Rocket® software

The Rocket® Enterprise Suite*: Supporting Business Critical Application Modernization

(*formerly a Micro Focus® product)

Delivering mainframe application modernization with confidence

Contents

← Back to contents

Modernization matters

As global events have proved, application modernization is not just possible, but necessary to compete in a digital world. The chances are that, during and after the pandemic, you switched to a more flexible, remote way of working. Your previous working practices, and IT operations, were outdated overnight.

Unprecedented challenges

The digital era has transformed how the organization sees IT. Rising demand for more transformative change, at a greater pace, has put IT under even greater pressure. At the same time, global events have turned many IT operations upside down, and the challenges of remote collaboration — connecting in a disconnected world — have thrown normal practices up in the air.

Now is the time to enable your IT organization to adapt for the future; ready for innovation and able to maximize the opportunity in every challenge. Whether you are just beginning your transformation or already well along the path, now is the time to accelerate. Because in the perpetual race for relevance, standing still is reversing by another name.

Modernize, but how?

Rapid change can be expensive and risky. Multiple studies, including work by analysts IDC[1], underline the eye-wateringly high failure rates of "rip and replace" IT projects. In that context, reusing the unique, business- critical core applications and data you have enhanced repeatedly over time makes business sense. In other words, consider not replacing, or rewriting — but modernizing, using a pragmatic, low-cost, low-risk transformation model.

Analysts agree. Modernization needs to move beyond a single massive event, into a continuous, incremental process the Standish Chaos Report calls "Infinite Flow"[2]. Just as buildings and bridges need to be continuously updated and maintained, so do IT applications and systems. Your business is constantly changing and new technologies are constantly developed. Your IT systems need to constantly evolve in response.

Modernization, as a term, includes many technical and operational changes. Our comprehensive modernization capabilities resolve the three key challenges of core IT modernization:

- **Application**
  Use low-risk innovation such as process automation, APIs, web services and managed code models that support composite application delivery, to increase application value.
- **Process**
  Sync application delivery speed with the pace of change. Tap into the power of rapid analysis and agile development to enable continuous testing and accelerate delivery.
- **Infrastructure**
  With greater connectivity, flexibility, and security, organizations can rapidly deploy applications across host, server, cloud and containers, insulating IT from a future change strategy.

[1] IDC InfoBrief, sponsored by OpenText, Modernization Strategies as a Foundation for Digital Transformation (DX), April 2020. www.microfocus.com/en-us/assets/application-modernization-and-connectivity/modernization-strategies-as-a-foundation-for-digital-transformation-dx
[2] www.microfocus.com/en-us/assets/application-modernization-andconnectivity/continuous-modernization-boundless-business-value

← Back to contents

Key next steps on the modernization journey

Each modernization journey is different, shaped by the unique business situation and technology strategy, but every modernizing organization must factor in application, process and infrastructure change.

Recent market and customer input identified three trends as CIO success criteria for digital-ready enterprise systems:

- **Application Modernization for innovation**
  Execute important application changes and support API initiatives to expose and integrate trusted functionality as new services.
- **Process Modernization for speed**
  Quickly establish the steps needed to understand, identify, execute and test crucial business system changes, and new functions.
- **Infrastructure Modernization for flexibility**
  Maximize the opportunities offered by cloud computing and containerization to deploy new business services rapidly, cost-effectively, and flexibly.

This list reflects a core ethos — to build on strength; adapting, evolving and innovating with proven business systems to accelerate positive business outcomes. All three run like a thread through the latest release of the Rocket Enterprise Suite.

Infrastructure modernization for flexibility

Enterprise-scale computing to achieve large-scale reliability, availability, serviceability and performance criteria as the business demands has traditionally meant the IBM® mainframe. However, there is growing market evidence that in today's hybrid corporate computing solution environments where new levels of flexibility are required, many mainframe CIOs are again examining the right blend of platform deployment strategies.

