

IBM Software Demos

Tivoli Composite Application Manager for Web Resources

In this demonstration we will look at the unique features of ITCAM for Web Resources that help IT operations staff and application administrators identify and resolve problems. These features include the automatic setting of performance thresholds, the application dashboard, and the situation correlation wizard, which helps operators streamline the problem determination process. We will also look at how health and availability information from ITCAM for Web Resources can be combined with end user information from ITCAM for Response Time to provide operators with an indication of which problems are affecting end users.

In this logical view you can see all of the resources used by the Plants by WebSphere application. On the left side of the screen, you can see that we are collecting response time information, application server information, operating system data, web server metrics, and database metrics for the resources that support this application. On the right, you can see the end user response times for the Plants by WebSphere application, together with health and availability data. This workspace displays information from both ITCAM for Response Time and ITCAM for Web Resources and can be used to determine if application resources are impacting end user response times. It can also help IT staff prioritize which application resource problems should be fixed first.

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When we access the application dashboard of ITCAM for Web Resources, you can see that the backend tier status is unknown. This is because we have not yet established a performance threshold for this tier. We can use the Configuration workspace to see comprehensive information about the application and then drill down to understand what thresholds are appropriate.

The Configuration workspace displays information about the monitored requests and baselining status for a given application. It also reports the request ID, the parameters for auto-thresholding, and the actual threshold values, whether assigned automatically or customized by the user. Here we can see that the baselining process is not yet complete.

We can use the Request Baseline workspace to see how the baselining process is progressing. The baseline is a statistical distribution of application request response times and is used to facilitate the auto-thresholding feature of ITCAM for Web Resources. Baselining assigns fair and bad response time thresholds for each application request by each tier -- client, application, or backend. Thresholds are used at runtime to determine the overall health status of a request. In this workspace we can see baseline distribution statistics and

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threshold settings for a request, all in one view.

After establishing thresholds, we return to the application dashboard. You can see that a critical situation has been triggered, indicating a poor status in the backend tier. Let's view the Backend Tier workspace to get more information.

The Backend Tier workspace contains information about garbage collection and CPU usage for the application server. It also displays response times related to the application as well as JDBC resource and pool statistics. In this view you can see that the Plants by WebSphere application is using more pool resources than the other applications.

From here, we can drill down to the Pool Analysis workspace to obtain more information. This workspace summarizes pool information for this specific application server. Here we see that the database connection pools percent at maximum is the highest for the Plants by WebSphere application. We also see that the percent of CPU usage has recently spiked.

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By drilling down to the Database Connection Pool workspace, we see that Plants by WebSphere has had the highest pool sizes *and* the worst wait times. We also see that the maximum pool size setting is 10, compared to the average usage of 1.98. Because excessive maximum pool size settings can drain CPU utilization, this maximum setting should be lowered.

The problem determination scenario that we just walked through can be further streamlined with situation correlation. Here in the Situation Correlation wizard we have associated situations that will look for low average database connection pool sizes and high maximum pool sizes. We could also check for high CPU usage with no increases in throughput. All of these factors together would indicate that the maximum database connection pool size is set too high. Expert Advice can direct an administrator to change the maximum pool size for a particular application.

The unique features of ITCAM for Web Resources allow IT operations staff and application administrators to quickly identify and resolve application problems before end users are impacted. For more information, please contact your IBM sales representative, or visit www.ibm.com.