

Modernize your IBM i projects with Rational Software and ARCAD-Rational Power Pack

Specialized extensions to Rational Software for the IBM i platform



Highlights

- Address a huge opportunity to improve the efficiency and quality of your IBM i operations
- Revitalize and integrate your IBM i teams with leading Rational Software tools for collaboration and developer productivity
- Validated integrations with specialized analysis, integration and deployment capabilities from ARCAD
- Globally supported by ARCAD and based on decades of experience in the IBM i ALM market

Drive productivity, accuracy and quality in your IBM i teams

In order to optimize the return on your investment in IBM i application development, test and support environment, you need to address the immediate requirements of operational efficiency and quality, as well as longer-term issues such as skills retention and application modernization.

IBM i development teams work in a highly specialized environment, and ARCAD's intelligent tools for application analysis, integration and deployment can help serve as important elements for your overall strategy.

IBM® Rational® CLM and ALM products can help provide the key to unlocking better performance of your organization as a whole—by enabling you to integrate operations and collaborate across projects, platforms, functions, lifecycle stages and organizations.

ARCAD and IBM have validated as *Ready for Rational Software* the integration of key ARCAD tools with IBM Rational Team Concert™ and IBM Rational Developer for Power software, designed to help deliver solutions for modernizing your IBM i world.

Working with IBM i applications: Examining the challenges

Most IBM i applications are part of a complex, composite suite of software programs utilizing multiple platform technologies and are designed, developed and supported by multiple teams. Your IBM i platform investment is constantly under pressure to become more efficient, more agile and better integrated with application components on other platforms. Along with the IBM i platform strengths comes a highly specialized technical environment that has tended to isolate the teams, tools and processes from other activities in your organization. As a leader, how easy is it for you to plan and coordinate the activities across this divide? What visibility do you have into the overall state of your projects? Do emails and spreadsheets help you achieve this? How well are your planning tools connected to the reality of your execution, and do your teams find them easy to access and understand?

It is likely that a proliferation of “point solution” legacy tools have evolved to support your IBM i application lifecycle. Such a situation inevitably taxes productivity because the constant context switching between interfaces of different styles is time consuming. While highly specialized to the individual tasks, do these tools integrate seamlessly with one another? How easy are they for a developer unfamiliar with IBM i to understand and adopt? Would such a developer want to adopt them? When you need your team to share test plans, integration details and common requirements with the web interface development team, do your current tools properly support that?

The IBM i development environment requires specialized support and knowledge. Application structures, multiple code types and file system and database dependencies can be very difficult to understand and communicate effectively. These critical activities take up a lot of time, are error prone and very difficult to unwind in the event of a malfunction. Do your tools allow you to conduct an impact analysis on changes so that you

“With this integrated solution, companies can adopt the standard ALM technology in the market while taking into account all of the specific needs of the IBM i world.”

—Philippe Magne, CEO, ARCAD Software

know ahead of time what needs to be tested? How much time and effort do you spend in creating and maintaining a robust software deployment system? Are you confident that your procedures and tools allow the traceability and reliability required to meet regulatory compliance requirements? When new team members arrive, how easy is it for them to understand the application and your development processes?

A seamlessly integrated solution to help meet your needs

The integration of specialized capabilities of ARCAD’s tools with Rational’s leading Collaborative Lifecycle Management (CLM) and Application Lifecycle Management (ALM) tools is the answer to the challenges you face. IBM has validated the integration of ARCAD-Deliver and ARCAD-Observer with Rational Team Concert and ARCAD-Observer with Rational Developer for Power Systems Software and awarded them the *Ready for Rational Software* mark. The tools are designed to work well together and help provide the additional benefits of a properly integrated solution. Because all Rational CLM and ALM products work in tandem, you can extend the benefit of this solution with Rational Requirements Composer and Rational Quality Manager to give you full lifecycle, cross-platform, enterprise-ready ALM.