For some, the economics of scalable enterprise computing are at the tipping point in favor of scale-out (multiple commodity servers running parallel workload deployments) instead of scale-up (workload consolidated on a single, large-scale platform). The advent of mainstream cloud computing offers a genuinely new way of looking at performance, cost and scalability.

The Rocket Software viewpoint is that the fastest and lowest risk approach to getting to these new environments is to provide a platform that preserves your existing business logic and data with minimal change and allows this to execute on your platform of choice: z/OS®, Linux, UNIX and Windows, running on premises, on mainframe, Private or Public Cloud and Containers. This means that mainframe applications with a proven value to the business need no longer be tied to a single proprietary platform but can be run on any platform, or platforms, that meet the businesses requirements.

> "Rocket® Enterprise Developer* and Rocket® Enterprise Server solutions*, with their high level of mainframe compatibility, allowed us to rapidly migrate our existing mainframe application code in an application replatforming exercise which we could then deploy in our chosen Amazon Web Services (AWS) cloud environment."
>
> Head of Merchandizing and Inventory
> Retail Company

← Back to contents

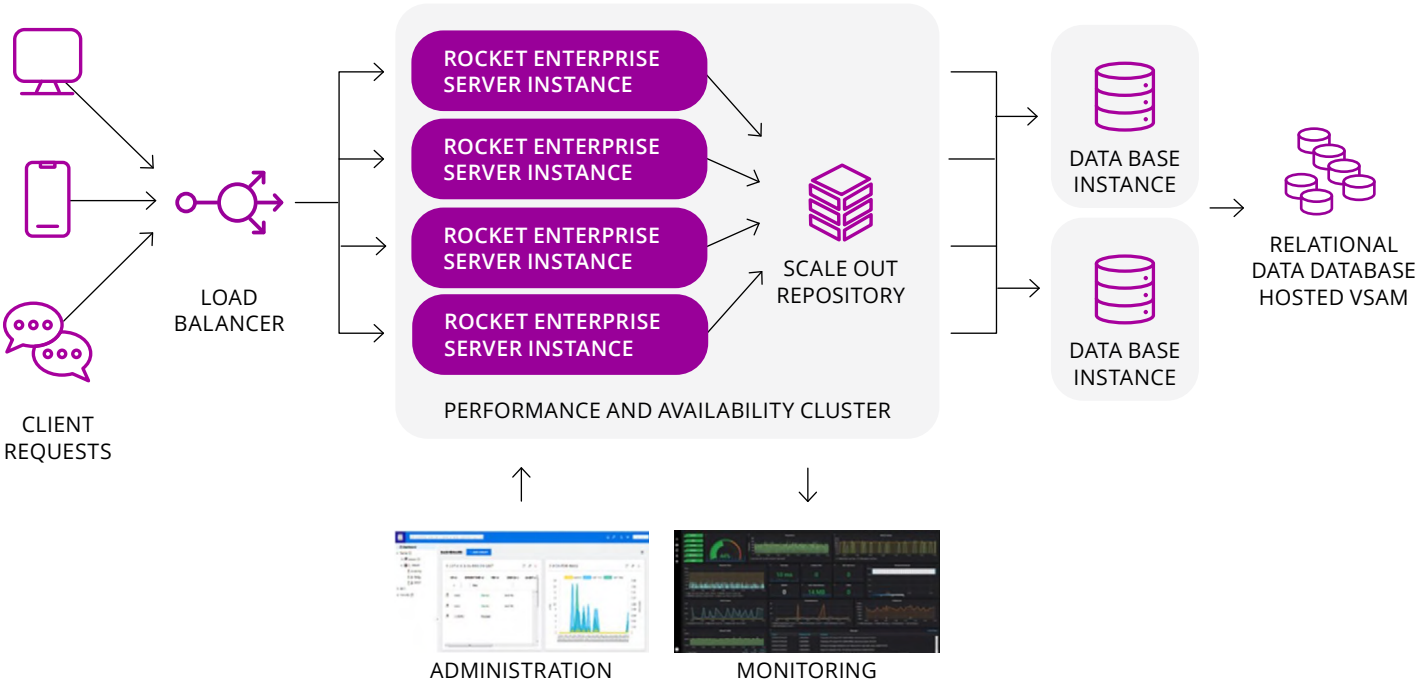


Figure 1. The Rocket Enterprise Suite deployment engine, Rocket® Enterprise Server*, supports application regions operating in a cluster and managed through a common web admin tool, accessible by IT operations monitoring tools. VSAM data is hosted in a relational database for high availability and requests are directed through a system load balancer.

Moving your applications and data to the cloud as fast as possible is one thing but once there, you can exploit the capabilities of modern commodity platforms to deliver the high levels of Reliability, Availability and Serviceability demanded by even the largest mainframe workload. Rocket Enterprise Server is designed to do just that. It is a proven production server that thousands of customers use today to run and operate their business-critical systems with the same quality of service and security as the mainframe. Highlights include:

- Support for multi-node clusters means customers can distribute workload across multiple regions working in concert on different machine instances or containers. This eliminates single points of failure in the deployment architecture and provides continuity of service in the event of a node failure.
- Automatic or elastic scaling of regions to provide consistent performance when business transaction rates increase and scaling down of resources when the peak has passed.
- Integration to your enterprise operations processes through a single web administration facility with a rich set of JSON APIs that supports the automation of operations tasks such as monitoring the health of the Regions, restarting or add/removing regions from a cluster.
- Support for common Relational database targets for your Db2® data as well as support for hosting VSAM data to Db2 LUW, SQL Server, PostgreSQL and Oracle, providing data replication and integrity that is transparent to the application accessing it.
- Enterprise class security to protect access through a robust user authentication model with optional integration to multi-factor and single-sign-on infrastructure and resource control restricting access levels based on user role and responsibility.

← Back to contents

Process modernization for speed

Enterprise-class expertise is required to build, maintain and modernize enterprise-class, scalable deployment environments, regardless of deployment platform. Today's IT climate demands the people, process and modern tools to ensure IT can respond quickly to change, yet those who are skilled in the task of mainframe development are typically in limited supply, as are their possible successors.

As many organizations are now finding, the use of modern tools simplifies the task of training those already knowledgeable in Java or C#. Training new employees on traditional mainframe development tools is a greater hurdle than learning the additional syntax of COBOL or PL/I systems which is straightforward.

Rocket Software believes that building mainframe applications should be as efficient, contemporary, and accessible as any other applications. This means highly functional developer experiences and a fully integrated toolchain at the backend to automate tasks such as requirement management, source control, assessment, build and delivery.

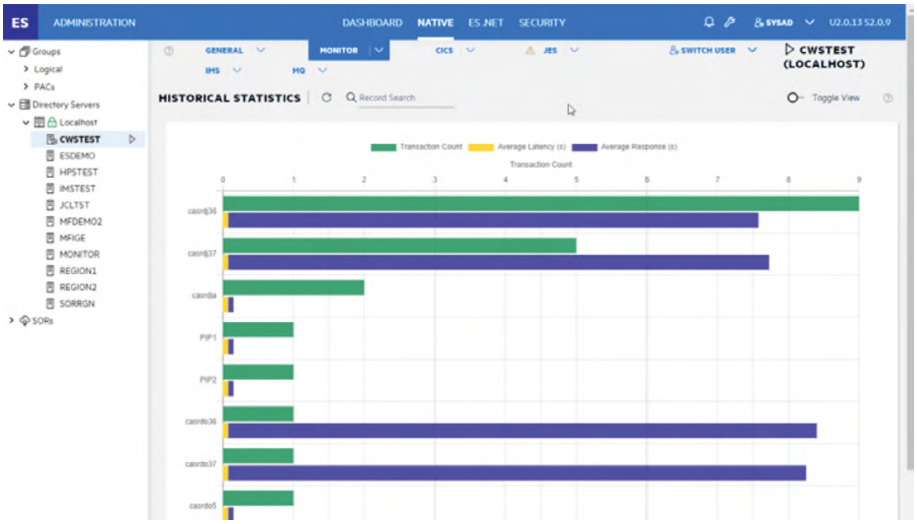


Figure 2. The Rocket Enterprise Server Common Web Admin for real time monitoring and control

