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# The value of RUP certification

Level: Introductory

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15 Jan 2007

from The Rational Edge: This article describes the IBM Certified Solution Designer -- Rational Unified Process v7.0 certification, including the requirements for certification and its advantages for RUP specialists.

*Throughout any professional career, it is common for an individual to earn certificates that attest to various capabilities, or at least indicate that some course or other has been completed. Acquiring a professional certification is like obtaining a key to a door we'd like to open. We get the key when we answer certain questions correctly. Often, these questions are carefully selected to verify that our level of expertise and knowledge is consistent with the standards of the profession in that area. Becoming certified in an area of professional expertise typically confers advantages such as higher pay and more prestigious career opportunities.*



*The IT industry offers a number of certifications, including the very popular ITIL and PMP<sup>1</sup> certifications, which have become prerequisites in many organizations. A certificate for the Rational Unified Process®, or RUP®, serves the same function: It asserts that the certificate holder is a member of a group of professionals who are knowledgeable and committed to the basic concepts of the modern software engineering process.*

*In this article I discuss a certification program for RUP specialists, called IBM Certified Solution Designer -- Rational Unified Process v7.0.<sup>2</sup> This IBM certification is ideally suited to RUP practitioners who wish to demonstrate their proficiency with RUP principles, terminology, and work products and their application within the discipline of software development.*

## Standards, consistency, and compliance

When you undertake a construction project on your home, it's important to ask the contractor "Are you licensed?" Beyond the cost and schedule associated with the work, knowing you're dealing with a qualified professional gives you peace of mind with respect to the quality of the end result. Further, the licensure of contractors serves as an instrument through which municipalities ensure that building codes are communicated and adhered to. Structural, electrical, and final inspections by a building inspector monitor the contractor's compliance with codes and professional quality standards.

Of course, there is no guarantee that a licensed contractor will work more efficiently, in terms of cost and schedule, than an unlicensed one. But the fact that he or she holds a license shows that the contractor has acquired and demonstrated the necessary on-the-job experience and skill to undertake the work.

The role of the homeowner in the scenario above is analogous to that of an IT organization with respect to software development professionals. Imagine you are being asked to hire an individual or third-party vendor for a project. The goal of the project is either to tailor RUP to your environment or develop a large-scale software solution in accordance with the RUP process framework. A number of applicants for the position have the necessary work experience, but a few of them also are certified in RUP by IBM. Which candidates would you rank higher: those with or without certification?

Recently I read submission guidelines for a conference whose presentations were grouped according to several different tracks. Guidelines for presenters in the project management track indicated that only applications from individuals with a specific certification would be considered. While some good speakers might have been neglected due to this prerequisite, the conference organizers valued the particular certification highly and wished to guarantee that every speaker would be able to relate to his or her audience via the same terminology and process. Every speaker would thus be able to put questions into the proper context and answer them in relation to that particular project management standard.

In professional and personal life we are often required to comply with formal standards. We need a driver's license to legally operate a motor vehicle on public roads. Restaurants must display health inspection certificates in order to serve food, and umpires and referees need to demonstrate the skills necessary to oversee sporting events. I don't think many people would argue that these and similar standards are useful outside the realm of software development, as well as within it.

## **The benefits of RUP certification for organizations**

Following a software engineering process inherently implies a commitment to consistency and standardization. In this context, certification is simply a guarantee to the consumer regarding compliance with a well-defined process and its terminology and deliverables. With a RUP certification in your pocket, you can demonstrate that you can talk the lingo and put things in context while collaborating with others. Being able to provide consistent, articulate answers to questions like "What is an activity?", "What belongs in a vision document?", or "Who is responsible for the risk-list?" serves to reduce ambiguity and support the process as a whole.

Moreover, the RUP certification verifies that the certified RUP specialist will demonstrate considerable skill in applying the RUP process framework. Candidates for certification must provide satisfactory answers to a wide range of questions about the underlying process architecture and tools for customization. RUP certification therefore shows that the specialist can tailor the process framework according to real-life needs of an IT organization -- a critically important factor in applying RUP successfully.

From an organizational perspective, employing RUP-certified specialists creates a consistent environment for communication and collaboration between project team members and other stakeholders, which is the basis for efficiency and productivity. Further, if an organization can execute a project following RUP, repeat the process across multiple projects consistently, and constantly improve the process as they go, then that organization is not only likely to achieve regular success with its projects, but it also has what it takes to demonstrate and reach higher Capability Maturity Model Integration (CMMI)<sup>3</sup> levels. It is not uncommon for IT organizations to reach CMMI levels of 3 or 4 after RUP has been successfully deployed.

## **Personal rewards of RUP certification**

Picture a salary negotiation with an employer who has deployed or wants to deploy RUP within the organization. Your RUP certification is more than a snapshot in time about your skills and knowledge; it shows your ongoing commitment to the process. Some software development professionals might believe that they have substantial experience with RUP after participating in their first and only RUP project. However, it is often the case that team members play only one or a few RUP roles over the course of a single project. For example, a subject matter expert (SME) who is assigned the role of System Analyst might work solely within the requirements discipline. This SME might have little

opportunity to experience the "big picture" of how the different disciplines, roles, and work products function and are connected.

