Rocket® DevOps (formerly Rocket Aldon)

Secure, end-to-end CI/CD for IBM° i

The speed of today's business environment places IT and development teams under significant pressure. You need to deliver applications, tools, and processes required by today's employees, customers, and markets not only to keep up with the market, but also to stake out a leadership position. Many teams are turning to DevOps as the standard by which they enable innovation within the business, while ensuring adherence to market and regulatory demands.

Rocket® DevOps (formerly Rocket Aldon) is a modernization platform specifically designed to enable end-to-end Continuous Integration and Continuous Delivery (CI/CD) practices for your multi-code environments that include IBM® i. Rocket DevOps enables you to build the structure and flexibility you need to extend holistic DevSecOps best practices to the IBM i, pursue innovative experimentation, leverage Kubernetes and other cloud native technology, respond easily to compliance audits, and adapt to ever-changing expectations be it via process, technology, or experience.

And, the unmatched experience of the Rocket DevOps' services team quickly positions you for success with a customized implementation that works best for your business and with the power to take ownership over any future changes.

PRODUCT BENEFITS

- Leverage an end-to-end
 DevSecOps solution built for
 IBM i powered businesses
- Make truly flexible CI/CD processes a reality
- Build structure to speed up time to market and ensure compliance
- Deliver holistic and simplified reporting
- Standardize DevSecOps best practices across the organization
 - Enable non-RPG talent to engage and support the IBM i DevOps process

Leverage an end-to-end DevSecOps solution built for IBM i powered businesses

The IBM i no longer lives in isolation. Businesses must respond to customer and market needs regardless of how their IT infrastructure is set up. Similarly, your customers expect development and IT teams to deliver new digital capabilities needed for their businesses to excel, regardless of whether they are working with RPG or Python.

WITH ROCKET DEVOPS, BUSINESSES CAN:



Establish agile DevSecOps methodologies and processes across your entire multi-code environment



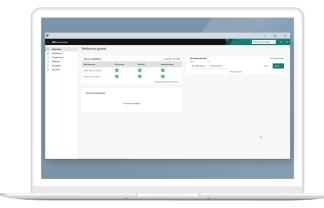
Enable "shift left" testing for true CI/CD



Weave security and compliance throughout the entire process via automation and controls



Include the tools and integrations organizations need to build end-to-end DevSecOps workflows, from requirement gathering to delivery



With Rocket DevOps, you can create customize dashboards for all users

Make truly flexible CI/CD processes a reality

Rocket DevOps allows you to implement CI/CD to enable freedom of experimentation experimentation from development through delivery. You can utilize the platform's built-in project management functionality or integration with third-party tools to provide developers and IT teams with the capabilities to quickly develop and then test new releases as well as experiment with new technologies and process workflows. Flexibility across all three paradigms strengthens the company's ability not only to quickly deliver high quality code to market but also to easily test out new ideas that could create a competitive edge for the business.

Build structure to speed-up time to market and ensure compliance

To achieve true CI/CD, Rocket DevOps incorporates pervasive automation and robust authentication and controls. This ensures developers can focus on rapid iteration and testing, which frees them from time-consuming, repetitive, manual tasks. Furthermore, the built-in automated workflows in Rocket DevOps eliminate reliance upon error-prone manual workflows and improve productivity for the rest of the DevOps team.

Automating as much of the DevSecOps process as possible in one multi-code environment also ensures compliance with regulatory and internal process mandate. Rather than audits triggering a stressful and sometimes costly exercise, you feel confident about having the compliance built right into your platform.







