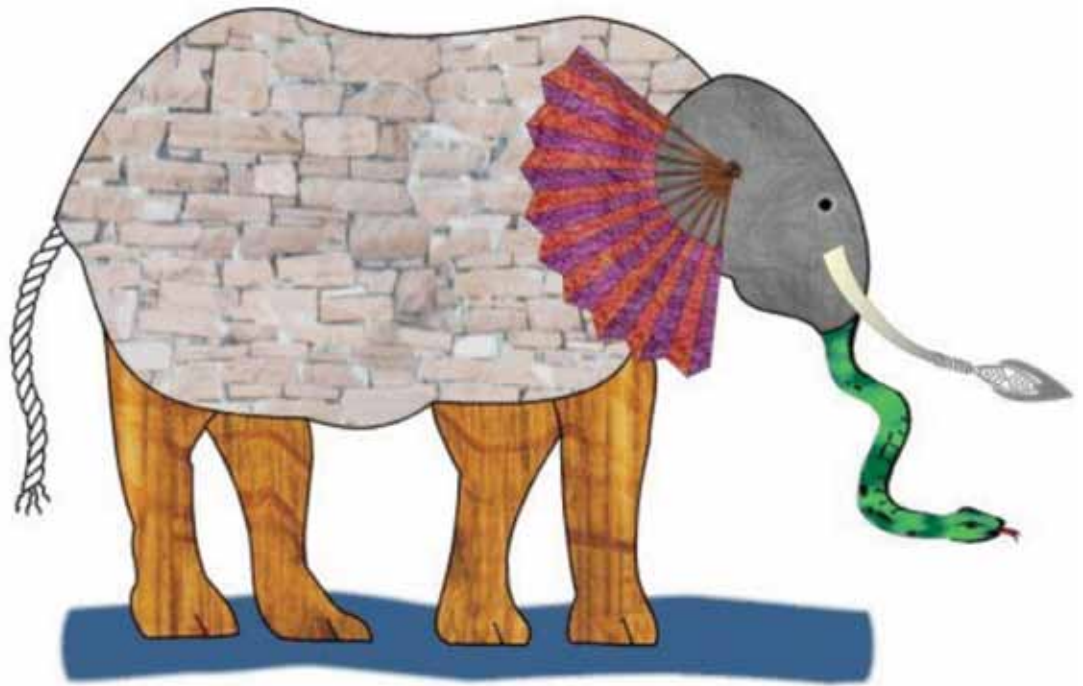


# NonStop – The Future Of Modern Computing

Marty Edelman

Since retiring from The Home Depot Marty Edelman has provided strategic guidance to organizations wishing to modernize their IT infrastructures. While at The Home Depot he was Director, Advanced Technology where he led a variety of teams that were responsible for in-store and customer-facing systems, including the Showroom Point-of-Sale, Finance Systems, Coupon Management, Gift Cards, Check Authorization, Electronic Deposits, and Tax Automation systems, as well as the hurricane and other disaster support systems. Edelman has been involved in the IT field for more than 25 years. As an independent consultant, he founded a small consultancy firm that specialized in developing high-volume mission-critical solutions for Fortune 500 companies. He and his team helped to build the UPS Tracking System, the NYSE Consolidated Trade and Quote systems, and the S.W.I.F.T. next-generation computing platform. A frequent speaker at such industry events as the Standish Group's Chaos University, the ITUG Summit for NonStop system users, HPTF and the HP Executive Council, Edelman has also been interviewed for numerous industry publications.

Ask two people to define modernization and you will likely receive two different answers. In many ways modernization is a bit like John Godfrey Saxe's poem about the blind men and the elephant. Six blind men from India encounter an elephant – each of the men then describes the elephant a bit differently because they touched different parts :



- o The man touching the trunk believes it to be a snake
- o The man touching the tusk believes it to be a spear
- o The man touching the ear believes it to be a fan
- o The man touching the elephant's side believes it to be a wall
- o The man touching the tail believes it to be a rope
- o The man touching the legs believes they are trees.

Modernization is like the elephant. To a developer it is about the tools they use to develop and support the application. To a business user it is about access to their data. To an operations manager it is integration into their operational suite of tools. To a security manager it is about supporting the necessary standards to ensure the system is protected. To the CIO it is about leveraging one or two vendors for their IT needs – vendors who have a complete portfolio of modern, standard hardware and software.

I would like to clear up one misconception before getting to the heart of the matter and that is the difference

between modernization and service oriented architectures (SOA). Modernization is about transforming a Tandem into a NonStop. It is about modern development, security, and operations practices. A SOA is a component of a modern platform. SOA is an approach that allows a heterogeneous array of distributed complex system to be transformed into a network of integrated, simplified and highly flexible resources. By implementing an SOA an IT organization can align more closely with the goals of the business. A well planned and executed SOA can help organizations react more quickly in an ever changing marketplace

## It's All About The Data!

Achieving modernization is a journey of many steps. The first step is about harnessing the most important resource an IT organization has, next to its people, its data. Recently I heard a statistic that made me pause: About 60% of all NonStop customers are still using Enscribe files, if not for all, for at least a significant portion of their database. Enscribe was a fine offering 30 years ago but modern database technology has so much to offer, I was shocked by this. When talking to companies about

modernization I always counsel them to start with the data first.

