

EasiRun/SMART. A Rule-Based Platform to Analyze and Modify Source Code.

What does “SMART” stand for?

S	=	Source Code
M	=	Modification
A	=	Analysis
R	=	Reengineering
T	=	Transformation

Who can benefit from EasiRun/SMART?

Customized software solutions often involve years or decades of development. New developments tend to be very costly and unpredictable. In most cases, it is less risky and better calculable to modernize or migrate applications instead. Generally, there are no standard solutions available for the migration of tailor-made software, or, if so, only rarely do they account for the software’s distinct features. So it was only natural for us to come up with a solution which is as individual as the software to be modernized. EasiRun/SMART is the ideal platform to realize your code objectives.

How does EasiRun/SMART work?

First, the source code to be processed is parsed, analyzed, and put into a form that is readable by the processing core. Afterwards, rules go through the processed source code. The order in which the rules are executed is determined by the rules themselves but also influenced by the code they find. The rules analyze, modify, or transform the code. Subsequently, the modified code structures are again exported into text files. Untouched code keeps its original format. Newly created and modified code constructs may be harmonized and neatly integrated into the existing code by an integrated formatter, leaving you with a code that is indistinguishable from the original code, unless you want it to be highlighted.

The benefits at a glance

- ✓ Efficient development of customized migration and modernization solutions
- ✓ Complex transformations not only on a syntactic but also on a semantic level (code refactoring)
- ✓ Very short code freezing times
- ✓ Ready for iterative development processes
- ✓ Fast and effective bug fixing
- ✓ Results are always reproducible on a level playing field
- ✓ Coherent implementation of analog code constructs (easier readability and maintenance)
- ✓ Reduced testing efforts
- ✓ Ready to be implemented into automated processes (e.g. continuous integration)

What makes EasiRun/SMART so unique?

In contrast to many simple code converters, modifications are made on a syntactic as well as a semantic level, providing for even more complex code adjustments, for refactoring and transformation.

Why choose EasiRun and EasiRun/SMART?

We are convinced that our approach is well suited in many situations. This has been confirmed by positive feedback from our customers. We are not creating utopias, but we will tell you openly and honestly how far we can go. We are not trying to sell you ready-made solutions but we want to know what requirements a modernization solution must meet to fulfill your needs and expectations. We are happy to assist you with our wealth of experience gained in previous modernization projects. To achieve your goals, we can serve you as a distributor, a supplier, a know-how carrier, and a training and support partner for a number of products that may also qualify for your projects, such as COBOL compilers, middleware solutions etc.

What languages does EasiRun/SMART support?

EasiRun/SMART is equipped with parsers for:

- IBM COBOL (mainframe dialects)
- RM/COBOL
- Micro Focus COBOL (incl. Object COBOL)
- Bull GCOS COBOL
- Dialog System screensets
- Row-based texts
- MVS Job Control Language
- VSE Job Control Language

Thanks to a very flexible basic technology, parsers for other programming languages and declarative languages can be created within a short period of time if required. Exports can be made to any file format regardless of the format of the parsed source code, i.e. it is also possible to export code formats for which no parsers are available (e.g. Fujitsu NetCOBOL for .NET, shell scripts etc.).

What else is to be said about EasiRun/SMART?

The development of modernization solutions with EasiRun/SMART is complemented by our Eclipse-based EasiRun/SMART Developer Studio which makes development, testing, management and deployment considerably easier.

EasiRun/SMART supports parallel processing and can therefore benefit from the full power of multi-core processors and multi-processor systems.

As an example project has shown, EasiRun/SMART may process 1,800 COBOL applications including approx. 2,800 dummy sections in well under five minutes. The set of rules used in this project contained approx. 90 transformation rules, in part with a high level of complexity.

Many fields of application¹

EasiRun/SMART may be used for the following tasks:

- ✓ Analyzing complex applications individually
- ✓ Modifying syntactic constructs during a platform or compiler change
- ✓ Restructuring and modifying customized source code while maintaining identical function
- ✓ Transforming source code into other languages
- ✓ Creating customized converters for data migrations
- ✓ Re-formatting code
- ✓ Instrumenting code (logging, tracing, monitoring)
- ✓ Creating test modules

¹Generally, other fields of application may develop in the context of our modernization projects.

About EasiRun

EasiRun is a European supplier of tools for software development modernization. With expertise in the areas of Mainframe, Java, .NET and COBOL (Linux, UNIX, Windows) the company focuses on Eclipse IDEs, COBOL cross compilers, data management and Web browser solutions. These solutions are relevant to very specific niches, enabling complex IT modernization and minimising technical debt situations. Developed to ensure the sustainability and reusability of legacy applications, the project proven modern tools implemented by EasiRun aim to make IT landscapes independent and cost-effective. The wide range of consulting services cover the entire spectrum of the modernization of applications and application development.



For more information on EasiRun/SMART or other products and solutions offered by EasiRun please visit <http://smart.easirun.com>

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