

IBM Software Demos

WebSphere Virtual Enterprise - Dynamic Cluster Operation

DYNAMIC CLUSTER OPERATION

In this video I am going to show how WebSphere Virtual Enterprise uses its dynamic cluster feature to automatically respond to workload spikes when they occur in the environment.

The dynamic cluster feature will automatically start and stop application server engines based on varying workload and the service policy that has been assigned to the workload.

From what you can see in this graph, there are three applications that we have running: financial advice, stock trade, and account management. We see the response times being prodded on the graph along with the response time goals: platinum goal of 200 milliseconds; our gold goal at 250 milliseconds; and our silver goal at 350 milliseconds.

Right now the application is all right, it's loaded, so we're having no trouble meeting the response time goals. What I am going to do is increase the workload for the account management application.

We'll see the response time spike up on that application and then the WebSphere Virtual Enterprise Placement Controller is going to notice the increase in response time. See that we have some excess CQs past the available within the cell and start an additional application server instance to bring the response time back down for the account management application. And now I am going to go ahead and increase the workload.

So after the backup dates here we should see the response time increasing for the account management application to this sort of brownish colored line on the graph. And there, there we see it spiking up. And since the application placement controller is running on a two or three

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minute cycle, I am going to go ahead and pause the video while we wait for the placement controller to take affect.

So we can see where the response time for the account management application revved up as I increased the workload and then we can see after some time had passed and the application placement controller had noticed the increase in response time to fix the application. We started up a new application server instance and we've now brought the response time back down from its high levels.

This is showing WebSphere Virtual Enterprise operating on a fully automatic mode. WebSphere Virtual Enterprise also has the options to operate in what we call a supervised mode in which it would notice changes in the workloads and make suggestions to the administrator for changes of the, in the application server allocation.

So for example, if we were running a cluster in supervised mode, it may have made the suggestion to the administrator that we need to start a new instance of the account management application on node 22.

This completes the video for the application placement controller.

END