Deliver holistic and simplified reporting

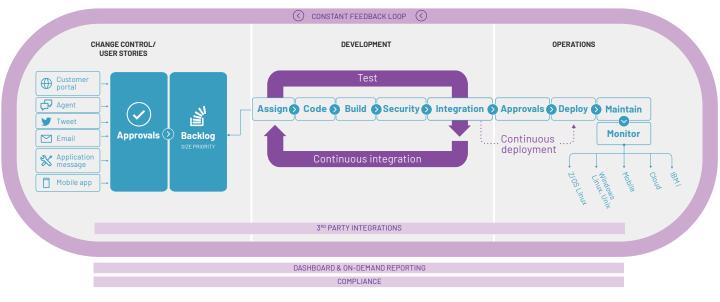
Adherence to regulatory compliance means little if you can't prove it. Instead of rushing to review dozens of logs across the entire IT environment, leverage the built-in documentation and reporting tools in Rocket DevOps to collect data about projects quickly, no matter what infrastructure you are using. You then use the data to create detailed reports for regulatory audits or process checks prior to delivery. With the click of a button, you easily generate holistic reports across both RPG and non-RPG development and deployment workflows.

Standardize DevSecOps best practices across the organization

You can implement DevSecOps best practices through Rocket DevOps third-party and open-source tool integrations. You can also extend support for popular tools like Git and Jenkins to their RPG development environments, and standardize your DevSecOps methodologies across your entire organization.

Enable non-RPG talent to engage and support the IBM i DevOps process

RPG developers' project queues are so overburdened they make prioritization an exercise in futility. With Rocket DevOps, you can enable your developers and IT admins who don't have experience with IBM i to support the DevSecOps process for RPG applications. Enabling non-RPG talent to do the work instead of waiting for the long project gueues of RPG developers eliminates project bottlenecks, and facilitates getting code out the door quickly.

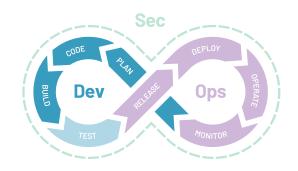


DevOps Architecture



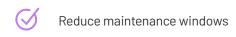
Manage and automate IBM i development and deployment effectively

Equipped with built-in DevOps capabilities for the IBM i, such as easy integration with the IBM RDI modernization solution, Rocket DevOps empowers you to bring agile best practices to the IBM i including shifting testing left, building CI/CD pipelines, and leveraging third-party tools like Git. This enables your developers to collaborate on building modern, innovative applications, while your IT teams extend DevOps automation and control best practices.



Rocket DevOps displays a list of objects associated with an IBM i application release in a format familiar to developers. The list shows all objects from all libraries included in the application, which eliminates the need to go to each library and source file individually. The list shows comprehensive status information for each object on a single line.

ADDITIONAL FEATURES:



Avoid time-consuming errors such as level checks

Automate deployment

Integrate with third-party tools like LANSA, JD Edwards, and 2E



The "Work with Objects by Release" panel in Rocket DevOps for IBM i, both in the green screen and new portal



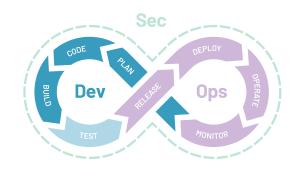






Enforce workflow standards and process visibility across diverse systems

In this digital era, IBM i development work can no longer exist in silos that stifle innovation. With Rocket DevOps, you can manage multi-code environments in a way that retains structure across your organization, while providing the flexibility you need to develop applications and processes rapidly, no matter where the applications reside or what code is used. Rocket DevOps provides a holistic view that allows you to monitor what is happening across the DevOps tools utilized. Rocket DevOps manages all code within one DevOps environment, and enables compliance reporting with a single button click.



Support is available for Windows, Linux, UNIX, and modern languages and frameworks such as Angular and HTML5, which makes Rocket DevOps the best choice for organizations seeking to standardize software development and delivery processes across diverse systems.

The interface to non-RPG systems provides visibility into the central secure repository, which allows you to browse through any application and view all its contents. In addition, the customizable display clearly shows each component that is resident in each of the software lifecycle environments, and who is working on it.

ADDITIONAL FEATURES:



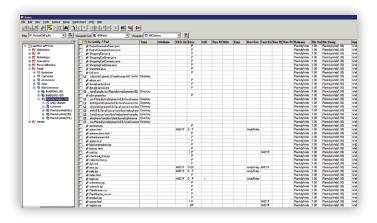
Automated deployment



Scalable to thousands of target systems



Process and authority built into version control check-in/check-out



Rocket DevOps core for Enterprise component non-IBM i applications illustrates the structure of nested applications and projects, and the stage of the project development within the application's lifecycle.