"We estimate that the Rocket solution in a Linux environment runs at 10–20% of the original IT operating costs, so a saving of 80 to 90% of the mainframe costs which translates to full ROI within two years."

Chief Technology Officer
Bank

Rocket Enterprise Server provides support for:

- A choice of modern development IDEs for COBOL and PL/I development that are easy to learn, will be familiar to new recruits coming into your business and can be hosted on premise or entirely in the cloud with no mainframe dependencies.
- Application knowledge and analysis at the point of change, removing the reliance on application subject matter experts and ensuring developers can make quality changes with confidence.
- Unit and functional testing capabilities that can be integrated into your CI processes means virtually unlimited test capacity ensuring faster feedback to developers and fewer downstream production issues.
- Integration with code analysis tools to provide static code analysis of COBOL vulnerabilities meaning mainframe application development can participate in your DevSecOps initiatives.

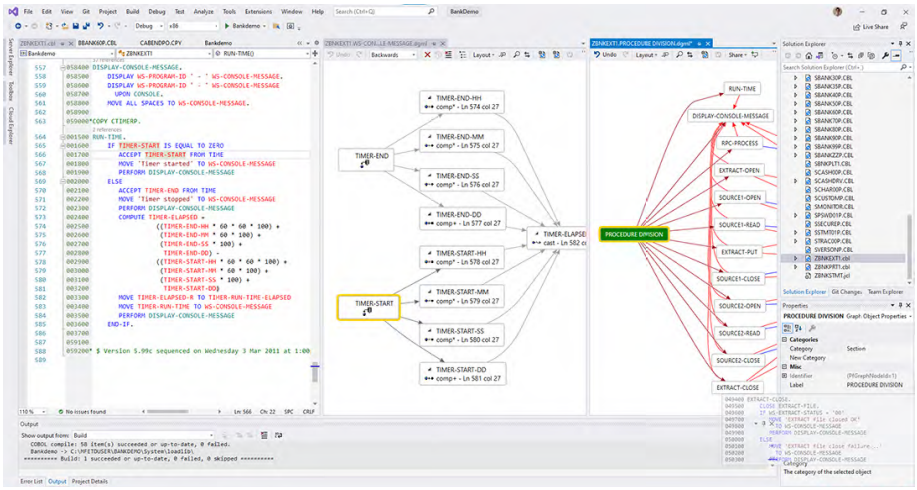


Figure 3. The Rocket Enterprise Suite offers detailed, real-time application analysis information embedded within the developer IDE or as part of an automated CI/CD delivery process. Rocket Enterprise Suite integrates with and supports the modern mainframe delivery toolchain including for example Jira, Git, Jenkins and UFT.

"The new Rocket development environment has opened our eyes to so much opportunity. We are looking to move to a DevOps model with more end-to-end serviceability in the cloud. Our productivity has increased by 30 percent and we are more responsive to the business."

Senior Developer
Insurance Company

← Back to contents

Application modernization for innovation

According to one industry report[3], integration challenges are slowing digital transformation initiatives for 85% of IT organizations. Expectations for today's IT landscape is one of highly connected composite applications that offer the collaboration and integration the modern business needs.

Those who manage core COBOL and PL/I systems understand the sheer size, scale and complexity of the applications involved. They appreciate that the application value lies in the business processes and services they deliver, but poor understanding of both applications and processes can mean low levels of code reusability or re-purposing.

