

IBM Podcast

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MATHENY: Welcome to this IBM Podcast, the Rest of the Story, Rational Developer for Power. I'm Angelique Matheny with IBM. New Rational Developer for Power now supports Linux development in addition to AIX and IBM i. There's also been a complete refresh of Rational compilers for Power.

And today, we'll hear about the new functionality for Power developers which can make you more productive and your applications exploit the new technology of the Power hardware.

And joining me for today's discussion is Don Yantzi, product manager for Rational Tools for IBM Power Systems; and Roland Koo, product manager for compilers. Hi, Roland and Don, welcome to the podcast. Thanks for joining us today.

KOO: Thank you very much, Angelique. It's great to be here this morning.

YANTZI: Thanks, Angelique.

MATHENY: Don, I'm going to start with you. Let's just jump right in. Tell me about the packaging for Rational

Developer for Power V8 and the various development language options.

YANTZI: Yes, so, Angelique, in your introduction there, you outlined that we've been expanding the Rational Developer for Power integrated development environment to cover a broader spectrum on Power, both from an operating system perspective and from a language perspective.

And with the 8.0 Release that we're going to be GA-ing on October 26th, we going to be adding the Linux on Power support. So we've had two releases already in 2010 where we added the IBM i operating system support, the AIX operating system support, and now we're coming out with the Linux support.

So it's the operating system perspective, and at the same time, we're covering more languages. We now cover the main development languages on Power systems from C, C++, COBOL, RPG and Java. And what we've done is from a packaging prospective, we've come up with really three different groups of packages and then within those there's even sub-packages.

So we have what I'd consider our main development tool packages. We have the C, C++ development tools for AIX, a COBOL development tool for AIX, RPG and COBOL development

tools for i and now a new C, C++ development tools for Linux package. And those are just the development tools -- your edit, your search analysis compile...integrated compile, the compilers are still separate, and debug capabilities.

Now, we also have what I also call the development studio packages. These are packages that include both a license of the development tools and the license of the compiler. So if you're an existing compiler customer, you can just buy the development tool.

If you're someone that's new to the Power systems platform and you need the compiler and the tools, we have these studio packages for buying both together in a convenient package.

Then, what we came out with new also in 8.0 is what we call our Power Tools packages. And we have a Power Tools for i, we have a Power Tools for AIX packages. And these combine the native tools with Java development capability.

So, Rational came out with something called Rational Application Developer Standard Edition back in August, and the Power Tools packages combine that with it, the Power Tools for i Package, the RPG and COBOL development tools for i, or if it's the Power Tools for AIX, it combines the Rational Application Developer Standard Edition with the C,

C++ development tools for AIX.

And these are really bundles that are targeted at organizations doing multi-language development. You know, the very common scenario is someone developing a Web front end, Web 2.0 front end in Java or perhaps a services layer in Java, integrated with some back end business logic in RPG or COBOL on i or C, C++ on AIX.

MATHENY: So, Don, what new capabilities are available in Rational Developer for Power V8?

YANTZI: One of the biggest new capabilities was the C, C++ development tools for Linux which takes the capability that we had already in our C, C++ development tools for AIX and now just supports Linux on Power as a server development platform.

One of the other big things we came out with in 8.0 is a Linux Client -- so for the longest time now we've only had a Microsoft Windows client. In 8.0, we now offer both the Windows and the Linux client, and that's something that our install base has been asking for, for quite a while. You know, 8.0 is very much a big Linux release, Linux on the server and Linux on the client.

The one thing I want to make sure we don't cause confusion

around is those are very separate things. So, I talked about earlier we have these different packages for perhaps C, C++ development on AIX, or RPG COBOL development on i. Both of those now have a Linux client as well in addition to the C, C++ development tools for Linux on Power.

Now, we've added some other enhancements to some of the existing features we had before. So for example, we updated the debugger so when you're debugging C, C++ applications on AIX or Linux, you can, when you set a break point, you can specify whether you should just stop that current thread or whether you should stop all threads.

You know, these multi-threaded applications are becoming more and more prevalent and more and more powerful with all of the, the new multi-core capabilities that we've announced in POWER7 this year.

As well, we've updated the C, C++ development tools to include a new remote include hierarchy view. We've already had the call hierarchy and as well as the type hierarchy view before. Now, users can see their include hierarchies in a visual notation.

And this really gets into the power of the integrated workbench and moving from tech-based tools to an integrated environment where we can do some more of these analysis-type

capabilities, as opposed to just edit, compile and debug capability.

And then the last one on the COBOL development tools, we've made a whole lot of improvements here. From beefing up our editing support for COBOL, especially focusing on embedded CICS, embedded SQL calls.

They're now color tokenized, you get content assist for those, as well we've integrated the editor more into the Eclipse workbench supporting things like code templates and snippets and even starting to add a little bit of re-doctoring capabilities for COBOL.

MATHENY: And Don, does Rational Developer for Power integrate with other Rational or Eclipse products?

YANTZI: Yes, excellent question, and most definitely it does. Rational Developer for Power itself is an Eclipse product. It's based on top of Eclipse as well as some other components from eclipse.org. And the Rational Application Developer Standard Edition is the great example of this.

I mentioned back in the first question that we did come out with the new Power Tools package that combines Rational Application Developer Standard Edition with the native development tool, either C, C++ for RPC and COBOL. And you

know, those on their own are actually separate products, but when you install them on to the same workstation, they can install into the same Eclipse workbench.