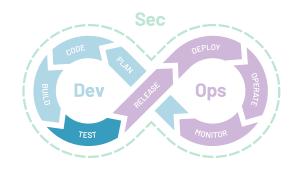






Conduct continuous, automated, and precise real-time testing

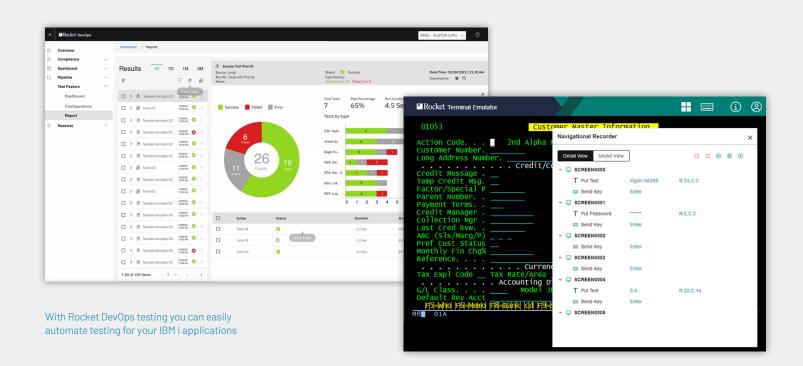
Developers cannot truly embrace DevOps methodology until they've implemented continuous and automated testing loops within their development processes. Rocket DevOps taps into DevOps test workflows and environments to shift testing left and automate processes. This unlocks greater speed to market, reduces risks of bugs or issues entering production, and minimizes future needs and costs of fixing bugs.



The Rocket DevOps environment easily performs integration and regression testing on IBM i applications – whether the test scripts are interactive sessions or batch jobs. Rocket DevOps testing will also test for database updates that break predefined rules against tables.

Test data

Because your developers now generate test data from live systems in real-time, anonymize it, and utilize it for testing, they can perfect code for more efficient and agile production builds in the future.









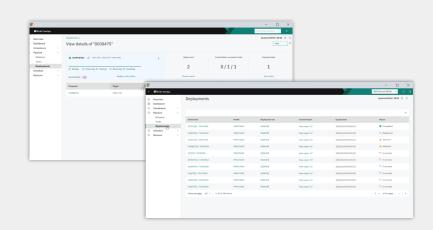
Reduce the risk of errors and complexity in deployment and release

Why deploy and release software manually when you can automate the process, minimize risk of errors, and improve verification, while saving valuable time and effort? Continuous integration isn't effective without continuous deployment or delivery. You can enable true CI/CD by leveraging Rocket DevOps' market-leading deployment and release management capabilities. Rocket DevOps helps you automate the packaging and distribution of new builds, or releases to the right locations within an organization precisely and confidently.



Rocket DevOps' browser-based release management capabilities streamline releases or updates for builds, applications, or software. With Rocket DevOps, you get real-time visibility for all target systems (from small deployments up to thousands of endpoints) - including updates on endpoint status for quick-issue identification and troubleshooting - and execute, promote, compile, and deploy file workflows within three mouse clicks. This enables developers to be the agile and responsive teams they need to be, with end-to-end automation of the deployment process. Rocket DevOps gives you the flexibility to leverage one or multiple 3rd party tools like Git, Jenkins, or Jira for source control. Or you can allow Rocket DevOps to manage source control, process control, and deplyment to both testing and live endpoints.

Deploy and release code to thousands of endpoints in one click. Quickly know what needs your attention so you can resolve issues and redeploy.