Application knowledge to unravel complexity and to understand the impact of change is the critical first step in planning and delivering application modernization in a non-disruptive way. Rather than undertaking the expense and the risk of rewriting large amounts of working code, business value can be retained by reusing or re-purposing existing application logic. Rocket Enterprise Suite provides incremental facilities to support rapid and reliable application change to meet your business requirements:

- Automatic processes for identifying, documenting and managing business rules in a central searchable repository.
- Code refactoring capabilities to automatically "Code Slice" business functions into discrete application logic that can be redeployed or re-purposed.
- Service creation wizards for easily building and exposing application logic as RESTful APIs.
- Modern deployment of COBOL applications to containers and managed environments like .NET Core and the JVM.

These capabilities allow you to transform the once siloed mainframe business processes to integrated parts of your enterprise wide portfolio ensuring they continue to deliver value.

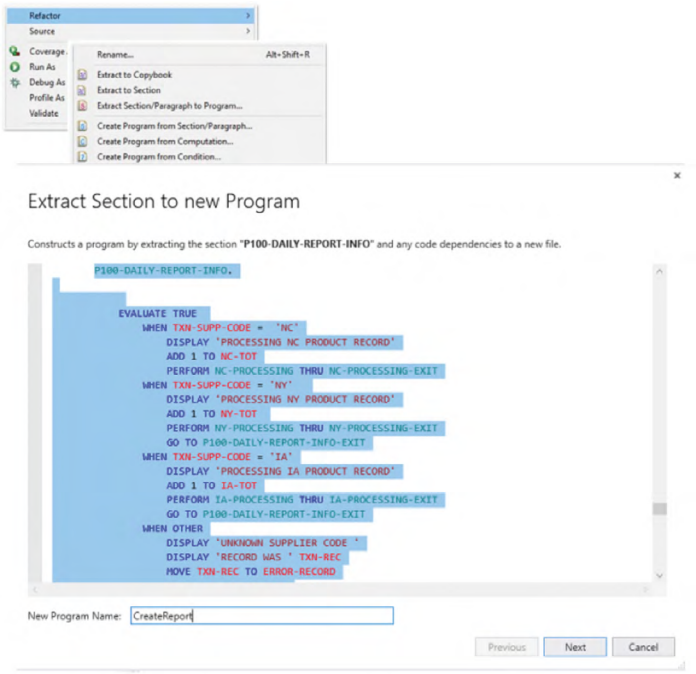


Figure 4. Rocket Enterprise Suite includes a robust set of facilities to identify, extract and build new code fragments, enabling them to be called using APIs.

[3] https://resources.mulesoft.com/ty-report-connectivity-benchmark.html

← Back to contents

Enterprise application modernization from Rocket Software

Our track record and credentials in enterprise modernization creates a unique and comprehensive capability.

- We can help streamline development and delivery activities by 40%[4], using contemporary technology, DevOps agility and unrivalled flexibility.
- We have delivered 1,000+ modernization projects, supported by a major global partner network and the Rocket Modernization Maturity Model — a framework for the planning and implementation of a modernization journey.
- Developers can now deploy COBOL applications in a native or managed code environment, and across all major supported platforms on the market unchanged.
- Works for all core applications and major data stores. Take your database variants into both mainframe and distributed worlds.
- Rest assured with certification of virtualized and cloud environments including AWS, Azure and GCP, and containerization, including Docker and Kubernetes.
- Customers have achieved 50%–90% reduction in IT operations costs and a performance improvement of up to 50% for batch and online transactions.

With the Rocket solution, we gained a robust web service that we can operate with standard tools. We now use COBOL programs flexibly as microservices integrated in a service-oriented architecture to accelerate business processes even further — helping the organization deliver excellent client services."

