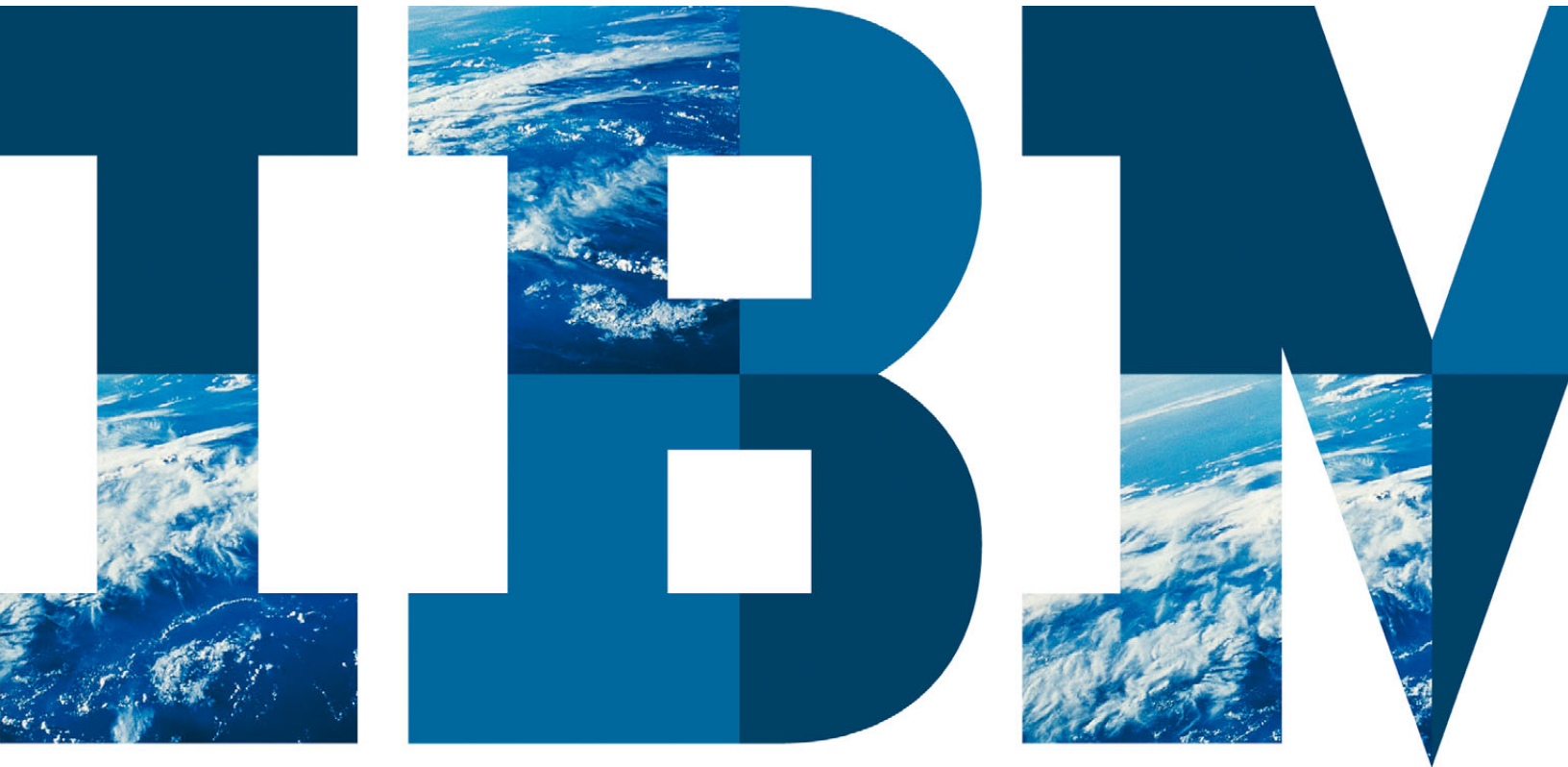


# IBM Rational solutions for cloud computing

*Plan cloud deployments and develop and deliver  
applications for and on the cloud*



Cloud computing is an emerging, smart IT delivery model that can enable your business to significantly reduce IT costs and complexities while sharpening your competitive edge. Inspired by consumer Internet services—such as online banking—and shared consumer models—such as power grids—the cloud is a centralized source for IT-supported services and activities. Cloud computing helps end users get the services they need, lets businesses take advantage of economies of scale and optimizes workloads.

