

IBM Software Demos

Tivoli IT Lifecycle Management System Performance

Tivoli_IT_Lifecycle_Management_System_Performance_D_May05

1a <Intro slide > (21 secs)

Today's Enterprise applications are extremely complex. They often consist of many distributed components and are affected by many different conditions. Databases, applications, servers, and networks all need to perform at optimum levels to ensure appropriate levels of service to your customers.

1b <Need for IT lifecycle mgmt slide> and <challenges slide> (22 secs)

Exhaustive testing with comprehensive testing plans can attempt to minimize production performance issues, but the reality is that some issues are not detectable until the application is in production. Being able to monitor and collect application performance data in a production environment is necessary for resolving performance problems.

1c <Slide with animated arrows> (22 secs)

In this demonstration, you'll follow a performance problem as it is detected, analyzed, fixed and finally tested. IBM is uniquely positioned with solutions from Rational and Tivoli to enable the necessary information flow between the Operations, Development and Test teams to resolve the most difficult performance problems.

<Silence over detect performance slide>

<Start of TEC video>

2a 23 sec

The first indication of a performance problem is an alert appearing in the Tivoli Enterprise Console or TEC (pronounced "tech"). In this case, Tivoli Monitoring for Transaction Performance, or TMTP, has observed a poorly performing transaction, and has forwarded this alert to the TEC. The details can be viewed in the event properties screen

<Silence over problem isolation screen>

<Start of TMTP video>

2b 8sec

The problem is now passed to the Level 2 Support Engineer, who is responsible for problem isolation.

2c 11sec

The Support Engineer first pulls up a transaction response time graph which indicates response time has been gradually increasing over the last few hours.

<Click dashboard>

2d 8sec

Using TMTP's Fast Path to Failure feature, the Support Engineer can quickly locate the problem.

2e 20sec

TMTP automatically baselines the performance of all transaction components so that it is able to automatically identify which component is at fault when a transaction is running slowly. The transaction topology graph allows us to visually understand the flow of a transaction.

2f 9sec

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Here, we see the Support Engineer has isolated the problem to the AccountingBean inside a Session EJB.

<Arrow to analyst slide>

3a 9sec

After the poorly performing component has been isolated, the problem is passed to a Line of Business Application Analyst for diagnosis.

<WSAM login>

3b 9sec

The Analyst uses WebSphere Application Manager to get a real-time detailed view of the activity and resource utilization of the problem components.

<Server overview screen>

3c 8sec

He sees that response time has indeed been increasing and also notices that throughput has consequently been impacted.

<System resources clicked>

3d 8sec

WebSphere Application Manager provides a comprehensive overview of your J2EE server's performance.

<EJB clicked>

3e 13sec

A quick look at the EJB details identifies the most time consuming EJB's in the system. The Accounting bean has been averaging a 3.4 second response time.

<Recent activities clicked>

3f 14sec

The recent activities display allows the analyst to check for a correlation between response time and the number of requests. It does not appear that the degraded response time is related to the number of requests.

<Create reports clicked>

4a 16sec

To further diagnose the problem, the Analyst can request a method-level report to identify which methods are causing the performance problem. WSAM provides real-time performance data down to the method level.

<Analyst: record and assign defect PPT slide>

4b 17sec

In this case the Analyst has determined that a code change is necessary, so he opens a defect against the problematic component using Rational ClearQuest. ClearQuest's Web Interface allows him to manage defects from any computer with a browser.

4c 11sec

Because the problem has already been isolated with TMTP and diagnosed with WebSphere Application Monitor, the defect is assigned to the appropriate developer.

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<Arrow to developer ppt slide>

5a 5sec

The performance problem defect is now routed to the developer.

<silence on acknowledge defect ppt slide>

< CQ screen>

5b 14sec

The developer reviews the defect report using ClearQuest's native interface. He could also have accessed the defect report using the ClearQuest view integrated into the Rational Software Development Platform.

<Silence on slide analyze performance problem ppt slide>

<developer – analyze performance problem>

6a 29sec

Using the IBM Problem Resolution Toolkit for Rational Application Developer, the operational data is imported from TMTP. The developer is able to import data pertaining to a specific transaction instance that violated the established response time threshold. This allows him to get real-world data from the actual production systems, without installing high-overhead diagnostic tools on the production machines.

<Wait until tree is expanded and pop up menu come up>

6b 9sec

The developer now views a performance call graph of the actual production transaction, and can see the response time for each step.

6c 10sec

The thicknesses of the lines indicate the relative response times of each component. Once again, the AccountingBean appears to be the culprit.

6d 12sec

Since we're already in the Rational Software Development Platform, we can link directly to the code responsible for the poor performance and start making modifications to fix the issue.

<Silence on ppt slide>

<Developer: fix & deploy>

6e 12 sec

Here we now see the code being changed. Again Tivoli Integration with the Rational Software Development platform, provides this direct developer capability.

<Click on AuctionV60EAR>

6f 10sec

Within the same integrated development environment, he deploys it to a test WebSphere Application Server to allow the test team to verify the fix.

<Silence on arrow to tester ppt slide 'cause I couldn't think of what to say here..>

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<Silence on tester ppt slide>

<Start of video>

7a 14sec

Using Rational Performance Tester and the IBM Performance Optimization Toolkit the Tester begins verifying the fix. He creates a new test project and the Test project wizard walks him through the steps.

7b 7sec

Rational Performance Tester will record the actions as he steps through the transaction to be tested.

7c 10sec

Here, the tester launches the Auction web site and records a simple browsing sequence, making sure he exercises the code that was just fixed.

<right click on AuctionPerformanceTest >

7d 10sec

Next, He creates a new performance schedule, specifying the number of simultaneous users and iterations for Rational Performance Tester to simulate.

7e 13sec

In addition to providing a totally integrated environment for performance testing, Lifecycle management solutions from IBM can help reduce operation costs through best practices systems management.

<Right click on LongRun>

8a 12sec

Once the test sequence is built, the tester launches the performance test.

While the test is running, reports can be viewed that show the success rate of the transaction and the performance over time.

8b 7sec

Following the successful completion of the test cycle, the new release will be deployed back into production.

8c 11sec

This IT life cycle solution from IBM provides the ability to comprehensively address application infrastructure issues in a complete and integrated way.

<END SB>