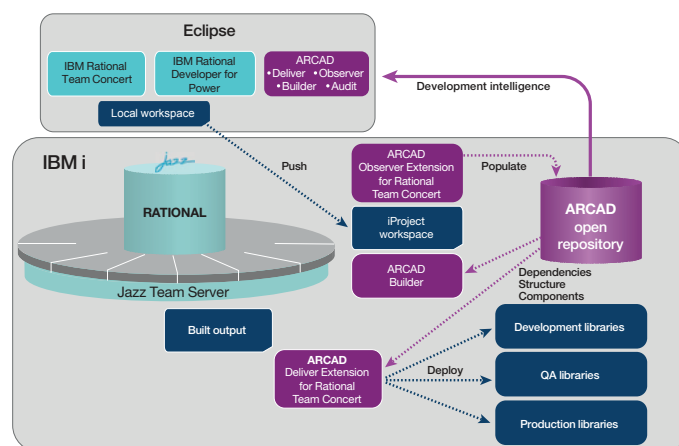


Figure 1: ARCAD-Rational Power Pack with Rational Team Concert and Rational Developer for Power Systems Software.

Harnessing the power of ARCAD and Rational

The integration of ARCAD tools with Rational software is designed to help the IBM i development community by:

1. Improving your team’s development intelligence with specialized analysis of the IBM i application code and dependencies, maintained automatically in a dedicated repository with the integration of ARCAD-Observer and Rational Team Concert.
2. Speeding code comprehension and change analysis with the extension of the Rational Developer IDE by ARCAD-Observer’s Eclipse-based user interface for visualization of application structure and automatic generation of technical documentation in HTML format.

3. Automating and improving the integration build of IBM i applications by incorporating the ARCAD-Builder tool in the Rational Team Concert build configuration. ARCAD-Builder uses the ARCAD Repository to determine all dependencies and steps required for an accurate, repeatable integration build ready for deployment.
4. Orchestrating the automated deployment of your applications to multiple test or production platforms simultaneously with the integration of ARCAD-Deliver and Rational Team Concert. ARCAD-Deliver includes functions that provide security-rich features, traceability and the ability to roll back on error for deployment operations.

The developer sees a single, powerful, industry-standard Eclipse workbench environment (as shown in Figure 2) from which all of the integrated solution functions can be controlled and consumed. Release engineers can help configure and control the build and deployment phases using the integrated features of Rational Team Concert. Stakeholders and managers can gain enhanced visibility, intelligence and confidence in their projects, and optimize productivity, quality and reliability. It is designed to enable quality and risk managers to demonstrate compliance with regulatory requirements. Organizations can expect increased satisfaction from their development teams as they use the best tools available.

ARCAD's decades of experience and innovation in IBM i technology, when combined with Rational software, helps provide better capability to IBM i teams. IBM Rational Team Concert integrates with IBM Rational Requirements Composer for the creation and management of your business requirements and with IBM Rational Quality Manager software for the centralized

management of your entire validation effort. Integrations between these CLM products provide the ability to link requirements, development plans, designs, activities, test plans, test cases, test results, change sets, builds and defects, providing full lifecycle integration and traceability.

IBM and ARCAD have validated key integrations as Ready for Rational Software to ensure seamless interoperability, which can help you optimize the return on your investment with a consumable, ready implementation.

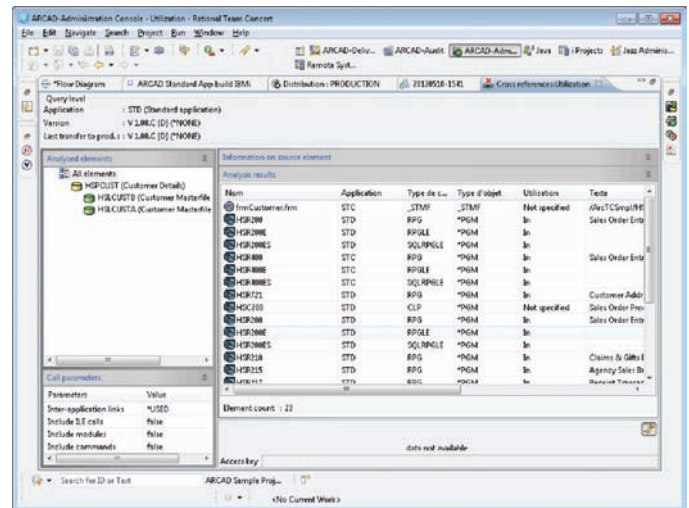


Figure 2: Eclipse workbench environment.

