



IBM Software Group

WebSphere® Process Server V6

WebSphere® Integration Developer V6

Monitoring Service Component Performance



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This presentation will focus on monitoring the performance of service components at the IT level in WebSphere Process Server and WebSphere Integration Developer V6.0.

Goals

- Explain options available for measuring performance of SCA Components



The goals of this presentation are to cover the administrative console, deployment automation using the serviceDeploy tool, administration of integration applications, and measuring performance of SCA components.

Viewing Service Component Performance

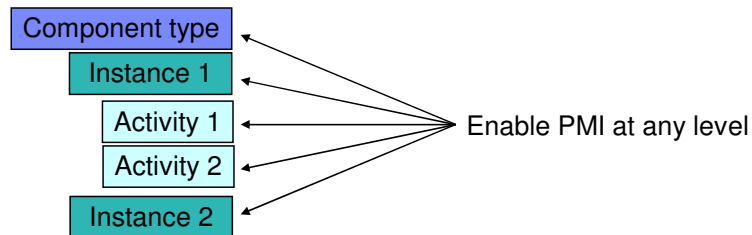
- Service components are instrumented with Performance Measuring Infrastructure (PMI) hooks to monitor performance of synchronous invocations
 - ▶ Asynchronous calls are can not be monitored
 - ▶ Business processes and human tasks are not instrumented
- Enabled with steps identical to other components
 - ▶ Enable PMI on component
 - ▶ Indicate which PMI information should be displayed in the viewer
- Viewable through the Tivoli® Performance Viewer
 - ▶ Available through Administrative Console
- Not meant as long term enterprise monitoring solution
 - ▶ Only shows current server session
 - ▶ More robust products available



The Performance Monitoring Infrastructure of WebSphere Application Server has been extended for monitoring the performance of service components in WebSphere Process Server. There are specific hooks placed into the service components running on a server. There are PMI hooks for the EJB™ container, the Web container, database and connection pooling in the base application server, and essentially everywhere across the server. These same hooks have been incorporated into the SCA invocation layer as well, allowing performance of SCA invocations to be monitored to a very granular level. At this time, the performance of synchronous requests can be monitored for all SCA components except business processes and human tasks. In the future, the performance of asynchronous invocations for all SCA components and business processes and human tasks will be supported. For example, for a business rule, every invoke can be measured and the average response time can be calculated. These hooks are enabled to start reporting data in the same way as with any other component. For instance, if you wanted to get connection pooling information, you could go into the console and find a special section called WBISStats.RootGroup, which you can expand to see the various service components and components available for performance monitoring. Service components must be invoked at least once before you can enable the PMI hooks, which is a variation from the base Application Server. There is no preknowledge of these components so they must be instantiated at least once before the performance information can be viewed. Performance information from service components is viewed in the same manner as information from the Web container or EJB container. The Tivoli Performance Viewer, which can display a tabular or graphical view of component performance, has been incorporated into the administrative console. After enabling performance monitoring on specific service components, you can then specify what performance data you want to view. The Tivoli Performance Viewer is not intended to serve as a long-term, historical performance monitoring mechanism. Instead, it is intended for short term monitoring of specific situations. Although you can capture and save the data to a log file and replay it, it does not have aggregation or comparison capabilities. For example, Tivoli Performance Viewer does not offer the capability to look at business rule performance over the last month. Other Tivoli products or the WebSphere Business Monitor product, can provide this type of in-depth monitoring.

PMI Instrumentation for SCA Components

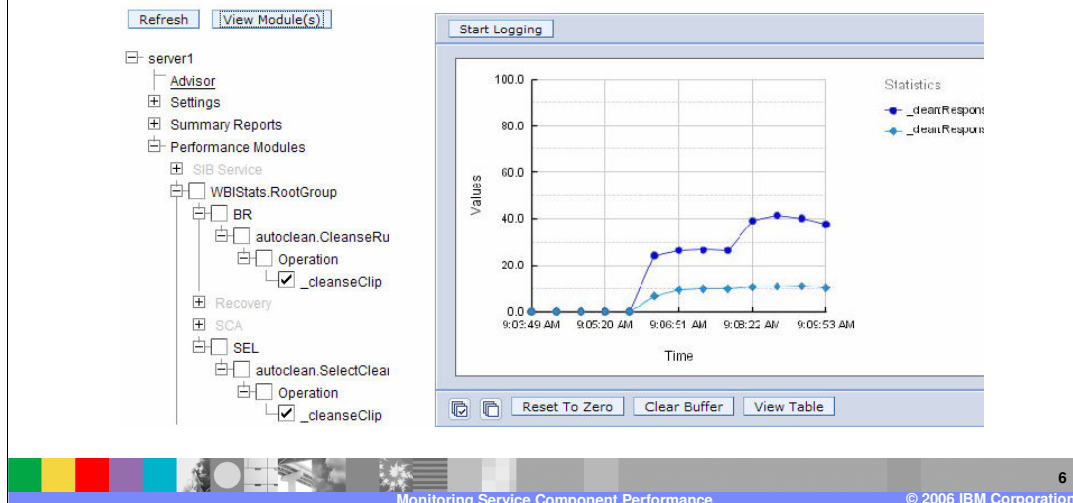
- Basic performance information available
 - ▶ Number of Good Requests
 - ▶ Number of Bad Requests
 - ▶ Response Time
- PMI information can be obtained at different places
- Specific activities in components can be monitored
 - ▶ Provides a fine level of performance information



Performance information can be collected for request metrics, including the number of good, bad, or failed requests, and response time, with response time often being the most useful metric. Performance hooks can be set at very fine levels across a component. For example, PMI can be enabled on specific operations on a business rule. PMI could also be enabled for all operations on a business rule, or for all operations on all business rules.

Tivoli Performance Viewer

- To view service component performance, the component must have run once (loaded) before performance information can be displayed



This graphic shows the Tivoli Performance Viewer inside the administrative console. In this example, monitoring is enabled on the cleanseClip operation in the business rule CleanseRuleGroup in the AutoClean module. Monitoring is also enabled on the SelectClean selector in the AutoClean module. Checking the operations, components, or modules will cause them to appear on the graph at the right of the screen. There is also a View Table tab that can be used for viewing statistics in a tabular format.

Agenda

- Viewing SCA Component Performance
- Summary

This section will provide a summary of this presentation.

Summary

- SCA component performance available through Performance Monitoring Infrastructure (PMI)
- Performance information is available for synchronous SCA invocations



In summary, WebSphere Process Server provides the ability to monitor the performance of synchronous SCA component invocations. Using the Tivoli Performance Monitor, the number of good and bad requests, as well as the response time can be monitored.

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