

SSP chooses the most flexible, cost-effective and risk-free approach to migrate its 9,5M LOC application to .NET

UK-based, global ISV for the financial and insurance sectors licensed ArtinSoft's Visual Basic Upgrade Companion and ensured a quick, natural transition to a newer technology without any constraints by extensive third-party libraries

Situation

SSP is a global IT company that delivers consultancy and software solutions to help brokers, insurers and financial advisers throughout the world provide a better service to customers. Headquartered in Halifax UK, SSP has offices in Birmingham, the South of England, the Republic of Ireland, Denmark, South Africa, Australia, New Zealand, Kenya, India and the United States.

With over 25 years of experience in the insurance and financial services sectors, SSP has a strong customer base of almost 50,000 users in over 50 countries, including 20 of the top 50 global insurers, 30 of the top 50 UK brokers, and 4 of the top 10 UK financial advisers. Their systems support an estimated £2.0 billion of UK personal lines gross written premium, and £2.9 billion of UK commercial lines gross written premium.

Comprised of about 9.5 million lines of source code, S4i is a full-featured, end-to-end policy administration suite that delivers policy issuance, re-insurance, claims management, customer management and full accounting functionality for a range of personal and commercial lines insurance.

The comprehensive insurance policy management application is an in-house developed system, with a version specific for customers in the United Kingdom and another version used worldwide. It has a highly modular architecture and can be installed at customer's sites or it can also be hosted and provided as a service. The normal deployment consists of one or several Citrix servers that provide access to all the components of the application, with a separate server providing database access.

S4i was written in Visual Basic 6.0, and SSP was looking towards upgrading it to the .NET platform as VB6 no longer provided the tools they needed. Even though the runtime is still supported on the operating systems that Microsoft supplies, in order to take the product forward SSP needed to move to a newer technology.

Customer profile

SSP is a leading provider of IT solutions to the global insurance and financial services industries, with almost 50,000 users in over 50 countries.

Business situation

S4i is a 9,5M LOC application that handles all aspects of insurance policy administration, insurance accounting, document management and reporting. It was written in VB6.0 and SSP needed to move it to the .NET platform to ensure application advancement and staff availability.

Solution

SSP evaluated several options, including a manual rewrite, and using the Upgrade Wizard or a competitor's tool, and came to the conclusion that the Visual Basic Upgrade Companion was the best option because of its flexibility, customization capabilities and the fact that it generated native .NET code instead of relying on an extensive support library.

Benefits

Moving to .NET will alleviate any possible concerns about support, and will enable the use of new technologies that will be applied to enhance and add value to the application. Using the Visual Basic Upgrade Companion will allow SSP to reach the project goals quickly and at a much lower cost and risk. And by getting the application onto .NET without being constrained by a third-party's rigid approach, SSP will be able to move forward and provide a solution that will work in the long term.

So there were basically four main drivers for the migration:

- Application advancement: SSP wants to start using all the new features and development capabilities provided within the .NET framework.
- Platform Refresh: SSP has a long term plan of moving the application to a new SOA-based paradigm. This evolution will be made in stages, with the .NET migration being the first step.
- Customer demand: SSP has always made a commitment to their current customers to stay on top of any new technologies.
- Staffing: recruiting new staff with the Visual Basic 6.0 skill set is becoming more difficult.

Solution

SSP evaluated several modernization options, from a manual rewrite to using an automated tool, like the Upgrade Wizard that ships with Microsoft Visual Studio and other third party products.

“The Upgrade Wizard does a good job, but it is not flexible and it is more applicable to small scale applications. On the other hand, we evaluated your main competitor’s tool and thought the approach was too rigid, requiring embedding their runtime within the migrated application. Plus we were looking at the long term, refreshing the technology beyond just moving to a new platform, but being able to move forward and provide our customers with a solution that will work for the next 10+ years. To me that meant getting the application onto .NET without being constrained by someone else’s rigid approach,” noted Robert Courtney, SSP’s Chief Software Architect.

“We chose the Visual Basic Upgrade Companion because of the flexibility that it provides, and because we can get pure .NET code, as opposed to someone else’s third-party library. It was not just the tool itself but the actual engagement with ArtinSoft; the way we can analyze the code and discuss how we want it to look, and then customize and configure the tool accordingly”, added Courtney.

The project entailed a high level of complexity, considering the size of the application and the presence of a large number of third-party and Microsoft components, plus the interaction with VBScript code. The application employs several controls that relate to the user interface. Many of these components are currently supported by the standard version of the Visual Basic Upgrade Companion (VBUC) and will be converted to native .NET components with a very high automation percentage, while others will be left as they are and will be accessed through COM Interop. For example, ADO and DAO will be upgraded to ADO.NET using the classes defined in the System.Data.Common namespace. Some customizations were also added to the tool, either to increase the overall automation or to comply with SSP’s specific target requirements.

In the end, SSP licensed a customized version of the VBUC. The project will be performed by SSP’s resources in their India development center, with initial on-site training and support by an ArtinSoft migration expert. S4i has always been developed in Visual Basic and though moving to C# is supported by VBUC, SSP felt that it might imply more refactoring of their specific code, therefore VB.NET was chosen as the target language. So S4i will be migrated from Visual Basic 6.0 to VB.NET, and from Windows 2003 with SQL Server 2000 to MS Windows Server 2008 on SQL Server 2008.

Benefits

Using the Visual Basic Upgrade Companion will allow SSP to reach the project goals quickly and at a much lower cost than a manual rewrite. *“A manual rewrite would have been harder and would have entailed a much higher risk. Using the VBUC allowed considerable savings and approaching the project in a much more controlled manner,”* stated Courtney.

The standard tool already offers the ability for end users to create new migration rules or mappings according to the specific needs, reducing manual intervention to fix migrated code and compilation and runtime errors. These user-defined transformations can be applied to upgrade ActiveX libraries and user components into native .NET libraries or third-party equivalents, enhancing the migration process by creating personalized mappings to handle conflicting or particular elements, as well as increasing existing support for legacy components. The inclusion of additional customizations to the migration engine will increase even further the automatic conversion coverage in line with SSP’s requirements.

SSP has initiated a substantial investment in a Technical Refresh Programme for S4i and is committed to an ongoing alignment to relevant MS technology releases. The migration of S4i to .NET is the first phase of this program. Later phases will look to further enhance S4i capability by utilizing appropriate modern MS technology with SOA enablement, web channel delivery and product definition receiving enhancement.

.NET is Microsoft’s premiere development platform, designed from the ground up to overcome many of the problems prevalent in application development. Namely, long development times, inability to change applications quickly, high total cost of ownership of software, and ease of deployment. Microsoft is committed to .NET as a foundation to their technology roadmap and are increasingly using it in their product releases. SSP clients can therefore be assured that the move to .NET will provide a stable, future focused platform for S4i moving forward.