CICS TS V5.3 open beta – Liberty in CICS

Nick - For this podcast I'm joined by Phil Wakelin and Mike jones from the CICS development team and they will explain the advances we have made in the area of CICS and Java, as well as the WebSphere Liberty profile that's inside CICS. So Mike and Phil, thank you very much for joining us today. In other podcasts we've talked about the hills that have gone into the CICS transaction server v5.3 open beta and today were going to talk about hill 1 which I believe is around Java and Liberty capability. Phil, could you expand a little bit on what we're delivering here?

Phil - Yeah so hill one is all about extending our support for the Liberty profile inside the CICS JVM server. so we've got three components to this, first of all were supporting many more features to enable you to exploit the APIs and functions available from we've Liberty profile. The second thing is to better integrate with existing CICS programs calling to and from them and the third thing is to improve the systems administration and management of the JVM server environment.

Nick - Okay that's clearer and I understand the three focus items here, but what sort of value, what benefit will our customers realise from this?

Phil - Well what were really aiming at is to ease the ability to port web applications into their CICS runtime so you can take a web application and just run it inside the Liberty JVM server. This builds on the value that we've got with Java on the mainframe and we've got a great deal of value with Java 7.1 and then we've announced a support for Java 8 and the exploitation there of the z13 hardware.

Nick - And that presumably incorporates the instructions that come with these iterative releases?

Phil - Yes so for each release of hardware, we typically have lots of new instructions for the Java 7.1 we were able to exploit new instructions in the ec12 and actually with z13 we've got the ability to run SMT for zaap so you can dual thread on the zaaps and that's available with any release f Java

Nick - Wow that sounds like a rich set of values. Mike, I'd like to ask you can you describe what sort of Java application can now be deployed into the CICS Liberty JVM server.

Mike - So you can now deploy a wide range of applications onto the Liberty JVM server which makes use of any modern Java ee technologies so you can now begin to use technologies such as JPA EJB and JMS in your applications.

Nick - What can you do with EJB's and CICS inside the Liberty JVM server?

Mike - So we now provide support for the EJB light specification in CICS Liberty which allows you to deploy and write Java enterprise themes, and includes support for e files in CICS Liberty you cna also make use of JPA in these applications to make calls into relational databases from more Java friendly format

Phil - So how does that compare to cdi managed beans?

Mike - So we also support cdi managed beans in CICS Liberty cdi provides a different flavour of EJB which is to provide a simple interface for bean management.

Phil - And you mentioned JMS what does JMS allow you to do inside CICS Liberty?

Mike - So we currently early support for sending and receiving messages for WAS embedded messages server in the Liberty runtime. we've MQ is supported in the OSGI JVM server, and were hoping to do more in this area very soon.

Phil - You also mentioned jmx, what does jmx allow you to do with an application?

Mike - So jmx, it allows you to locally and remotely monitor and deploy your applications in a Liberty JVM server.

Nick - Now Mike a lot of our listeners here may not be traditional Java developers they may be interested in things around written in COBOL or PL1 what about integrating these applications with those existing PL1 and COBOL applications?

Mike

So much like OSGI JVM servers in CICS at the moment applications written for a Liberty JVM server will be able to use the jCICS library to make calls into existing COBOL or PL1 applications. Also starting in the open beta we're providing a prototype which will allow existing applications to link into applications running in a Liberty JVM server. We're also providing support for jca which will allow you to write connectors to link you Java and Liberty programs together.

Phil - So Mike does that mean that you can take a Java web application that's written to use the eci resource adapter supplied by the CICS transaction gateway and just drop that onside CICS and will run just the same.

Mike - Yes you should be able to deploy your adapter into CICS and it will run the same as if it were running outside of CICS.

Nick - Does that mean you can take any application that conforms to the jee 6 web profile and just drop it into CICS?

Mike - Yes that's true, Liberty in CICS supports the jee 6 web specification so any application complies with that, the jee 6 web specification should work in CICS Liberty. Applications exploiting things such as JPA session db currently only support type 4 data source but we are hoping to do more in this area soon.

Nick - So Phil can you explain a little about how easy it is to manage a Liberty JVM server inside CICS?

Phil - Mike mentioned jmx, so jmx is an API and framework that you can use to build monitoring applications in Java. On top of that we have our existing CICS spi support and our cmt support which enables you to enquire on the JVM server and to understand thread usage and heap usage for instance, that's integrated with the CICS statistics and CICS monitoring on top of that the CICS explorer will give you views to access the same information, and then additionally you can use standard Java tooling to analyse what's going on in the JVM if you need more information. a get a tool is the ibm health centre which enables you to attach to any JVM and to analyse a heap usage application profiling locking and running threads and gives you a great environment for debugging and profiling your application.

Nick - So many of our listeners maybe not using web applications but just running business logic in an OSGI JVM server are there any changes here that would benefit those uses?

Phil Yes so we've already mentioned JMS usage in an OSGI JVM server with we've MQ, our intention to support Java 8 will benefit anyone using Java in CICS and then additionally and we've got enhancement to our logging support for Java so we've got management of the number of ZFS log and trace files so you don't have to be concerned with log files filling up the ZFS filing system we've got the ability to redirect ZFS log files to the je-s pool. We've got the ability to localise all the time stamps in the JVM server output with the local time in mvs we've got a new simplified directory structure. We've got ZFS log files, so all of that makes it much easier and simpler to build and manage a JVM.

Nick – That's great, thank you for joining us. Well, that wraps up this podcast discussion. To find out more about the CICS TS V5.3 open beta, please go to the description for this podcast at: http://www.IBM.com/software/os/systemz/podcasts/websphereonz/

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