Use the Rocket DevOps dashboard to see statistics such as deployment frequency







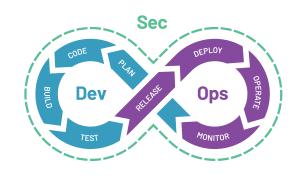




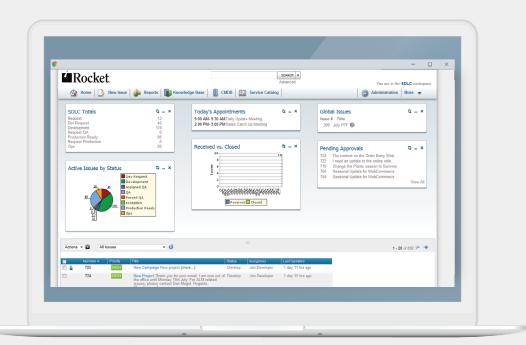
Enhancement requests and change management

Rocket DevOps unifies software development processes with the inclusion of tools to document and manage requirements. It allows you to track incoming change requests, and leverage automation, which channels those requests to appropriate stakeholders, and traces approvals and access reports all from one central, highly visible location.

Whether integrated with third-party tools like Jira, or by leveraging Rocket Community Manager, your IT or development teams work seamlessly with managers and stakeholders to scope changes, streamline development, and speed up delivery to enable agile and cost-saving development. Your IT and development teams can then also respond quickly to changes, implement best practices, and meet compliance regulations.



With Rocket DevOps Community Manager, you can build personalized home pages with their own dashboards, views, filters, and reports













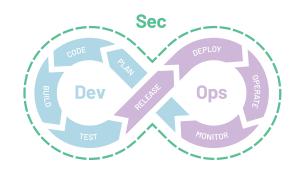


Build a DevOps environment where security is woven into the platform

In a DevSecOps world, security transitions from a team's responsibility to a shared responsibility across all stakeholders. The best DevOps platforms are process enforcers with security best practices woven into every step of development and deployment. You can set up Rocket DevOps to work with popular security tools and shift security left to detect potential vulnerabilities earlier, thereby enabling your developer teams to write safer, high quality code and limit the risk of introducing vulnerabilities to production.

In addition, Rocket DevOps makes it easy to enforce security best practices when it comes to access and permissions, including delineating clear roles within the DevOps environment. Whether a user is a developer, tester, or manager, the upfront configurations, automation, and controls built into Rocket DevOps mean you can be more confident the DevOps process is secure.

With Rocket DevOps, IT teams can secure both the code and the process.













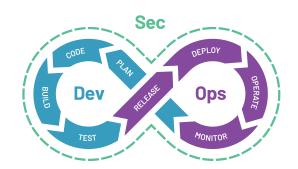






Deliver a high-quality DevOps experience by leveraging popular third-party and open-source tools

We strive to offer top-notch DevOps experiences to our customers, and a big part of the Rocket way is to adapt to the way you run your businesses.



That's why we've added support for popular third party and open-source tools, in particular:

VERSION CONTROL TOOLS – GIT AND APACHE SUBVERSION

The tools within the Rocket DevOps environment conveniently mirrors all changes. Git and Subversion also make it easy to integrate with automated building tools like Maven, Bamboo, Ant, and Jenkins.

PROJECT MANAGEMENT AND SUPPORT TOOLS - JIRA

Our custom plugin for JIRA-a leading work management tool-enables seamless integration across platforms within the Rocket DevOps environment. Teams can stay engaged in a system that makes the most sense for their workflows, which drives up productivity for development projects.

AUTOMATED BUILD TOOLS - JENKINS

An open-source build tool that is popular with companies moving towards CI/CD processes, source code is stored in the Git or Rocket DevOps repository, while leveraging Jenkins to manage builds across distributed environments. Following that, DevOps can take over deployment, security, testing, auditing, tracking, and other ALM/DevOps functionalities.

OTHER OPEN-SOURCE TOOLS

Considering the speed at which businesses are linking applications across operating systems, having a common repository is critical to manage all related changes effectively. With Rocket DevOps, developers get the best of both worlds by combining the most powerful open-source tools, while benefitting from its comprehensive native build and deployment capabilities.

