

Utilizing the cloud to transform software delivery

IBM Rational software delivery services solution for cloud computing



Highlights

- Manage and maintain your software development infrastructure within the cloud to save time and effort and reduce capital expense.
 - Harness the agility and flexibility of the cloud to allow development and delivery teams to develop, test and deploy new technology-based business initiatives more quickly.
 - Rapidly provision and manage images to support the development, test and delivery of software applications.
 - Improve agility and adaptability by allowing more rapid provisioning of changes in your development and test environment.
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The challenge: Managing and maintaining traditional software development infrastructures

The world is becoming increasingly instrumented, interconnected and intelligent. In turn, software development and delivery teams are being asked to respond to changes in the marketplace more quickly—but with fewer resources and while delivering more value.

Today, geographically dispersed teams are being asked to continually deliver new and innovative products to the marketplace faster and faster, and software is increasingly the key differentiator in those smarter products. Software developers and delivery professionals need to create quality software quickly and efficiently, while many are also wearing many hats—performing administrative duties in addition to managing an ever-expanding technology infrastructure that supports an increasing number of business responsibilities.

As a result, IT staff spend more time acquiring, configuring and managing environments quickly and cost effectively for the software development life cycle than they spend actually developing and delivering software. And traditional software development and test environments require many manual steps to be executed each time the environment



is set up, configured and taken down. To further complicate matters, a significant percentage of a test and development environment can often sit idle, which means organizations are paying for computing power—and the associated energy costs—that they don't use on a daily basis.

Developers, delivery professionals and IT managers are challenged with many factors causing increased capital and operational expenditures in software delivery that strain IT budgets:

- High deployment costs to deliver software—due to the capital and operational expense of IT systems and resources, including managing and increasing the utilization of a sprawling IT environment caused by years of software investments
- Control and governance chaos in the software delivery process—the inability to govern software best practices for corporate governance and dealing with concerns regarding regulatory and security compliance
- Test environments typically sit idle for much of the time, used only when large-scale performance or scalability tests are required
- Infrastructure necessary to rapidly manage software builds is also expensive and sits idle for large periods of time, but is critical when needed to enhance productivity
- Rapid provisioning of new infrastructure and services to support new development efforts is time consuming and requires specialized skills, often delaying projects before they even start

The solution: Utilize the cloud to maintain the pace of change

You've already decided to invest in cloud in order to reduce portions of your capital expenditure budget. What if you could manage and maintain your software development infrastructure within the cloud to save time and effort and reduce capital expense? Utilizing cloud computing to transform your software delivery efforts requires the skills and resources to customize your processes and tools, ensure effective governance and migrate your development and test workloads to the cloud.

Cloud computing can help with these issues in a number of ways to support the software delivery effort:

- Reduced installation and administration costs
- Lower total cost of ownership (TCO) by improved utilization of software assets
- Better governance through standardized delivery of services
- Preconfigured software embodying best practices
- Tools can be rapidly provisioned—no download, installation or setup
- Self-administered portal to access to software resources for a globally distributed team

The IBM® Rational® Software delivery services for cloud computing solution allows you to have access to a development and test environment without having to acquire, manage and maintain it, along with the expertise from IBM to ensure that your software development process works on your cloud. Unlike traditional application life cycle management methods, the cloud model dramatically decreases the many

manual steps and traditional processes required to setup and configure development and test environments. We can help you modernize your processes to work efficiently in your cloud and more effectively address governance and compliance issues. With on-demand provisioning of virtualized resources, Rational Software delivery services for cloud computing can help reduce capital investments while offering the elastic scalability to handle fluctuating business needs.

Speed, agility, and improved governance

IBM Rational Software delivery services for cloud computing provide an on-demand, easy-to-use software delivery model for the cloud with significant cost savings, flexibility, speed, agility and improved governance. With application life cycle management tools from IBM, Rational Software delivery services for cloud computing enable real-time provisioning of key preconfigured IBM software products.

Once your cloud infrastructure is set up, you can rapidly provision and manage images to support the development, test, and delivery of software applications. These services are optimized for deployment in a private cloud infrastructure hosted by you or the IBM Cloud. Scenarios supported by IBM Rational Software delivery services include:

- Rapidly accommodating new projects and supporting on-demand application usage
- Responding to excess capacity needs and facilitating easier capacity planning
- Reducing the need for excess hardware acquisition or capital expenses
- Modernizing your software delivery environment to increase productivity and efficiency

IBM Rational Software delivery services for cloud computing are supported on the IBM Smart Business Development and Test Cloud, private cloud solutions, and by IBM Smart Business Development and Test on the IBM Cloud, a “shared private” solution where the cloud infrastructure is hosted by IBM.

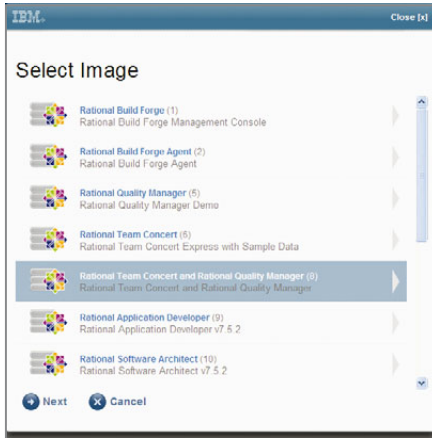
IBM Rational Software delivery services for cloud computing solution includes:

- **Agile development services**, which allow you to set up a self-organizing team of developers and testers using instant-on availability.
- **Quality management services**, which provide test management capabilities in the cloud and integration with IBM Rational test tools outside the cloud.
- **Build automation services**, which allow you to utilize your cloud capacity without human intervention, automate your machine images so you don't need a department of people to deal with them, and automate process flows to deploy images or automate builds.
- **Asset management services**, which provide instant-on access to and effective governance of assets in the cloud.
- **Collaborative requirements services**, which give you instant-on services that allow project managers to engage stakeholders and solution delivery teams in defining and using requirements across the project life cycle.

