



Compuware ISPW speeds and simplifies source code management for this Telecom Service Provider!

Source Code Management (SCM) has been a challenge for mainframe development and operations staff for a long time. For too many years the limitations of the VSAM file structure dictated how and what could be achieved with process-based code management. Various fixes and approaches including file-based library management led to the current mix of CA Panvalet, CA Librarian, CA Endeavor and Serena ChangeMan as awkward operational backstops for frustratingly complex source code management.



Adding to the frustration, using these tools requires the creation and continued long-term maintenance of complex custom processes, operating entirely external to the management products themselves. Therefore, they must be manually maintained as the various products are changed and updated. This adds more complexity and further delays to ongoing efforts of mainframe source code management.

This approach to code management is wholly inadequate for today's fast-paced digital economy. Service-oriented IT environments cannot effectively support customers with out-of-date SCM solutions.

Distributed systems source code management have been developed along entirely different lines influencing the evolution of new products for the mainframe. The adoption of DB2 and a move away from MIPS-based solutions opened the way for applying new, more efficient ways to manage code. One solution is the cross-platform management approach of Compuware ISPW. Compuware acquired the technology and integrated it into their Topaz solution, extending the next generation of mainframe tools for next generation development and operations.

These integrated solutions provide developers with full access to powerful Topaz functionality with a more powerful, frictionless solution for application analysis and code management. For instance, access to Topaz for Program Analysis makes it much faster and easier for developers using ISPW to analyze and understand complex application logic. Powerful, rich visualization capabilities speeds analysis and assessment of the impact of code changes on the rest of the mainframe environment.

ISPW represents a significant change in SCM from older approaches. Rather than speculate on benefits, and repeat Compuware's marketing phrases, we spoke directly with a company that actually made the leap to ISPW from a more traditional, customized SCM environment. Here's what we found out.

The company and its operations

We met with the Director of Software Development for a major communications industry service provider located in the United States. This company provides mainframe-based software applications and solutions support for companies that deliver digitized communications services to



businesses and individuals. Their solutions include service management (e.g. moves/adds/changes), billing, service acquisition, customer relationship management, etc. Their customers provide a wide range of digital services to commercial, service and production companies across all of North America – Canada and the US.

The company is provided with IT outsourcing and managed services from a premier provider. The software development group is responsible for managing the software used by operations to provide services. The computing environment consists of four (4) major LPARS; three (3) are production LPARS and one (1) development LPAR. Multiple software production databases are maintained for their different customers. The parameters and software code used to provide services evolve, change, converge and diverge according to customer demands and activities.

All source code management work was performed in the development LPAR. Deployment packages were assembled, tested and sent out to operations. Changes could be requested, implemented and deployed at multiple different levels. They typically push out four (4) major updates per year. A major update typically involves between 5K and 7K specific modules. They also ran smaller, on-going production updates of 50 to 100 modules that can be required as frequently as once per week.

SCM challenge of existing approach:

- *Failed to keep up with the speed and volume of changes*
- *No standardized way to implement, track and deploy changes*
- *No consistent library 'clean-up' to remove old versions*
- *SCM tasks were tedious, time-consuming and inefficient*

The Issue

Their existing mainframe code management tools were designed for a different era and style of coding. Hopelessly outdated, they just could not adequately perform in today's world of agile development and rapid programming styles. *The in-house developed SCM processes couldn't keep up with the pace of change.* Deployments would slip out without all of the correct software changes and updates incorporated. Old and new versions of software were being deployed in error.

There *wasn't a standardized way to implement changes.* Procedures for version control and verification processes were not standardized. As a result, *'clean-up' of existing libraries was inconsistent,* so that old versions of software would remain in 'updated' libraries. Changes could be made at any level making auditing, repeatability and traceability difficult.

In short, SCM was a *tedious, time-consuming, inefficient and inconsistent process* resulting in unnecessary errors. The company wanted a source code management solution that made the whole effort easier, more consistent and streamlined.



Selecting ISPW

The company needed a new SCM solution but had no interest in moving to one of the existing traditional solutions. Past experience with 'pilot' studies did not justify the time and expense. In fact, one vendor's quote for the pilot alone exceeded the total cost of ISPW!

Based on their own research which included in-depth reviews, demos and conversations with Compuware's ISPW staff as well as experienced ISPW customers, the company chose it for their SCM solution.

ISPW uses a totally different approach from their current solution. So, choosing it meant they would undergo a fundamental, significant change to the existing culture. Therefore, they prepared for the migration with a detailed project plan which included significant ISPW support.

Planning and Implementation

The company attributed much of the success of its smooth implementation to the fact that they spent roughly 10 months researching and learning about the product with ISPW staff. They had to rethink how they did things and learn how to do what needed to be done with ISPW. Being a services provider, they also expected to have to create a number of new complex processes to modify ISPW for use in their multi-customer environment. This meant they undertook extensive planning and engineering of new processes to be created.

ISPW staff have extensive experience moving customers from existing SCM programs like CA Endevor. To help this company, ISPW staff had to learn and understand the company's in-house system. They did so while working closely the company's IT team at each step to help them become experts at understanding, using and modifying ISPW for their own environment. The Software Development Director made special mention of both the high level of support from ISPW and the confidence his team achieved in their own ISPW abilities as a result of working closely with them.

The Results

By the time the company implemented ISPW into their environment, they were able to quickly and easily make the sophisticated, complex modifications and reconfigurations they needed. They found the ISPW solution to be highly flexible and functional. The functionality and structure that is integral to the ISPW solution helped them to achieve previously unobtainable levels of consistency, repeatability, auditability and traceability in code management. Processes for handling changes have become automated resulting in freeing up a significant amount of IT staff time.

Today, developers easily handle 50 to 100 production changes per day. They design the modules for deployment, get approval and run them automatically. After going live in late 2015, they have had only one rogue 'old' software version slip into production. Under the old system, while not a regular occurrence, an old version might slip through every month or so.



Summing it all up

There is no doubt that Compuware's ISPW has made source code management significantly easier and more reliable for this company. The proof is in the results which include changes that are now handled in a consistent manner. 'Clean-ups' that are now consistently performed and documented. Source code management that now operates reliably and on-time with all needed checks. A once annoyingly complex process is now acknowledged to be:

- Simplified
- Repeatable
- Auditable
- Traceable

In wrapping up our discussion with the Director, he made clear that he is looking forward to being able to access and use more powerful and attractive features of ISPW and adding key functionality from Compuware's Topaz solution suite as well. Among these, there are the recently announced extensions that include fully automated deployment processes that speeds code into production, visualization that highlights potential deployment problems and more extensive third-party integrations. I expect to have further conversations about the benefits of those features in the future.

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