Leveraging virtualization, standardization and automation, cloud computing frees up IT staff, capital and operational budgets for strategic investments. It helps organizations get the most out of their existing hardware resources and speed time to market for new services and capabilities. With the promises that the cloud delivers, many companies are considering building their own clouds—some private for corporate use only and some public for their customers and users outside of their firewall. Given all the things to consider when leveraging a cloud model, implementing one may seem daunting—but it doesn't have to be. IBM Rational® solutions can help your organization:

- Plan, manage and safeguard a public, private or hybrid cloud.
- Plan, prioritize, build and deliver applications for and on the cloud.

### **Strategically implement a cloud using an enterprise architecture approach**

When a company starts considering whether a cloud is right for its business, it must identify how a cloud could fit into its business strategy—and associated business architecture. It needs to determine which workloads would be better in a cloud environment rather than a local environment and ensure that the transformation to cloud improves operations without causing unforeseen disruption. Based on its needs, a company may want to elevate environments—such as storage, application development and testing, web services, and analytics—to

a private, public or hybrid cloud. But how does a company determine which environments to migrate and what kind of cloud it needs—and how to implement one after it decides?

To figure out how to get to where you want to be in the future, you need to first understand where you are. Leveraging an enterprise architecture approach to strategic planning can help you:

- Understand the current state of your business and how well it operates today.
- Identify efficiencies, gaps, risks and opportunities for change.
- Create transformation plans that help manage change and achieve your intended return on investment (ROI).

This kind of planning and strategizing establishes an actionable enterprise architecture, which is a dynamic blueprint of the business and technology operations and components. Using one to model your cloud strategy can help you seamlessly transition workloads from a localized environment to a cloud environment.

IBM Rational software provides context for the integration of strategies, systems, people and processes and helps companies visualize relationships, perform analysis, report on status and build governance. The Rational solution for enterprise architecture can help you:

- Align business and IT objectives by producing a consolidated view of the business's current state and cloud target state.
- Ensure that business requirements are driving cloud deployment.
- Decide how and when to leverage new cloud services to reduce risk and speed ROI.
- Establish a unified cloud analysis and reporting platform to track performance.

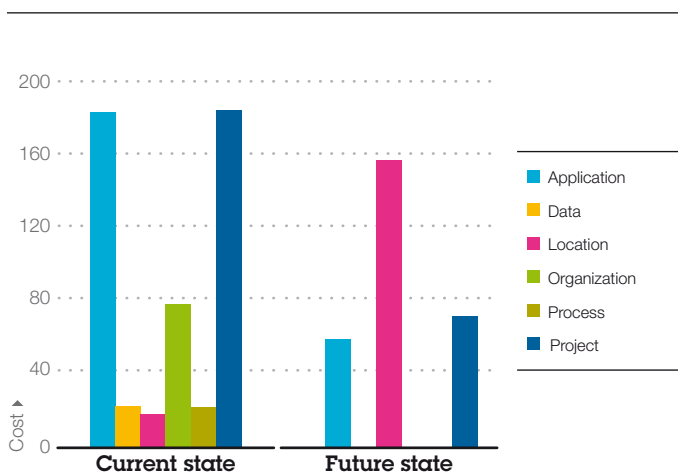


Figure 1: The Rational solution for enterprise architecture can help you align business and IT objectives by producing a consolidated view of the business's current state and cloud target state.

Moreover, you don't need to plan your cloud alone. The IBM Rational Lab Services team can help you identify and target the best workloads to deploy to the cloud and recognize areas where your organization will likely achieve the greatest ROI. You can even leverage the depth and breadth of knowledge of the IBM Global Technology Services group to plan, set up and manage private cloud implementations. And for organizations that don't want to or can't create a cloud using existing assets, you can build a private cloud with the IBM CloudBurst™ solution—a ready-made cloud environment composed of hardware, software and services.

## Gain peace of mind by safeguarding your cloud

Security is a top concern of businesses with regard to cloud computing. Companies want to ensure compliance and protect their intellectual property and data from third parties and sometimes even employees within the company. A widespread concern is that a cloud may not be as safe as an environment within an organization's firewall.