The RUP certification randomly tests skills across all subject areas, ensuring that a certified RUP specialist has considerable knowledge of the entire process framework, not just part of it. A RUP-certified SME is able to look beyond his own area of concern to put other aspects of the process into context from different perspectives.

Because a certified RUP specialist has demonstrably more value to the organization, he or she might well expect to be compensated for that greater value with more money. Of course, I cannot guarantee that a RUP certification will earn you more money. However, studies do show that achieving other certifications results in substantial monetary compensation, at least within some companies.<sup>4</sup>

Monetary rewards notwithstanding, a RUP certificate on the wall of an office conveys professional pride and confidence that reflects back positively onto the work ethic of the surrounding work environment. Certified RUP specialists, having devoted considerable time and energy to thoroughly studying RUP, are likely to identify strongly with "core" RUP values such as a quality focus, a disciplined approach, adaptability to the needs of the organization and a willingness to appreciate other stakeholders' perspectives. When key team members hold these values it supports the team as a whole to embody them.

## **Content and objectivity of the certification process**

The RUP certification process is well-established and has a reputation for being quite challenging. It includes a formal, written exam, the content and structure of which has been kept up-to-date to cover and reflect the latest industry practices. Not all the players in the game of software methodologies certification require a comparable certification process. For example, some certifying organizations hand candidates a certificate after they "sit through" a training course, without requiring any validation that the information conveyed in the training has been successfully transferred to the student.

The content of the examination overall emphasizes applying "classic" RUP for large projects, which is broadly applicable across much of the software development industry. And although many organizations and projects tailor RUP to their own needs, the standard RUP framework is the subject of the certification.

While IBM creates the questions for the certification exam, the RUP certification process is conducted by Prometric, Inc., an independent, worldwide testing service that handles all administrative aspects of the certification. The set of questions is fixed, and is developed by a team of RUP specialists. The ratio of questions targeting a specific topic is carefully balanced so that examinees must demonstrate knowledge in a broad range of different subject areas.

Prometric interacts with examinees directly, and keeps exam results confidential. In particular, Prometric does not inform examinees' organizations about whether they have passed or failed the test. They do, however, inform IBM about who has successfully gained the certification. (Beyond that, all they share with IBM is generalized statistical information about testing outcomes.) RUP certificates are issued via e-mail. Therefore, candidates can attempt the certification as often as they wish without ramifications beyond what it costs to make each attempt. Once conveyed, the RUP certification does not expire and re-certification is not necessary.

## **Conclusion**

The RUP certification process is a formalized, reliable way of demonstrating that an individual has acquired the skills and experience necessary to carry the title of IBM Certified Solution Designer -- Rational Unified Process v7.0.

IBM's stringent certification process means that turning a self-declared RUP practitioner into a

certified RUP specialist requires more than sitting through a training course. It demands that each person actively pursue the certification by leaving their comfort zone, preparing for, enrolling in, and successfully completing the certification process. Certified RUP specialists can be justifiably proud of their accomplishment.

## For more information

Details regarding certification and test objectives, education requirements and a sample test are available at: [http://www-03.ibm.com/certify/certs/rl\\_index.shtml](http://www-03.ibm.com/certify/certs/rl_index.shtml)

## Notes

<sup>1</sup> For more on ITIL, see <http://www.itil-itsm-world.com/index.htm>; and for more on PMP, see [http://www.pmi.org/prod/groups/public/documents/info/pdc\\_pmp.asp](http://www.pmi.org/prod/groups/public/documents/info/pdc_pmp.asp)

<sup>2</sup> Previously called *IBM Certified Specialist -- Rational Unified Process*. See <http://www-03.ibm.com/certify/certs/38008003.shtml> for more information.

<sup>3</sup> For more information on CMMI see <http://www.sei.cmu.edu/cmmi/>.

<sup>4</sup> *PMP Exam Prep, Fifth Edition: Rita's Course in a Book for Passing the PMP Exam*. Rita Mulcahy, RMC Publications, 2005, ISBN-1932735003.

## About the author



Jochen (Joe) Krebs (<http://www.jochenkrebs.com>) is a Method Engineer within the Rational Brand for IBM. He develops content for the Rational Unified Process, OpenUP and other agile software engineering processes. Prior to his current role he was responsible for successful enablement of Rational products and services for clients in the financial sector. Before joining IBM Rational he worked as an Instructor and Senior Consultant with a focus on project management, requirements management, software engineering processes and object-oriented technologies using Smalltalk and Java. He holds his MSc in Computing for Commerce and Industry at the Open University.

Along with Ahmad K. Shuja, Krebs is co-author of the forthcoming book *RUP Reference and Certification Guide*, to be published in 2007 by Addison-Wesley (ISBN-0131562924).

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