Rocket® software

Rocket® Enterprise Server for .NET

(formerly a Micro Focus® product)

Rocket Enterprise Server for .NET enables a fit-for-purpose IBM® mainframe application workload to be deployed to the Microsoft® .NET framework. Providing the complete execution environment for Enterprise COBOL applications, Enterprise Server for .NET offers a scale-out architecture — integrating mainframe COBOL online and batch applications under .NET as well as preparing you for deployment to the Microsoft Azure cloud environment.

Business challenge

For many organizations, the new digital economy is shaping future business and IT strategy. In order to compete and win in this digital age, where time to market is paramount, IT teams must remove cultural barriers and work together, embrace new approaches to software delivery and incorporate customer feedback along each step of the journey. Digitization is driving accelerated change across the business. IT teams play a pivotal role in helping the business meet this challenge and achieve their objectives.

Additionally, a shifting landscape of new technologies, compliance demands and new ways of working make IT provision a constant challenge, especially in the face of greater client expectation and continued cost pressures.

These forces are driving many organizations to look at moving 'fit for purpose' mainframe workload onto distributed, virtual or cloud platforms. This is usually part of a strategy to manage or reduce operating costs while increasing overall processing capacity. Taking this mainframe modernization approach has helped organizations reduce annual operating costs by up to 90%. We call this approach mainframe application replatforming.

Many organizations are replatforming mainframe applications to extend the use of these proven business systems to new markets and geographies where there are insufficient available mainframe resources. Whatever the driver, the key to any successful application replatforming project is minimizing change to avoid unnecessary risk, while moving to an agile environment that can support future growth. The benefits are compelling but are unlikely to be realized unless the underlying technology can:

- Deliver the performance and transaction throughput required by the business.
- Meet Reliability, Availability and Serviceability (RAS) expectations for the workload being moved.
- Offer Enterprise levels of application and system security for users and data.
- Enable IT to proactively monitor and manage the health of systems in production.
- Provide a flexible architecture that enables IT to respond rapidly to new and changing business demands.

With the scale out architecture offered by the Microsoft .NET framework, organizations are looking to Rocket Enterprise Server for .NET to provide additional capacity on demand and to unify development and deployment under a single managed environment, readying them for a possible move into the Microsoft Azure Cloud.

Rocket Enterprise Server for .NET enables you to:

Modernize existing mainframe applications in Microsoft Visual Studio using any Managed Code Language including C#, Visual Basic and COBOL.

Reuse COBOL business rules and achieve increased flexibility using the latest Microsoft technologies.

Instantly build in fault tolerance and greatly simplify disaster recovery with scale-out architecture.

Deliver expected Quality of Service (QOS) levels but with lower infrastructure costs.

Reduce IT costs up to 90% by deploying mainframe application workload to Microsoft .NET and the Azure cloud.

Product overview

Rocket Enterprise Server for .NET provides a high performance, scale out, deployment environment that enables organizations to move fit for purpose mainframe applications to the Microsoft .NET framework.

Rocket Enterprise Server for .NET is built around a batch execution and transaction environment that supports IBM® COBOL, IBM JCL batch jobs, common batch utilities including SORT, IBM CICS® and mainframe data files. Mainframe Db2® is supported by moving data to Microsoft SQL Server or to IBM Db2 LUW.

The result is a single integrated deployment environment which provides the batch and transaction processing to execute mainframe applications under the Microsoft .NET framework. Mainframe application replatforming enables the enterprise to reuse core online and batch application logic to define unique business pro cesses and deliver competitive advantage. The reuse of mainframe application logic and data is achieved with minimal change and supported by a high performing, high availability scale out platform.

Complimentary to Rocket Enterprise Server for .NET is Rocket® Enterprise Developer* which fully supports the development and maintenance of managed applications. This comprehensive and fully integrated toolset enables you to seamlessly develop, test, modernize and integrate with other applications in your .NET framework.