ANALYSIS AND PRODUCTIVITY TOOLS - X-ANALYSIS

Developers use X-Analysis to improve visibility into the DevOps processes and gain a better understanding of impact on larger environments. Rocket DevOps provides a plugin for X-Analysis so developers can make smarter decisions about their applications and code.

INTEGRATED DEVELOPMENT ENVIRONMENTS (IDES) - ECLIPSE AND VISUAL STUDIO

Two of the most popular IDEs on the market. Our plugins connect directly to the Rocket DevOps environment, which allows developers to edit, build, debug, compile, and deploy code more cohesively.

OTHER SUPPORTED ENVIRONMENTS

Rational, CA 2E, Zend, Oracle® JD Edwards EnterpriseOne, JDA Infor System 21, and Lawson.







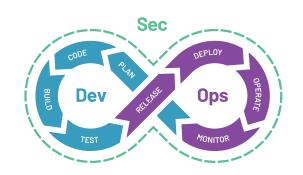






Holistic and simplified compliance reporting for multi-code environments

Complex compliance and reporting obligations can be time-consuming to track and fulfill, which raises the risk of non-compliance and its associated consequences. Rocket DevOps reduces the administrative burden on your IT teams by streamlining compliance requirements through pre-packaged templates, permissions/controls, and automation capabilities. This ensures achievement of compliance tasks by automatically processing and assigning them to the right individuals for review and approval. The automated capabilities of Rocket DevOps make it easy to show exactly who has authority to perform which operations. They also leverage automation with browser-based release management solutions, pre-built templates, and customized reports to gain clarity over compliance levels, and ensure consistent adherence to regulations.



ADDITIONAL FEATURES:



Compliance reporting, including authority reports such as permissions by release or user

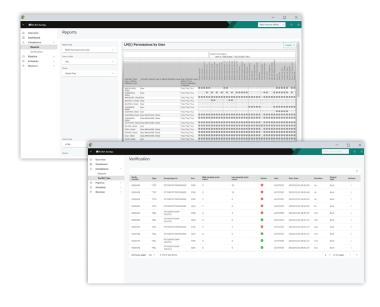


Other reporting such as:

- Report on-time logs against testing, development, etc
- Release activity reports
- Deployment activity reports
- Man-hour reporting
- · Task activity



Export data via HTML, PDF



With a holistic view of your DevOps environment, ensuring compliance and generating reports is easy





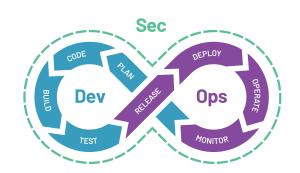


Create transparency and internal collaboration across stakeholders

Rocket DevOps is the single source of truth for your IT or development functions, where data, reports, and business requirements can be stored centrally for easy access. Rocket DevOps allows project and product owners, to work together to track, analyze, and scope feedback or change requirements, which is true to the spirit of DevOps.

With the ability to supercharge collaboration and transparency over real-time feedback data, Rocket DevOps helps development teams improve their rate of innovation, speed to market, and CI/CD processes. It does this by aligning your teams with the right information, progress tracking, or performance, and ensures development runs like a well-oiled machine to deliver competitive offerings that meet ever-evolving market expectations.

These capabilities are especially important when your teams are siloed, and struggle to work together efficiently either because of cultural differences, or process roadblocks. Having a continuous delivery environment in place like Rocket DevOps helps you break down those barriers. It fosters real-time collaboration and transparency across your organization, thereby minimizing your risk of asynchronous development, speeding up time to market, improving productivity, and aligning stakeholders.



