Cloud DevOps and the Cloud with Matthew Webster

Nick Garrod - Hello and welcome to the '*Did You Say Mainframe?'* podcast series. This is where I chat to technical specialists about hardware and software topics that are related to the mainframe. And I'm your host Nick Garrod.

Now today we're joined by a serial offender to this series of podcasts, Matthew Webster from the CICS Development Team and today, he's going to talk to you about the CICS cloud capabilities and how it relates to the DevOps operations, so Matthew, thank you very much for joining us.

Matthew Webster - Thanks for inviting me back Nick.

Nick Garrod - So Matthew, we hear a lot in the press and around IBM communications and DevOps and cloud, and the latest release of CICS seems to be talking a lot around both those topics, could you just elaborate a little bit on how DevOps and CICS are more coming together in this relationship.

Matthew Webster - Okay, so DevOps is essentially collaboration between application developers and IT professionals hence DevOps, and this is to facilitate faster development and deployment life cycles while at the same time improving reliability. So in a sense it's more haste and less speed. So in CICS terms, it's system programmers talking to application programmers and vice versa helping to bring a more production like environment to development and also realising that a new application feature or bug isn't really delivered until it's running successfully in production.

One of the features of CICS TS V5 that we think helps with this collaboration is threshold policy, which I want to talk about today.

Nick Garrod – Okay, so could you perhaps put a bit of positioning around that, perhaps an example or a scenario.

Matthew Webster – So I think the best way to describe these policies is to use an analogy, and for that argues a mobile phone contract which most people have, so it's a good example. So each month I get 500 minutes of calls, unlimited text messages and one megabyte of that all important 3 and 4G data. So that's three resources that I get from my provider each month but with a different limit. But what happens when I exceed or approach one of those limits? Well I get a text message saying something like *'you have now used 80% of your data allowance this month.'*

So there are actions providers can take as well when you get close to one of these limits. And this is exactly the way that threshold policies work in CICS except that the resources we have are things like CPU storage, transient data and the actions CICS can take are to issue a message, inimitent event or abend the task that's trying to use the resource who's threshold has been exceeded.

Nick Garrod – Okay now that's a really good example and I can see what you're describing there, so in a CICS sense, why would a customer care about the fact that they can set policies or thresholds and get warnings?

Matthew Webster – So the primary reason for using a threshold policy is to help protect

high volume production environments against resource consumption problems. So an example would be an application using too much CPU because of a bug and that can disrupt other applications or in fact cost the customer money because you're using CPU.

Now in my previous podcast I talked about application multiversioning and increasing the rate of change of applications so as development becomes more responsive to the business then operations needs to become more responsive to development so change can reach customers but without risking the reliability, and this is where the threshold policy really helps.

Nick Garrod – So what are the benefits of this?

Matthew Webster – So firstly with threshold policy you could automate the situation immediately without human interaction and that's another aspect of DevOps which is about automation. So rather than speaking about what happened later, after you've had the problem, you can do something about it immediately in production.

So for example, in response to a vent for an application that's using too much CPU or something else, you can create some automation that disables that application so immediately you're taking action, no human intervention. Secondly, part of this DevOps is policy can be used in the development environment or during QA to find problems like, for example excessive storage consumption or database access where those problems can be more easily corrected. So you catch those problems before they reach production and again this about bringing the production environment into the development space, understanding the limits and understanding the environment.

Nick Garrod – So when was this capability available?

Matthew Webster – So threshold policy was actually introduced in CICS TS V5.1 making use of the events infrastructure that actually arrived in V4.1 so in some respects this is actually a really mature piece of infrastructure. However we've added a lot of capability in CICS TS Version 5.2. Firstly we've doubled the number of resources that can be managed by policy, in particular CPU elapsed time this was largely in response to feedback from customers including RFE's so that was a really good way of us making enhancements

Nick Garrod – So that's actually illustrating how it's worth customers putting in these RFE's.

Matthew Webster – We had five thresholds in V5.1, we took it to conferences and talked about it and then we discussed with customers and then we got ideas for the next set so it's a really good round trip. And secondly we've also added the URI map entry point as part of our cloud support. So now there's another way to identify an application entry point in addition to to the program entry point we had in V5.1.

Nick Garrod – So where can I get it? Where is this capability available is it like a feature pack?

Matthew Webster – No, so a threshold policy is available both in V5.1 as well as V5.2 so you might be able to make use of it already if you upgraded to V5.1 so you can use it right away, also the supporting CICS PA to help you create policies so you can use the report forms to set suitable values for those threshold values based on SMF data that you collect.

Nick Garrod – And CICS PA is CICS Performance Analyser the CICS tool. So is there any supporting documentation or resources that you would recommend people that are interested by listening to this podcast can then get further information?

Matthew Webster – So yes, as always the best place to start looking is the new Knowledge Centre as well as a dedicated section for getting started with cloud enablement on threshold policy. There's also a scenario creating and deploying policy so you can go straight there. You should also be able to find my presentations from conferences like Impact on SlideShare including the most recent one *"'no rain clouds here' Using CICS Platform Policies to keep your private cloud healthy"*, so there's an expansion on what I'm talking about today. Finally always check in on the CICS Dev blog that has articles posted in there by the experts from the development team on threshold policy, the principles of DevOps as well as all the exciting capabilities in CICS TS V5.2.

Nick Garrod – And that's a really good point there the CICS Dev blog on developer works is quite a rich resource, and it's just a Google search CICS Dev. So in summary Matthew what are the key nuggets you would want people listening to this to take away with?

Matthew Webster – So DevOps is all about collaboration and automation. Threshold policy an be used to set limits on CICS resource consumption by applications. So policy aids this collaboration by finding problems earlier in development while also allowing an automated response to problems in production.

Nick Garrod – That's great Matthew that's really interesting and a really good concise explanation as to how DevOps is in a CICS environment and the kinds of capabilities and value that CICS is bringing to help out DevOps. Thank you very much for coming along today.

Matthew Webster – Thank you Nick.

Nick Garrod – Well that just about wraps it up for this podcast for more details go to ibm.com/software/os/systemz/podcasts/webxeronz

Please join us again for another insight into an interesting topic to do with mainframe. But for now this is Nick Garrod saying thank you very much for listening.