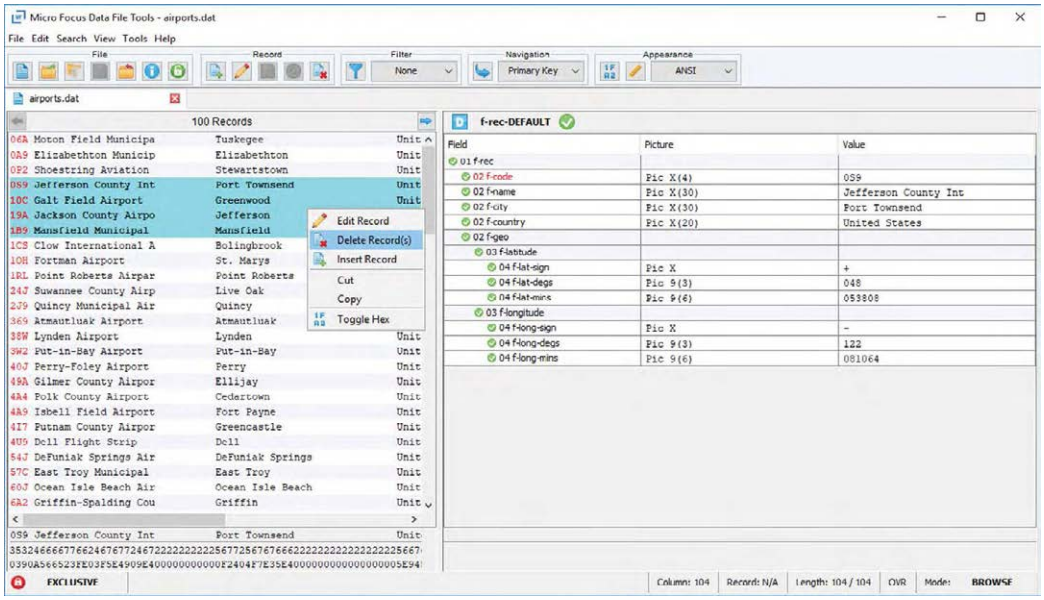

Fig 1. Production Data File Editor for VSAM/QSAM Formats.

Key benefits

- Exploit the price and performance benefit of powerful, competitively priced processors to achieve cost savings of up to 90%.
- Take advantage of the scale out architecture in Rocket Enterprise Server for .NET to provide flexible capacity when you need it.
- Through the same scale out architecture, instantly simplify disaster recovery options and build in greater fault tolerance.
- Redistribute mainframe application workload to contain or reduce MIPS on z/OS®, in order to delay or avoid mainframe upgrades and reduce MLC.
- Replicate core business applications on low cost platforms to satisfy regulatory requirements, service new market requirements, or provide continuous service during scheduled mainframe downtime.
- Shrink batch cycle times by taking advantage of scalable capacity under .NET.
- Modernize critical enterprise applications through full integration with .NET infrastructure, ensuring critical business functions are accessible, maintainable and adaptable to changing business requirements.
- Be cloud-ready when your business wants to take advantage of the high availability and scalability that Cloud platforms offer.

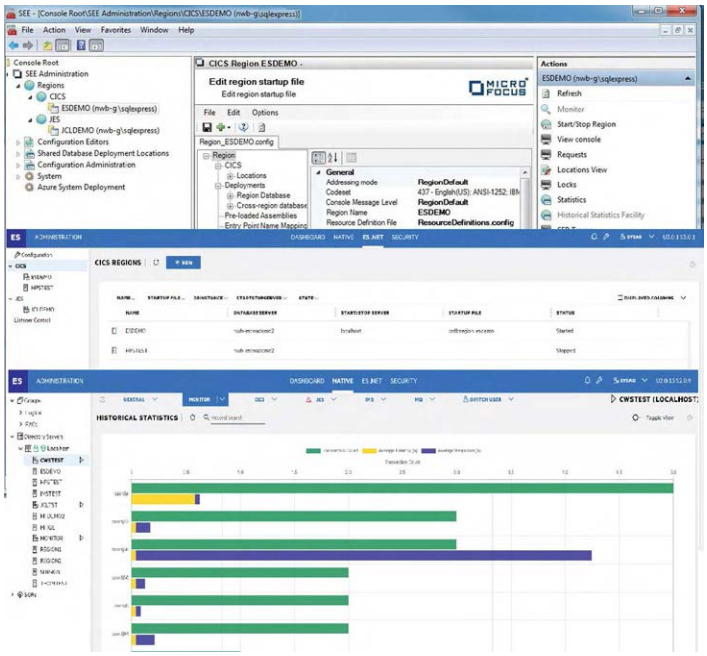

Fig 2. Production Data File Editor for VSAM/QSAM Formats.

