*QA*Load 5.7 and Vantage Analyzer

Combining Load Testing and Application Server Analytics for Powerful Root Cause Analysis

Please direct questions about
or comments on this document to:
Compuware Corporation
One Campus Martius
Detroit, MI 48226-5099
1-800-538-7822

Outside the USA and Canada, please contact
your local Compuware office or agent.

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Introduction

Spotlight Overview

COMPUWARE's goal is to provide a "best of breed" performance testing solution:
Application Performance Assurance or APA.

- ***QA*Load**: Highly scalable load testing and comprehensive application analytics.
- **Vantage Analyzer**: Non-intrusive Java and .NET application server analytics to component and method level.

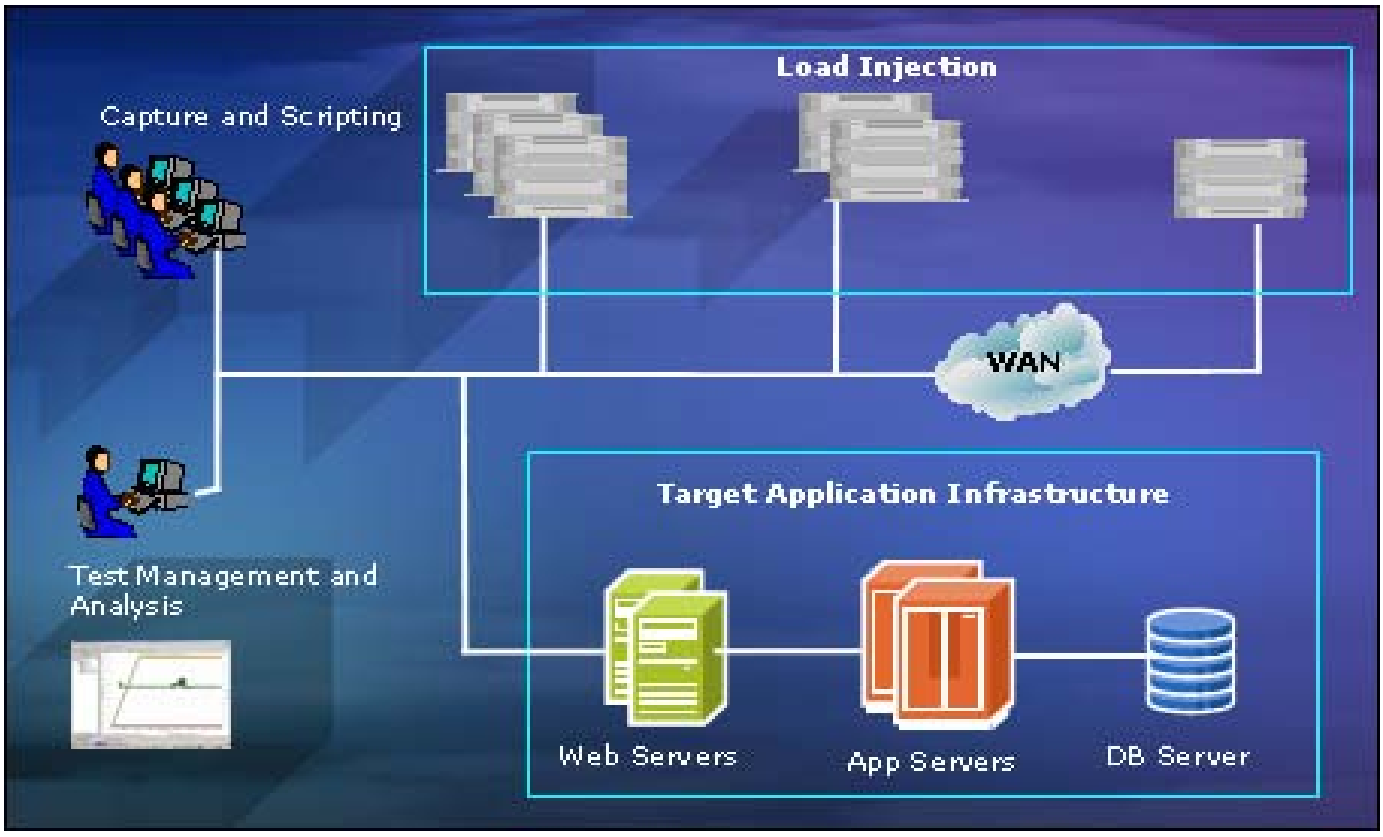
Integration of load testing and application analytics is a key part of **APA** and the latest release of ***QA*Load (5.7)** extends this integration to include the powerful application server analysis capabilities of **Vantage Analyzer.**