“The integration of the ARCAD solution with Rational Team Concert has moved ALM for the IBM i series to the next level. The integration has enabled us to create a standard automated build-and-deploy process for our applications. The automation will save us hundreds of hours in deployments while increasing the quality of those deployments.”

—Scott Lancaster, Director, IT Application Development, Kenco Group

IBM Rational Team Concert environment

Rational Team Concert is IBM’s lean development environment for software development teams built on Rational’s common collaboration and integration platform, Jazz™.

Key features include:

- A modern and rich Software Configuration Management (SCM) capability based on the “stream” and “change set” concepts, with local and distributed models to help enable scalability as well as cross-team and cross-organization collaboration on shared software components.
- Support for breaking down communication barriers within and between geographically distributed teams, with extensive features to assist with efficient and complete information sharing using event feeds, integrated chat and customizable views.
- Defect lifecycle management, fully integrated with the SCM system and all work item artifacts.
- Planning and task tracking of any type of plan, including agile, traditional and hybrid, that is easy to create, maintain and understand by all team members and stakeholders.

- Build configuration and automation, fully integrated with the SCM system and work items. These features are designed to embrace continuous integration and help improve the quality and predictability of your software deliverables.
- Built-in and custom reporting, as well as flexible web dashboards for an instant visual “snapshot” of a team or project, enhancing the whole team’s ability to see detail as well as the bigger picture.
- Development process, guidance and governance with templates for popular processes, fully customizable, providing flexibility and control for your teams’ ways of working.
- Linkage between code, build and work item artifacts is automated, providing built-in traceability with no effort.
- Extensible and open platform supporting a large ecosystem of integrations as well as your own customizations.
- Both web and Eclipse client interfaces are available to support all types of users.

IBM Rational Developer for Power Systems Software

Rational Developer for Power Systems Software provides a rich integrated development environment (IDE) to create, maintain, or port applications to IBM Power Systems™, including IBM i. The Eclipse-based interface includes remote (IBM i, AIX®, or Linux) file management, searching, editing, refactoring, application analysis, build and debug.

Key features include:

- Simplify and accelerate code development and maintenance through a comprehensive application development environment when used in combination with IBM Power Systems compilers and Rational Team Concert.
- Realize productivity gains of moving from older, text-based, command-line development tools to a rich IDE.
- Make use of a modern development environment to attract and retain new talent familiar with Eclipse tools, thereby helping to lower training costs.

- Make developers portable across projects using AIX, IBM i and Linux and development tools for a wide range of programming languages, including Java, Java EE, C/C++, RPG, and COBOL.
- Enables development in both host-connected and disconnected modes.

The ARCAD-Rational Power Pack integration

ARCAD and IBM have validated the integration of key ARCAD tools as *Ready for Rational Software* with IBM Rational Team Concert and IBM Rational Developer for Power, designed to help deliver solutions for modernizing your IBM i world.



Figure 3: Graphic summarizing the four ARCAD tools that comprise the ARCAD-Rational Power Pack integration.

ARCAD-Rational Power Pack consists of four ARCAD products:

- **ARCAD-Observer**—application analysis, visualization and documentation
- **ARCAD-Builder**—support for complex integration builds of composite IBM i applications
- **ARCAD-Deliver**—deployment automation and synchronization across multiple platforms with automatic rollback on error
- **ARCAD-Audit**—IBM i code audit and restructuring

ARCAD-Observer

The ARCAD-Observer solution is designed for the ease of use of application intelligence for maintaining and transferring knowledge of existing systems. Whether the context is application maintenance or modernization, the basic needs are the same: to find information and have ready access to technical documentation that is relevant and up-to-date.

