

innovative. individual. independent.

Software Innovations GmbH



About improvIT Software Innovations

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improvIT Software Innovations offers unique system software for the IBM z/OS environment.

In the complex world of z/OS and UNIX system platforms the management, IT production, system maintenance and system architecture have to meet higher and higher requirements.

Thereby a difficult problem must be handled – the available staff has to increase the quantity turnover per time interval with additional pressure by IT costs and shorter and faster innovation cycles.

Our *innovative* products are based on long experiences in IT operations and offer solutions and concepts to first optimise maintenance and production processes *individual* adapted to our clients and furthermore to reduce IT costs.

Our software products are almost *independent* of the design of the system architecture and other installed software products.

XCR

Compiling instead of interpreting



- Is too much time being spent supporting many individual adaptations in your REXX development environment?
- Would you like to fully integrate REXX into your development environment?
- Do you have self-developed functions and want to protect your knowledge and investment?
- Do you need additional functions not available in the interpreter REXX?

These and many other problems can be resolved by using **eXtended Compiler for Rexx (XCR)**.

REXX is the preferred programming language within the z/OS system environment, especially for routines in systems management, systems operation and monitoring. REXX is easy to learn, very flexible, powerful and easy to maintain. Because of the characteristics of the language there is a wide range of use.

But on standard REXX is an interpreted language, so the readable source code is accessible for the REXX runtime object. This induces potential security risks and there is no protection of the imbedded knowledge. Unauthorised changes on the code can easily be performed. As a consequence the stability of the implemented functions can be decreased and the support costs for system programming can be increased.

XCR resolves the above problems and additionally offers support for common code and ISPF edit macros.

Leistungsmerkmale

- Convert REXX execs into load modules
- Encryption of the original source code
- Performance improvements through source code optimisation
- Common code may be included
- IBM ISPF Edit macros may be compiled
- Transparent use of compiled REXX functions from interpreted execs or other high level programming languages

Vorteile

- Protection of investment and improved security through code encryption
- Improved quality-of-service by avoiding unauthorised changes
- No illegal replacement of your original code
- Performance improvements
- Simplified development and reduced maintenance by using of common code
- Fully integration in system and development environment

XCR

Compiling instead of interpreting

Optimised Usage of the REXX environment

Our product eXtended Compiler for REXX (XCR) optimises the benefits of REXX. XCR converts any REXX source code into load modules. The created load modules can be called and executed using the same methods as the original uncompiled version. As a special feature it is also possible to convert ISPF edit macros into load modules. The program macros must only be defined within the ISPF editor.

Compiled REXX procedures can be easily and transparently called from load modules, created using other programming languages, through the XCR applications programming interface.

Copy areas can also be included during conversion. The size of the created load modules is optimised during conversion by, for example, removing all unnecessary spaces and comments from the source code. This can result in performance improvements.



All REXX code is encrypted during conversion and can not be seen within the load module. This protects your investment and offers improved security. It also prevents unauthorised changes and modifications within the productive REXX environment.

It is also possible to automatically add copyright information to the load module. The compiler creates reports showing e.g. the optimised source code used to create the load module.

Compiled REXX procedures can be directly executed in other non-TSO environments such as USS or batch. No XCR runtime libraries are required to execute the compiled procedures.

XCR will be offered with three different types of license:

Version	max. number of REXX statements per module	Support
Evaluation	100	n/a
Developer	250	via email
Full	unlimited	Full

Use XCR and enjoy the benefits of REXX optimisation.

IBM, USS, TSO, ISPF, REXX and z/OS are Trademarks or registered Trademark of International Business Machines Corporation.



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Highlights of XCR

- Protection of investment through code encryption
- Protection of your productive REXX environment
- No runtime environment or environmental stubs required
- Simplified development by supporting common code
- Compilation of ISPF edit macros
- Runtime optimisation through elimination of unnecessary source code
- Transparent integration in the existing system and application development environment



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