*QA*Load: Overview

*QA*Load consists of the following modules:

- **Script development workbench**
  - Records and renders end-user activity as transaction scripts for use by the Conductor to build load tests.
- **Conductor**
  - Creates and executes load tests using transaction scripts created by the Script Development Workbench. Also uses multiple Players to inject load.
- **Player**
  - Used by the Conductor and functions as the load injector to simulate highly-scalable end-user load from multiple points of presence.
- **Analyze**
  - Provides graphical and tabular analysis of the results of a load test
- **Remote Monitoring**
  - Provides the ability to monitor and capture server, network and database performance data during load test execution.

Typical deployment

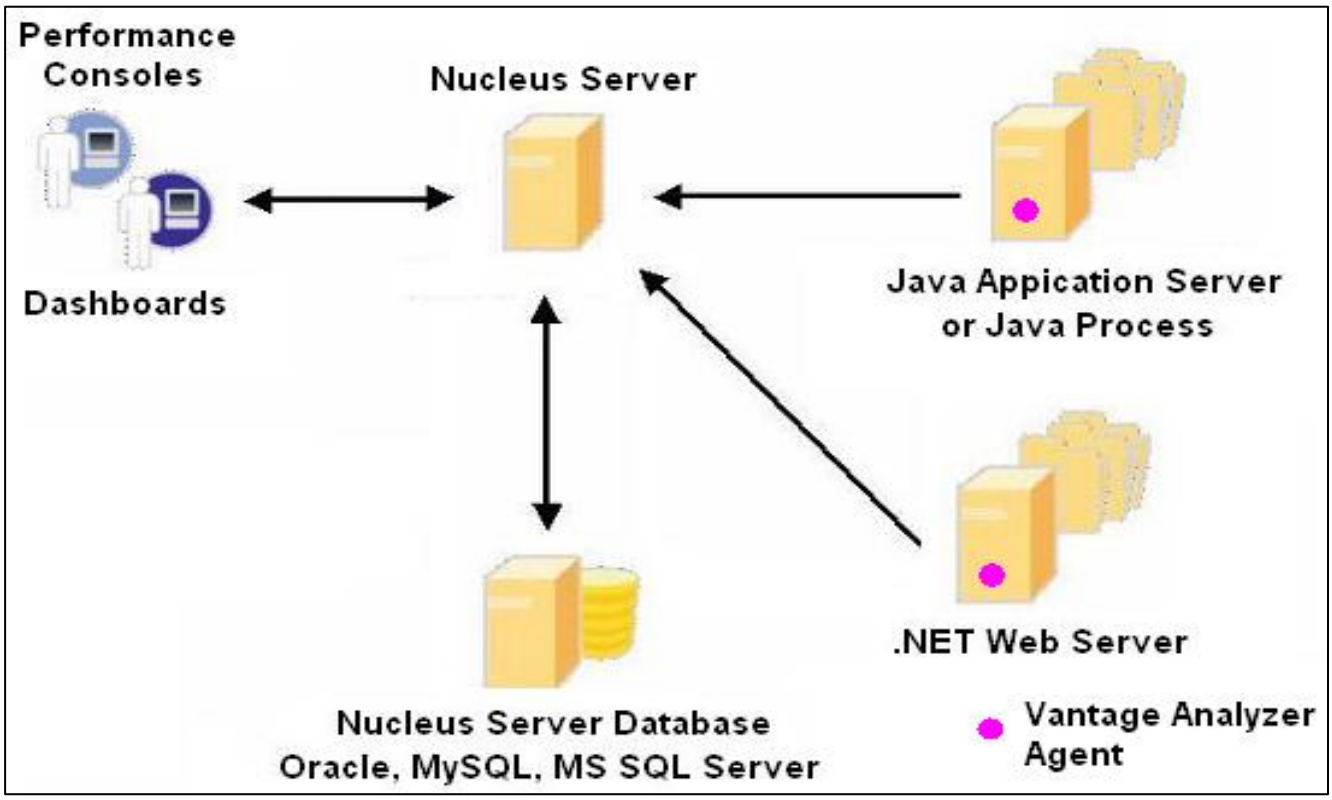


Vantage Analyzer Overview

Vantage Analyzer consists of the following modules:

- **Nucleus Server**
  - Acts as the database repository for all data collected by the Java and .NET agents.
- **Performance Console**
  - Real-time analysis of application server performance to method and component level.
- **Performance Dashboard**
  - Real-time highly customizable dashboard to display application server performance and monitor SLA compliance.
- **Java Agents**
  - Provides low-impact monitoring of Java application servers such as WebLogic, Websphere, JBoss and many others.
- **.NET Agents**
  - Provides low-impact monitoring of .NET CLR across multiple versions of the .NET framework.