Technical benefits

- Reduce risk and speed up implementation. Applications behave in the same way as they did on the mainframe because the original code defining existing online and batch business processes is reused.
- Continue to maintain replatformed enterprise applications as is. The Rocket environment converts COBOL application source to managed COBOL at compile time, greatly simplifying the conversion without compromising on the integration options offered by .NET.
- Modernize mainframe applications by integrating these systems completely under the .NET framework, exposing critical business functions to other .NET applications. This approach enables any .NET managed code (C#, VB.NET, etc.) workload to be fully integrated into the Enterprise Server for .NET online and batch processing environment.
- Easily deploy applications replatformed onto the .NET framework to the full Microsoft Azure platform, when and as your business demands it.
- Use the Rocket Enterprise Server Common Web Administration (ESCWA) or the Microsoft Management Console (MMC) snap-in to simplify administration, monitoring and control.
- Minimize changes to embedded SQL statements and support an easy transition of code and Db2 data with Host Compatibility Option for SQL Server (HCOSS).
- Improve agility by consolidating development under Visual Studio to provide a common development and test platform, unifying development teams and making mainframe applications easily accessible to a wider pool of developers.

Feature overview

Complete COBOL application replatforming and deployment environment

- COBOL runtime support, dynamic debugging and diagnostics.
- Job Execution System (JES) engine to support submission, prioritization and execution of batch initiators, with full support for REXX and key IBM utilities such as DFSORT, ICEGENER, IDCAMS, IEBGENER and IKJEFT01.
- CICS transaction system support to replatform online systems and screens.
- Complete .NET and mixed language integration with COBOL applications compiled to .NET Intermediate Language (IL) before being executed within the .NET Common Language Runtime (CLR).
- Enhanced public API enables C# applications to call CICS functions.
- Support for applications running in EBCDIC.
- EZASOKET support.

Flexible and robust systems administration

Administration of Enterprise Server for .NET is through ESCWA or the snap-in to the MMC. This means:

- ESCWA functions exposed through JSON services ensures applications deployed under Enterprise Server can be operated as part of an enterprise operations management policy.
- Command line and PowerShell access to administration facilities enables automation of common tasks controlling the production batch and online COBOL/CICS environment.
- Region configurations can be saved, restored, imported or deleted. Individual transactions and jobs can be deployed, started, stopped, edited and deleted giving the administrator full control of service deployment.
- Export facility for resource definitions now supports Enterprise Server format.
- Support for Historical Statistics Facility with GUI and command line analysis options.
- Option to automatically generate a mini dump on exception.

Comprehensive data access capabilities

- Mainframe VSAM and sequential file data can be unloaded, converted into ASCII and loaded into Microsoft SQL Server, without needing changes to the program code required to access the data. Consolidation of mainframe data under SQL Server simplifies data administration and enables all locking and transactional support to be handled by the database.
- HCOSS provides runtime support to minimize SQL updates when replatforming Db2-based applications to SQL Server.
- Data File Editor for secure browsing and editing of datasets.

Mission Critical Deployment Environment

- High performance deployment engine designed to run in the scale out model that the Microsoft .NET and Azure platforms provide. Applications are run within IIS containers on premise, or within Azure worker roles in Azure.
- Infrastructure for Reliability, Availability and Scalability.
- Supports Single Sign On using Digital Certificate Authentication Service (DCAS) to support the TN3270 Express Login Facility (ELF).
- Support for running other .NET workload, for example C#, directly within the transactional and batch environment offered by Enterprise Server for .NET.
- A comprehensive public API which supports the integration of application at the event level. This enables other .NET language applications to run under the control of Enterprise Server for .NET.
- Integration with popular third-party products:
    - Job schedulers
    - Print management
    - Operations management
- Award winning global product support.

System Requirements

Production

Rocket Enterprise Server for .NET can be deployed into physical or virtual machines on premise or in the Azure Cloud, or as worker roles within Azure. A minimum of Windows Server 2022 is required.

Databases supported are Microsoft SQL Server 2016 or later and IBM Db2 LUW 11.1 or later.

Development and Testing

Rocket Enterprise Developer for Visual Studio is required for the development, testing and deployment of applications to Rocket Enterprise Server for .NET. Visual Studio must be version 2022 running on:

- Windows 10, 11
- Windows Server 2022

* Formerly Micro Focus® products.

Rocket® software

Modernization. Without Disruption.™

Visit RocketSoftware.com ›

Learn more

© Rocket Software, Inc. or its affiliates 2024. All rights reserved. Rocket and the Rocket Software logos are registered trademarks of Rocket Software, Inc. Other product and service names might be trademarks of Rocket Software or its affiliates.

Micro Focus® is a registered trademark of Micro Focus IP Development Ltd. Rocket Software is not affiliated with Micro Focus IP Development Ltd.

MAR-9994_DS_ EnterpriseServerForNet_V4