ADDITIONAL VISIBILITY AND COLLABORATION **FEATURES INCLUDE:**



View who is working on a task and what they are doing



Track enhancement requests from support, to engineering, all the way through deployment



Share source code between between developers, QA, and Ops/SRE, track actions and edits, and merge code, even with multi-code structures



Coordinate across multi-code environments to align timing for testing and release



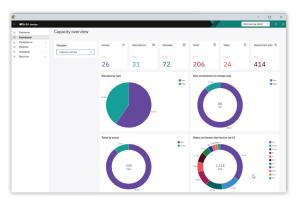
Enable users like automation engineers or QA managers to promote code, trigger a compileand-build sequence, or move code into testing without needing to know the underlying code



Allow IT to deploy to a virtually unlimited number of servers without knowledge of underlying code or the endpoints – no copy and paste; just click to deploy



Quickly know which tasks are still in development and which are ready for testing. Keep the process moving by easily promoting tasks to the next stage.



Business and management stakeholders can quickly see overarching data on projects such as the number of releases that are in DevOps and where work is being done.







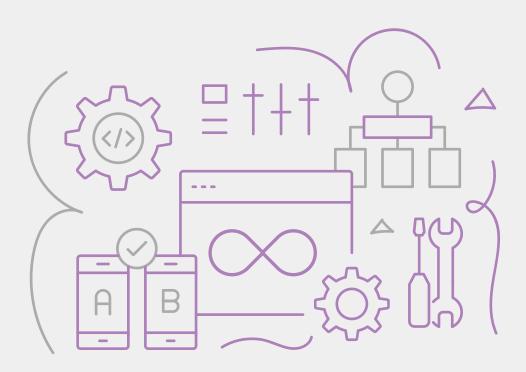




Rocket's IBM i DevOps experts empower autonomous operation

Every business and development team runs DevOps differently depending upon its unique development needs, market demands, regulations, or customer requirements. Our DevOps experts have decades of experience setting up IBM i customers for success. We work with you to implement the best configuration of Rocket DevOps that aligns with how you do business so your teams are quickly up and running.

Rocket DevOps also empowers you to manage, maintain, and update your DevOps environments without the need for additional services. If questions do arise, however, our support team is available 24/7/365 from anywhere in the world.













Rocket DevOps Technical Specs

| Rocket [®] DevOps Lifecycle Manager (IBM i Edition) | | | | |
|---|--|--|--|--|
| Development and Deployment Manager Server | For Deployment Server IBM i V7R2 through 7.4 For Deployment Client IBM i V7R1 through 7.4 | | | |
| Supported Integrated Development Environments (IDEs) and Applications | Git IBM Rational Developer for i/Power Systems CA 2E CA 2E CA 2E X-Analysis Oracle JD Edwards JIRA | | | |
| Rocket [®] DevOps Lifecyo | ele Manager (Enterprise Edition) | | | |
| Client Requirements | 64-bit Windows Server 2012, Windows Server 2016, Windows Server 2019, Windows 8 or Windows10 Red Hat Enterprise Linux or CentOS Linux, 64-bit, version 7.6 or higher (7.6-7.8 have been tested), Red Hat 64-bit version 8.1 or 8.2; CentOS 64-bit version 8.1 IBM AIX 7.1.05 or later, Oracle Solaris 10 (SunOS 5.10) or 11 (SunOS 5.11), or HP-UX 11.31 Mac OS X 10.11.6 El Capitan, or higher operating system | | | |
| Server Requirements | For IBM i Operating Systems: • IBM i 7.2 through 7.44 • Installation of Option 30, QShell Interpreter For Linux Operating Systems: • Red Hat Enterprise Linux or CentOS Linux, 64-bit, version 7.6 and higher, version 7 release (7.6 - 7.8 have been tested), or version 8.1 or 8.2 version 8 release • IBM Db2® UDB Express for Linux version 10.5.0.3 (installed with the package) • IBM Java Software Development Kit Version 1.88 (installed with the package) | | | |
| Additional Software | Java 1.8 or later for IBM i servers Apache Software Foundation Apache Tomcat Version 8.5.54 (installed with the Security Server) | | | |
| Supported Integrated Development Environments (IDEs) and Applications | IBM Rational Developer for i/Power Systems Eclipse MSSCCI (Visual Studio) Git SVN Jenkins JIRA | | | |
| Rocket [®] DevOps Deploy | ment Manager | | | |
| Client Requirements | 64-bit Windows Server 2012, Windows Server 2016, Windows Server 2019, Windows 8, or Windows 10, with Java installed (Java 1.7 or 1.8, Amazon Corretto 8 or 11, OpenJDK 7 and above). If Java is not installed, the Deployment Client installation program installs Java 1.7. On 64-bit computers, if 32-bit Java is installed, but 64-bit Java is not installed, the installation program installs 64-bit Java 1.7. Red Hat Enterprise Linux or CentOS Linux Version 7.6 or higher (7.6-7.8 have been tested), Red Hat Enterprise Linux 8.1 or 8.2, or CentOS Linux 8.1. Java 1.7, Java 1.8, or OpenJRE version 8 (Java 1.8 or OpenJRE version 8 is recommended), or Amazon Corretto 8 or 11. Red Hat Linux must be configured to receive Red Hat updates in order to install required packages automatically. IBM AIX 7.1.05 or later, with Java 1.7 or higher installed Oracle Solaris 10 (SunOS 5.10) or 11 (SunOS 5.11), with Java 1.7 or higher installed and the SUNWscpu package installed. HP-UX 11.31, with Java 1.7 or higher installed. Mac OS X 10.11.6 El Capitan or higher operating system. Java Development Kit (JDK) version 1.7 or higher IBM i version 7.2 through 7.4, with an appropriate IBM Developer Kit for Java licensed program installed for the operating system version. Java 8 is recommended for optimal support for deployment and automatic client update. | | | |
| Server Requirements | For IBM i Operating Systems: • IBM i 7.2 through 7.4 For Linux Operating Systems: | | | |