And ultimately what you end up with is one workbench that has all of the developer tools you need, so that you can be developing, again, a Java front end or a Java services layer, and the back end code in RPG, COBOL, or C, C++. But all within the same workbench, you could be debugging end to end, so you get a lot of Powerful capabilities there.

And then, it doesn't stop there with just Rational Application Developer or Rational Application Developer Standard Edition. Rational Developer for Power, the Version 8 is now based on top of the Eclipse 3.6.1 and any Eclipse plug-ins that can work in Eclipse 3.6 can plug into Rational Developer for Power as well.

There's a lot of third-party vendors out there with offerings. There's a lot of open source offerings, as well as Rational has quite a few offerings that can integrate with RD to provide more capability.

Another example of that is our Rational Team Concert client that integrates into Rational Developer for Power providing the collaborative lifecycle management capability in addition to the development capability.

MATHENY: And Roland, on to you. I understand that all the Rational Compilers for Power have been refreshed. So the question is, when should I upgrade my compilers and how are they licensed?

KOO: The compilers on Power have been refreshed and back in April, we came out with a new set of [XL] C, C++ and Fortran compilers on the AIX platform. And we have just made these compilers available to run on Linux on Power. So now they support the Red Hat Enterprise Linux Version 5.5 and also the SUSE Linux Enterprise Server Version 10 and Version 11.

The highlights for these compilers are obviously the platform exploitation for Power 7. Power 7 is a very complicated architecture, and the compiler now has intelligence to exploit everything in that architecture.

And also it will bring performance improvements to your applications because the optimization technology has also been updated. So once you upgrade your compiler, it's really, you know, every version of the compiler, not only we brought out the new platform exploitation, we also bring in a bunch of features that help usability and programmability of the development effort.

So it's really to also improve the programmer productivity in the whole sense that you don't really need to understand the infrastructure of the hardware to be able to take advantage of it. And also, we also have improved the capabilities for program determination, problem determination, debugging.

And also, increased the compile time performance. And with this particular release, we have also put out some security feature that prevents the [specs mashing] type attacks from other programs on the system.

So there's really a lot of reasons why you would like to upgrade the compilers. In general, when you upgrade a hardware, we recommend that we upgrade the compiler. But even though you're not upgrading the hardware, because we bring out a lot more features to help productivity and performance, it will be also a good idea to stay current with the compiler.

The compilers are licensed based on the number of users. And we offer two license terms, Authorized User and Concurrent User. Under both license terms, the compiler may be installed on multiple Power systems, and Authorized User does not allow developers to share the license. That's the only difference.

All developers under this licensing theme must have their own license and they can also submit multiple composite any one time. And concurrent users allow people to share the license because it allows multiple users to use the compilers simultaneously at any one time.

The number of simultaneous users sharing the license must not exceed the number of Concurrent licenses a card. So, Concurrent License will give you more flexibility, but if you wanted to use the Authorized User license it really licensed to the number of users. That's the story on AIX and Linux. I'm going to turn it over to Don to talk a little bit about the IBM i site.

YANTZI: The only difference on the IBM i site, we refreshed the compilers back in April with the IBM i 7.1 release. And the way we ship our i compilers is slightly different than our AIX and Linux compilers, where on the i compilers they are very closely linked to the operating system, and we don't do the mix and matching.

So if you want to go to the latest release of the RPG compiler, you also need to go to the IBM i 7.1 release. You can't get that back on, say, example, the IBM i 6.1 Release.

And the other difference from a licensing perspective is we have Authorized User Licenses, or actually what we call

Named User Licenses on the i. We don't have the Concurrent User licensing model there.

MATHENY: And Don, we're about out of time here. So what education is available to get started? Is there a virtual seminar coming up, I believe?

YANTZI: Yes, that's an excellent point. We do have an upcoming virtual seminar on November 9th and 10th. And that's a great way for people, organizations to get a lot more details on some of these things. We have a very broad spectrum offering on Power systems from compilers, development tools, lifecycle management and more that we're going to be covering in that virtual seminar.

The other thing to, the other place to get started is really if you go to the product pages for either the compilers or Rational Developer for Power. There's some information there. Even more important, there's a link to the trial edition. You can download it and start playing around with it, getting started right away.

And we have some community sites for the compilers and for Rational Developer for Power. We have a [Rational cafe](#) site out on developerWorks, and for Rational Team Concert and Rational Team Concert for Power, [jazz.net](#) is really the community site there for getting more information, pictorial

articles and even posting questions on user forums.

MATHENY: Roland and Don, of course, thank you so much for sharing your time today. This was very informative, and we really appreciate it.

KOO: Thank you very much, Angelique.

YANTZI: Thanks, Angelique.

MATHENY: That was Rational's Roland Koo and Don Yantzi discussing The Rest of the Story, Rational Developer for Power. To share this podcast with your colleagues, or if you're interested in more podcasts like this one, check out the Rational Talks to You Podcast Page at www.ibm.com/rational/podcasts.

We'll post a link to the upcoming virtual event Don just mentioned. It's two days, it's titled Design, Develop and Deploy Better Business-Driven Applications for Power Systems. This has been an IBM podcast. I'm Angelique Matheny. Thanks for listening. Keep tuning in as Rational Talks To You.

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