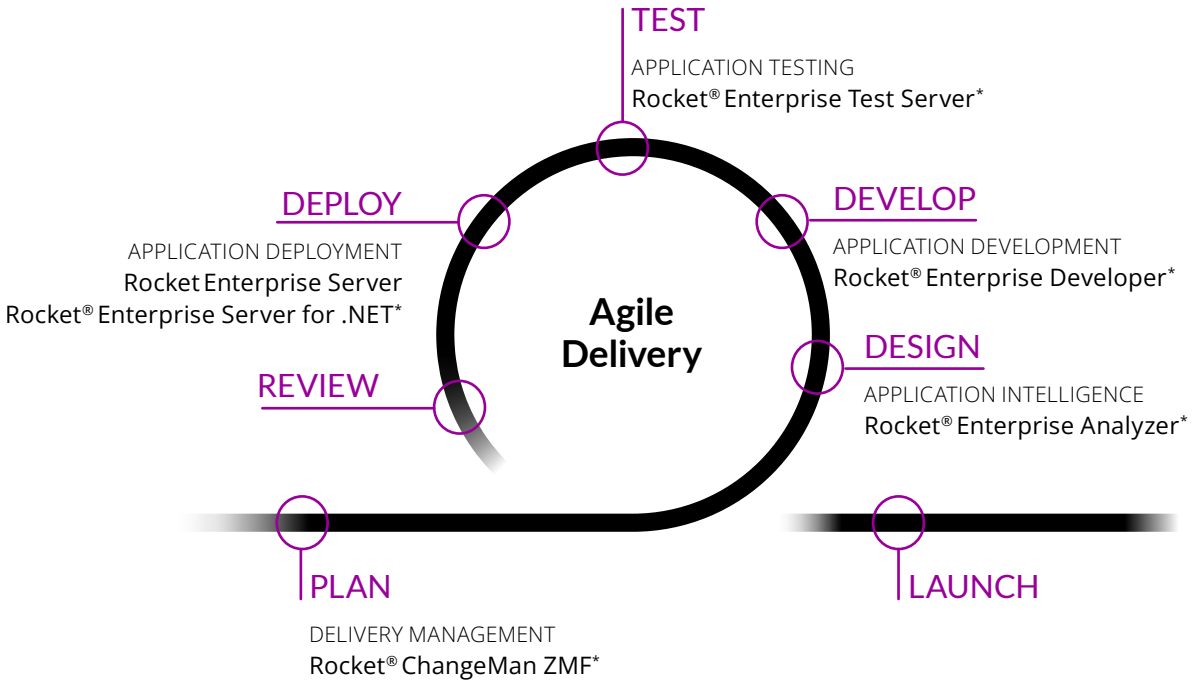
Senior Developer
Pension Fund

[4] https://www.microfocus.com/en-us/case-study/banca-popolare-di-sondrio

← Back to contents

Rocket Enterprise Suite

Scalable, flexible application delivery for the modern mainframe



Rocket Enterprise Suite products

- **Application Analysis**
  Rocket Enterprise Analyzer
- **Application Development**
  Rocket Enterprise Developer for Z
- **Application Testing**
  Rocket Enterprise Test Server
- **Application Deployment**
  Rocket Enterprise Server

Available for use on premises or on all major cloud providers including AWS, Azure and GCP.

Learn more about:

Rocket Enterprise Suite

Rocket's Modernization Solution

About Rocket Software

Rocket Software is the global technology leader in modernization and partner of choice that empowers the world's leading businesses on their modernization journeys, spanning core systems to the cloud. Trusted by over 12,500 customers and 750 partners, and with more than 3,000 global employees, Rocket Software enables customers to maximize their data, applications, and infrastructure to deliver critical services that power our modern world. Rocket Software is a privately held U.S. corporation headquartered in the Boston area with centers of excellence strategically located around the world. Rocket Software is a portfolio company of Bain Capital Private Equity. Follow Rocket Software on LinkedIn and X.

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