The IBM Security Framework is designed to help organizations take a holistic, business-driven approach to security—including in cloud environments. IBM organized its security framework around five security focus areas:

- **People and identity**—mitigates the risks associated with user access to corporate resources
- **Data and information**—understands, deploys and properly tests controls for access to and usage of sensitive business data
- **Application and process**—helps safeguard applications, protecting them from malicious or fraudulent use and hardening them against failure
- **Network, server and end point**—optimizes service availability by mitigating risks to network components
- **Physical infrastructure**—provides actionable intelligence on the desired state of physical infrastructure security and on making improvements

A recent study by the Ponemon Institute revealed that 76 percent of U.K. CEOs surveyed feel that reducing potential security flaws within business-critical applications is the most important aspect of their data protection program.<sup>1</sup> As part of the security framework, IBM Rational solutions further address security concerns by facilitating the security, compliance and alignment with business policies of the web services and applications they publish into the cloud. These solutions include:

- A suite of web application security testing solutions that automate vulnerability assessments.
- An automated online compliance solution that assesses quality, privacy and accessibility compliance issues.
- An automated testing tool for functional testing, regression testing, GUI testing and data-driven testing.



IBM Rational software delivery services for cloud computing offer an agile, flexible cloud computing model designed to help you simplify and streamline your operation so engineers can work faster—virtually regardless of where they are located. For example, you can provision temporary development and test environments on the IBM cloud as you need them in just minutes—versus days or weeks to implement them on local machines. The IBM cloud provides companies with the infrastructure they need to develop and test applications without the capital expenditure. For organizations interested in a private cloud deployment of Rational software delivery services for cloud computing, the software is also available for the IBM Smart Business Development and Test Cloud offering and the IBM CloudBurst solution: a prepackaged and self-contained service delivery platform that can be easily and quickly implemented in a data center.

The time-saving capabilities of Rational software delivery services for cloud computing help organizations:

- Speed application time to market.
- Reduce capital and licensing expenses.
- Decrease maintenance, operating and labor costs.
- Efficiently leverage your IT infrastructure.
- Scale development capacity as needed.

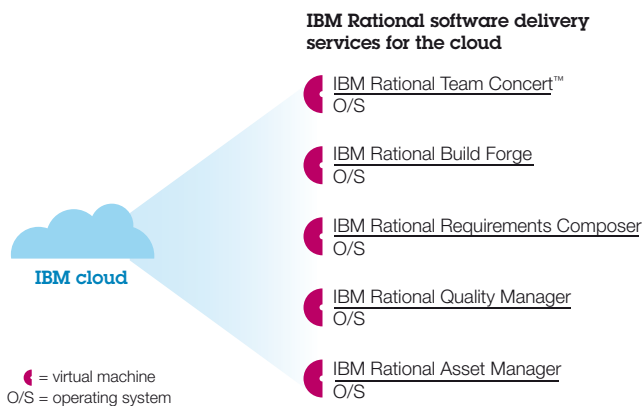
### Why IBM?

Our smarter planet requires infrastructure and software delivery to be more dynamic—and cloud computing provides the virtualization, standardization and automation needed to increase flexibility of and reduce costs for software delivery.

Successful implementation requires an overall strategic vision combined with a pragmatic, evolutionary approach to deployment—one that IBM has developed through its many cloud engagements within IBM and with clients around the world. Today, IBM is helping organizations get started on the journey toward cloud computing.

IBM offers cloud solutions that can help you create a private, public or hybrid cloud environment; build applications for your cloud; or develop and deliver applications on the cloud.

IBM Rational software and services for cloud computing help you transform software delivery by providing best-in-class software development and test solutions across multiple platforms—including in private clouds and on the IBM cloud. You can even use Rational solutions within a traditional software delivery environment while leveraging others on your private cloud—or even on the IBM cloud to create a hybrid-cloud-model development environment.



*Figure 3:* IBM Rational software delivery services for cloud computing offer a comprehensive, flexible cloud computing model designed to help you simplify and streamline your operation.

## For more information

To learn more about Rational solutions for cloud computing and to take a cost-free cloud readiness assessment, please contact your IBM sales representative or IBM Business Partner, or visit the following website:

[ibm.com/rational/info/cloud-services](http://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](http://ibm.com/financing)



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<sup>1</sup> Ponemon Institute, *Business Case for Data Protection*, March 2010.



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