ARCAD-Observer has a *Ready for Rational Software* validated integration with IBM Rational Team Concert that enables the construction and maintenance of the ARCAD Open Repository in synchronization with the application code residing in IBM Rational Team Concert's SCM repository. The Eclipse client for ARCAD-Observer has a *Ready for Rational Software* validated integration with IBM Rational Developer for Power Systems Software that allows seamless integration of ARCAD's enhanced application intelligence capability for IBM i with powerful Rational IDE functions.

ARCAD-Builder

The ARCAD-Builder solution is designed to help automate 100 per cent of the build process for any type of IBM i component. The executable code is recreated without any manual intervention and preserving any regression.

With ARCAD-Builder you can:

- Automate pre- and post-compilation commands
- Manage attributes, rights, and object ownership
- Manage save of data and automatic restore into new file structure
- Automatically sequence the re-compilation of dependent components
- Manage all compilation specifics such as SQL and ILE compilations

ARCAD-Builder does not directly integrate with IBM Rational Team Concert, but is used in Rational Team Concert build configurations to help enhance IBM i build intelligence by leveraging the ARCAD Open Repository data.

ARCAD-Deliver

The ARCAD-Deliver solution can enable coordination between development and production. It coordinates deployment of all platforms components in a single transfer. This solution can help enable your deployment process from a central console and deploy any type of files to any number of servers that host UNIX, AIX, Linux, Windows and IBM i operating systems. This solution offers reliability through automatic rollback, allowing return to the previous release at any stage during the implementation.

ARCAD-Deliver also has a *Ready for Rational Software* validated integration with IBM Rational Team Concert that can improve the robustness, automation and traceability of deployment of application software built using IBM Rational Team Concert.

ARCAD-Audit

The ARCAD-Audit solution analyzes your IBM i libraries and source code to populate a database containing all the inter-relationships between components such as programs and files and databases, work fields. This database reveals which components within your application are no longer used. In addition, it provides all the tools needed for a rapid clean-up of your application. These tools can compare, archive, compile and delete obsolete components with all the traceability and the security you need.

ARCAD-Audit does not directly integrate with IBM Rational Team Concert, but is included as a complementary offering to help you normalize, sanitize and prepare legacy code repositories as you migrate to the IBM Rational Team Concert SCM and ARCAD-Rational Power Pack environment.

About ARCAD

Founded in 1992, ARCAD Software develops and supplies an open and integrated range of solutions dedicated to the automation, security and traceability of software change across multiple platform types. ARCAD solutions are modular, covering release and change management, application analysis, test automation and application modernization. Individual modules are built over a common, metadata repository, enabling progressive adoption of IT best practices and regulations compliance, for example, ITIL, SOX and CMMi. Twenty years of sustained R&D effort have given ARCAD a functional coverage in the international market that includes software with more than 1,000 licenses deployed in 33 different countries and international references such as IBM, HSBC, NASDAQ OMX, ABN AMRO and GE Capital. For more information about ARCAD, visit: www.arcadssoftware.com

For more information

To learn more about the ARCAD-Rational Power Pack, please contact your IBM marketing representative or IBM Business Partner and request a briefing, demo or proof of concept, or visit the following websites:

- ibm.com/partnerworld/gsd/solutiondetails.o?solution=43833&lc=en
- <http://www.arcadsoftware.com/product-range-overview/281-rational-power-pack.html>

To learn more about IBM Rational Developer for Power Systems Software, and to download a free trial, visit:

- ibm.com/software/rational/products/rdp/
- ibm.com/developerworks/downloads/r/rdp/

To learn more about IBM Rational Team Concert visit:

ibm.com/software/rational/products/rtc/

To keep up to date with IBM's thought leadership in CLM and ALM, visit: jazz.net/

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