tested), or a version 8.1 or 8.2 version 8 release







• Red Hat Enterprise Linux or CentOS Linux, 64-bit, version 7.6 and higher version 7 release (7.6 - 7.8 have been

| Rocket [®] DevOps Community Manager | | | | | |
|--|--|---|---|--|--|
| Client Requirements | Any supported web browser listed below • Microsoft Internet Explorer 9, 10 and 11 • Mozilla Firefox • Google Chrome | | | | |
| Server Platform | Windows Server (64-bit hardware only) versions 2019, 2016, 2012 R2, or 2012, with latest updates | | | | |
| File System | NTFS-formatted hard drive | | | | |
| Web Server | Internet Information Services (IIS) v7-8.5 | | | | |
| Database | Microsoft SQL Server 2019, 2017, 2016, 2014, 2012 – licensed edition with latest updates | | | | |
| Additional software | Apache Tomcat® version 9 (64-bit) OpenJDK version 11 (64-bit) | | | | |
| Hardware | 1-20 Users, SQL Server on the same server | 51-150 users 8 GB RAM 4 Xeon or Opteron 2.4 GHz processor or better 151-249 users 8 GB RAM 8 Xeon or Opteron 2.4 GHz processor or better | 250-500 users • 16 GB RAM • 16 Xeon or Opteron 2.4 GHz processor or better 501+ users • 32 GB RAM • 32 Xeon or Opteron 2.4 GHz processor or better | SMTP for email notification (e.g., as provided by Microsoft Exchange and Lotus Notes) POP/IMAP/IMAP-SSL/Microsoft365-0Auth 2.0 for incoming email processing (as provided by Microsoft Exchange and Lotus Domino) | |

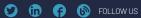
Rocket® DevOps Harmonizer

- Automatically installs on IBM i without user intervention
- Access to the QSECOFR profile or DevOps user profile
- File size: 30 MB

| Rocket* DevUps Git Plugins | | |
|--|---|--|
| Client Requirements | LMe GUI Client 6.6A, 6.6B, and 6.70.And Ald/CS command line 1.14, 1.15, and 1.16. | |
| Additional Software | Git 1.8.2 or higher • Windows: • Module Tk::LabEntry • Module Tk:Dialog • Linux/Unix: • Bash shell, Perl version 5.x and noted modules | |
| Rocket [®] DevOps Jenkins Plugins | | |
| | | |
| Client Requirements | Any supported web browser for Jenkins Rocket DevOps Lifecycle Manager (enterprise Edition) Version 6.77 for IBM i or Linux Rocket DevOps Lifecycle Manager Client Services (Ald/CS) middleware version 1.1616 | |