The IBM Rational Software delivery services for cloud computing solution applies the best practices of IBM Rational Services, IBM Global Technology Services and IBM Global Business Services with a full suite of consulting capabilities to adopt a cloud delivery model and to identify the greatest areas for return on investment in cloud adoption while facilitating the opportunity to modernize or upgrade your software delivery environment.

The IBM Rational solution helps you harness the agility and flexibility of the cloud, aiding development and delivery teams to more quickly develop, test and deploy new technology-based business initiatives. The end result is that teams of all sizes, configurations, and budgets have the advantage of a collaborative software delivery platform rapidly provisioned on the cloud.

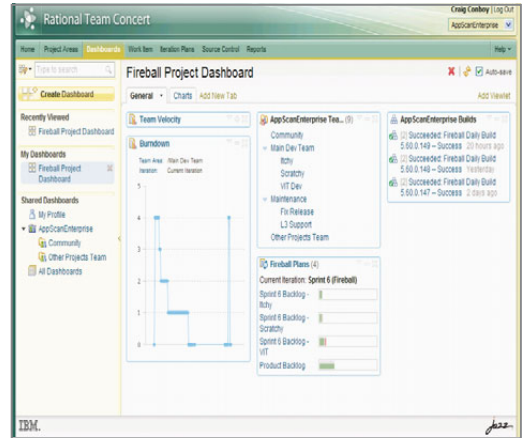
Step 1 Click and choose the service you need



Step 2 Choose the hardware and usage configuration



Step 3 Application provisioned and ready to run



Rapidly provision and manage images in your cloud to support the development, test and delivery of software applications

Through first-class development architecture with options that you can use to scale up or scale down based on the needs of your business, you can lower capital and technology costs for maximum return on investment.

A lasting competitive advantage

IBM Rational Services are an important part of a complete development solution consisting of tools, services and best practices. By laying the foundation for continuous improvement in software development speed and quality, IBM Rational Services can help your organization achieve lasting competitive advantage. Professional consultants work with you to create a custom implementation plan spanning initial project assessment, installation, mentoring and training, and maintenance. Services offered include:

- **Strategic planning:** Before you get started, you need a plan. IBM Rational Services consultants can help you identify your current state, your future requirements, and your desired end state. IBM will work with you to develop a strategy for migrating your development and test environment to the cloud, taking into account opportunities for updating and improving your processes and tools along the way.
- **Deployment:** deployment of IBM Rational software delivery services for cloud solution. Computing in your private cloud involves the preparation of your images, the configuration of the IBM Rational products, educating your users and mentoring your administrators. IBM can help you with these tasks as part of our deployment services, ensuring that you are getting the benefit of our experience. Services are tailored to your needs, whether you are a new IBM Rational customer or are experienced users migrating to a new cloud environment.

- **Integration:** To get the most from development and test tools, many customers automate data transfer and promote data sharing through automation. IBM Rational Services consultants can integrate your tools, allowing automated data transfer and data sharing to support your development and test workflows. As you move to a cloud environment, some tools will be integrated within the cloud, and some integrations will be with non-cloud systems. IBM Rational Services consultants can work with you to architect an integrated environment that works for you and to develop these integrations on your behalf.
- **Customization:** Your development and test environment is particular to your organization. As such, the predefined images may not be sufficient to meet your needs. IBM Rational Services consultants can work with you to identify where the predefined images should be customized and where you need images for products that are not part of the IBM Rational Software Delivery Services for Cloud Computing (SDS) offering. Rational Services consultants can create these custom images using the approach and methods developed for SDS.
- **Migration:** If you are an existing IBM Rational Software customer, you have configured your Rational software tools to match your usage patterns, and you have built up a repository of data and artifacts. IBM Rational Services consultants can work with you to plan and execute a migration to a cloud environment, helping minimize disruption to your organization and ongoing activities.

Business benefit: A flexible, agile software development environment

Whether you are planning to leverage the resources of the IBM Cloud or deploying your own on-premise cloud, use IBM Rational Software delivery services for cloud computing to modernize your software delivery environment while lowering your total cost of ownership, minimizing risks, reducing resource requirements and management overhead costs, and freeing up your team to focus on driving revenue-building initiatives. This approach can not only offer cost savings to your bottom line, it can also make you more agile and adaptable by allowing more rapid provisioning of changes in your development and test environment.

IBM Rational Software helps you deliver greater value from your investments in software and systems. It enables organizations to seize business opportunities, achieve precision in desired business outcomes, and execute with reduced risk and cost.

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For more information

To learn more about IBM Rational Cloud offerings, contact your IBM representative or IBM Business Partner, or visit: ibm.com/rational/info/cloud-services.

Additionally, financing solutions from IBM Global Financing can enable effective cash management, protection from technology obsolescence, improved total cost of ownership and return on investment. Also, our Global Asset Recovery Services help address environmental concerns with new, more energy-efficient solutions. For more information on IBM Global Financing, visit: ibm.com/financing



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