It is relatively easy to make the database modern. There are two routes to this On the NonStop platform. You can purchase Escort SQL from Carr Scott Software; this incredible software product converts Enscribe applications and files to NonStop SQL without requiring any changes to existing programs (i.e. no source code changes). Allowing an organization to focus on creating new applications which provide the business with new capabilities. The second is the Attunity Connect product which provides SQL connectivity (ODBC, JDBC, OLE DB and ADO.NET) to Enscribe data.

The Home Depot used Escort to transform the Enscribe files (which were a mess) into an eloquent SQL database. The Enscribe environment was designed, in what was typical for the time, as a single file which was then redefined depending upon different values stored in the record. In the early 1990s when the application was built it was considered state of the art but it quickly became a problem when trying to build modern components. By using the Escort product the Home Depot was able to focus on the real task which was to provide new functions to the business.

I provided some modernization advice to a well-designed Enscribe environment. They used individual files instead of an overlaid file for their data. In order to provide immediate access to their data they implemented the Connect product which allowed access to their Enscribe data from their .NET and Unix/Linux clients. They have also been able to use Crystal Report, Microsoft Excel, and Microsoft Access to access data. This is a

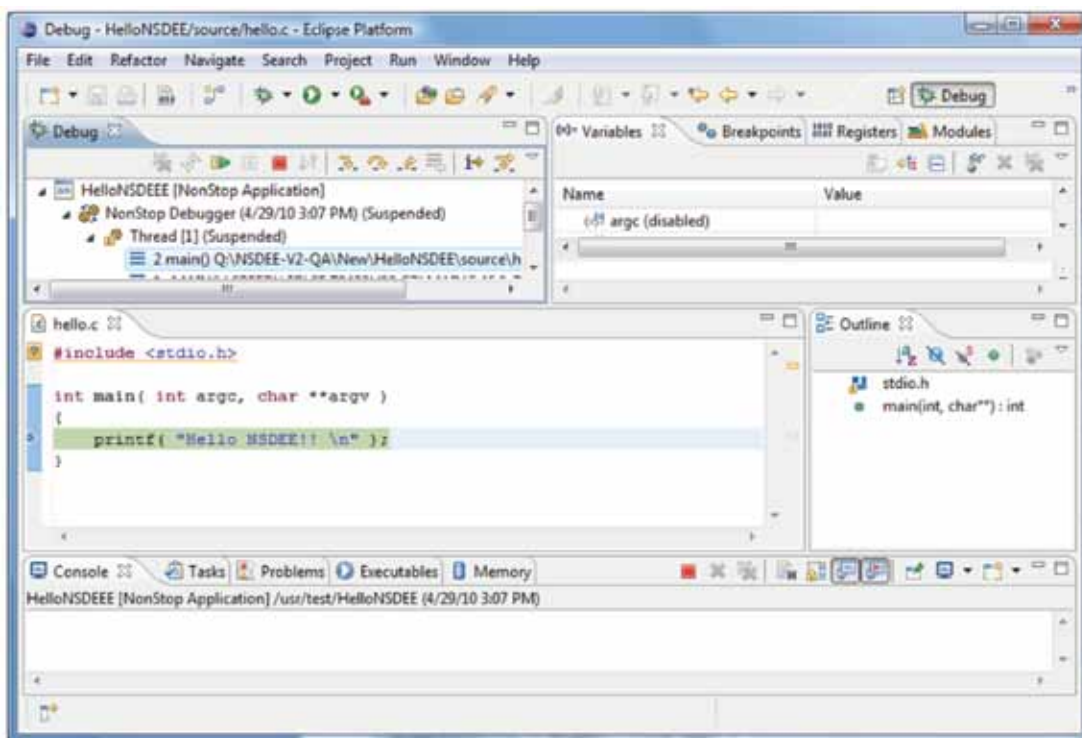
powerful feature which allows their business users to use the NonStop data in ways they never could before.

The above two solutions are not the only ways to make an organization's data accessible but they are certainly the fastest and safest. Yes, they will cost a few dollars but the value they provide outweighs the expense. When you deal with either of these companies you are also building a partnership with folks who do this for a living and can provide guidance along the journey.

## Development Tools

Once you have a modern database with modern tools that is accessible by other platforms, the next step is to start building new applications. If you have a staff of knowledgeable Tandem developers they probably use TEDIT, Inspect, and command line compilers to produce their programs. There is nothing wrong with these tools with the possible exception that no one coming out of college with a Computer Science degree has ever heard of them – I can guarantee they have never used them. For us old Tandem guys this may not seem like a big deal but for the CIO who worries about hiring and retaining talent this is a nightmare. A CIO wants to hire someone who is able to produce results on all of their platforms – they want a common development environment.