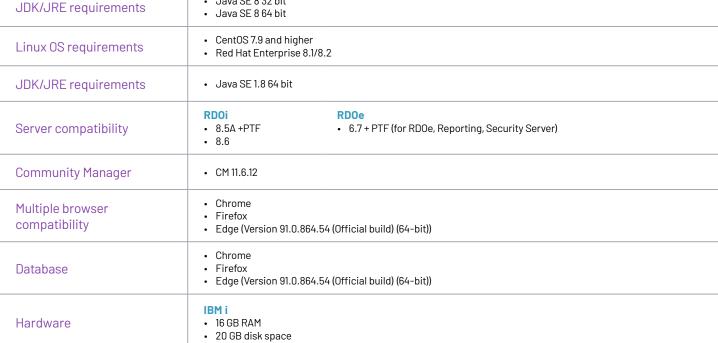






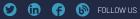


| Rocket® DevOps JIRA Add-on | | | | |
|------------------------------------|---|--|--|--|
| Client Requirements | Any supported web browser listed below • Microsoft Internet Explorer V10 or V11 • Mozilla Firefox • Google Chrome Server Platform | | | |
| Additional Software | JIRA v7.x or higher JIRA v8.x or higher Java Runtime Environment 1.8 or higher | | | |
| Rocket [®] DevOps Eclipse | plugins | | | |
| Client Requirements | Eclipse V4.9 to 19 (64bit) RDi/RBD V9.1 or higher Supports Rocket DevOps Lifecycle Manager Client Services (Ald/CS) to version 1.13 or higher | | | |
| Platform Requirements | Any windows 32bit or 64bit that supports Eclipse and RDi/RBD Mac OS (64bit) 10.11.6 or higher for RDi only | | | |
| Server Requirements | Supports Rocket DevOps Lifecycle Manager (Enterprise Edition) (LM(e)) to Version 6.6 or higher Supports Rocket Lifecycle Manager (IBM i Edition) (LM(i)) to Version 8.3A or higher | | | |
| Additional Software | Java Runtime Environment 1.8 or higher [from document: Rocket DevOps Technical Specs_11-18-21] | | | |
| Rocket [®] DevOps portal | | | | |
| IBM i OS requirements | V7R2V7R3V7R4 | | | |
| JDK/JRE requirements | Java SE 8 32 bit Java SE 8 64 bit | | | |
| Linux OS requirements | CentOS 7.9 and higher Red Hat Enterprise 8.1/8.2 | | | |
| JDK/JRE requirements | Java SE 1.8 64 bit | | | |













Rocket DevOps Testing Technical Specs

| Rocket DevOps testing server | | |
|------------------------------|--|--|
| IBM i | IBM i OS Requirements • V7R2 • V7R3 • V7R4 JDK/JRE Requirements • Java SE 8 64 bit or higher | |
| Linux | Linux OS Requirements CentOS 7.9 and higher Red Hat Enterprise 8.1/8.2 JDK/JRE Requirements Java SE 1.8 64 bit or higher | |
| Windows | Windows OS Requirements • Windows Server 2016 or higher JDK/JRE Requirements • Java SE 1.8 64-bit or higher | |
| Rocket DevOps testing agent | | |
| Linux | Linux OS Requirements CentOS 7.9 and higher Red Hat Enterprise 8.1/8.2 JDK/JRE Requirements Java SE 1.8 64 bit or higher | |
| Windows | Windows OS Requirements • Windows Server 2016 or higher JDK/JRE Requirements • Java SE 1.8 64-bit or higher | |













About Rocket Software

Rocket Software empowers organizations to create legendary impact in the world through innovation in legacy technologies. With deep expertise in IBM Z, IBM Power, and database and connectivity solutions, Rocket solutions power tens of thousands of global businesses, solving real problems and making real-world impact.