With the latest release of the NonStop Development Environment for Eclipse (NSDEE) the NonStop world has fully embraced the Eclipse development environment. Developers can complete all aspects of their job with a single tool (edit → build → deploy → debug). Eclipse is the leading tool open source integrated development environment. Eclipse runs on many platforms and has a rich set of



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plug-ins enhancing a developer's productivity. NSDEE supports Java, C/C++, COBOL, and pTAL so that all code that exists can now be worked from a single environment. With plug-ins for source control systems and SQL browsers (Note there is no Enscribe plug-in, yet another reason to migrate to SQL). A developer no longer needs to have 10 windows open on their desk top, this reducing errors and increasing efficiency.

A strange thing happened to me one day. I gave up my development job and moved into an executive management job. No longer was my biggest problem worrying about squeezing some additional performance out of a given line of code. My problems now were about providing much needed technology to my users. I gave up Edit/VS and Inspect for Outlook and Excel- jeans for a sport coat and slacks; it was a very scary time in my life. I didn't like change, but I knew I had to embrace it or become irrelevant. If I would have chosen to remain a developer, I would have been faced with similar hard choices. Yes, I would have gotten to keep my jeans but my choice of programming languages would have been changed. I could not expect to be a TAL/COBOL programmer. I would have had to move to C/C++ or Java. Change is the one constant in the universe, evolve or die. Ask any dinosaur.

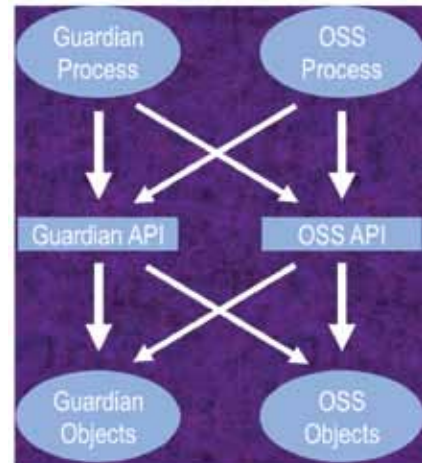
When I moved to these new modern development languages, I discovered a wonderful thing. Most of the library code I had squirreled away over the years became superfluous. These wonderful languages provided thousands of library functions that did what my library functions did plus a whole lot more! I could now concentrate on the business logic and not worry about converting a date to a Julian date or write a sort function. My productivity increased by an order of magnitude. Not only did I not have to write these functions, but I knew they were well debugged and would perform as expected.

When I first arrived at The Home Depot the development team was able to produce about one release a year. After we embraced modern development practices, we were able to produce 5 releases in an 18 month period and this was before HP released Eclipse for NonStop. These same tools enabled me as a manager to hire kids out of college and have immediate productivity from them. Before embracing open source tools, no recent college graduate wanted to go anywhere near Tandem, but when we started treating it like a NonStop they flocked to it. Over time they became true believers. I believe this injection of new blood will save NonStop from extinction.

### It's All About Personality!

What makes most of this new technology possible on the NonStop is the Open System Systems (OSS) personality which runs on the NonStop Kernel (NSK). It

runs right next to the Guardian personality – they coexist and can, in fact, co-mingle in a single program. I have heard many people talk about OSS as if it were an enemy, that by using it you would bring shame to your Tandem. That is, of course, nonsense! OSS provides access to ALL of the Tandem fundamentals but it gives them a new suit of clothing named NonStop. OSS is a POSIX compliant set of APIs and utilities which provide great value. It doesn't consume entire CPUs or eat all of the disk space as some people say it does. It provides another interface to the inherent goodness of the NonStop. Most open source is written for Unix/Linux, OSS allows these programs to run on the NonStop, often without modification.



OSS provides a modern interface for the NonStop. It retains all of the Tandem fundamentals but adds many new and improved features such as:

- o Windows/Unix/Linux file naming – no more 8 character file names
- o Access to a myriad of useful utilities
- o Ability to execute Guardian commands
- o The Unix/Linux programming API

The new tools that the HP NonStop division has released over the last few years (SQL/MX, SOAP, iTP Web Server, Java, XML, Axis2, Spring, MyFaces, and Hibernate) all require the use of OSS. Why do you think that is? If you guessed it is because OSS works and it works well you are correct. If you guessed that the NonStop division wants to leverage the open source community you are correct. If you guessed it is because they too have issues finding Tandem programmers but not NonStop programmers you are also correct. There are many reasons to embrace OSS. Isn't it time you did too?

In the next issue of The Connection I will address system management and security, until then why not try out the new suit and see how it fits. I am sure you will like the way you look. [CS](#)