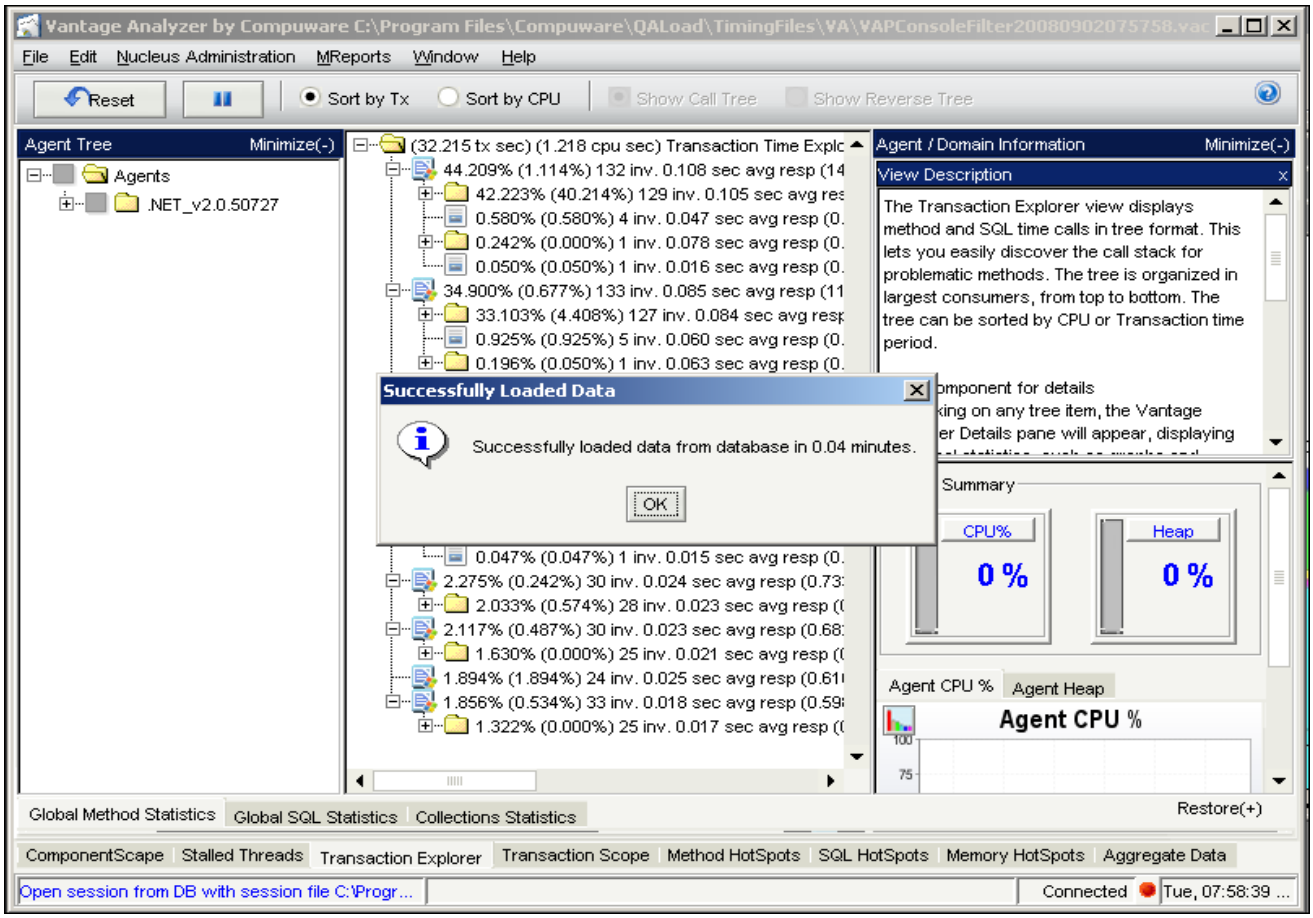
Typical deployment



Features:

Automatic extraction of Vantage Analyzer trace file

Upon completion of a load test application server data collected during test execution or alternatively a user-defined time period, is automatically extracted and presented in the Vantage Analyzer performance console.

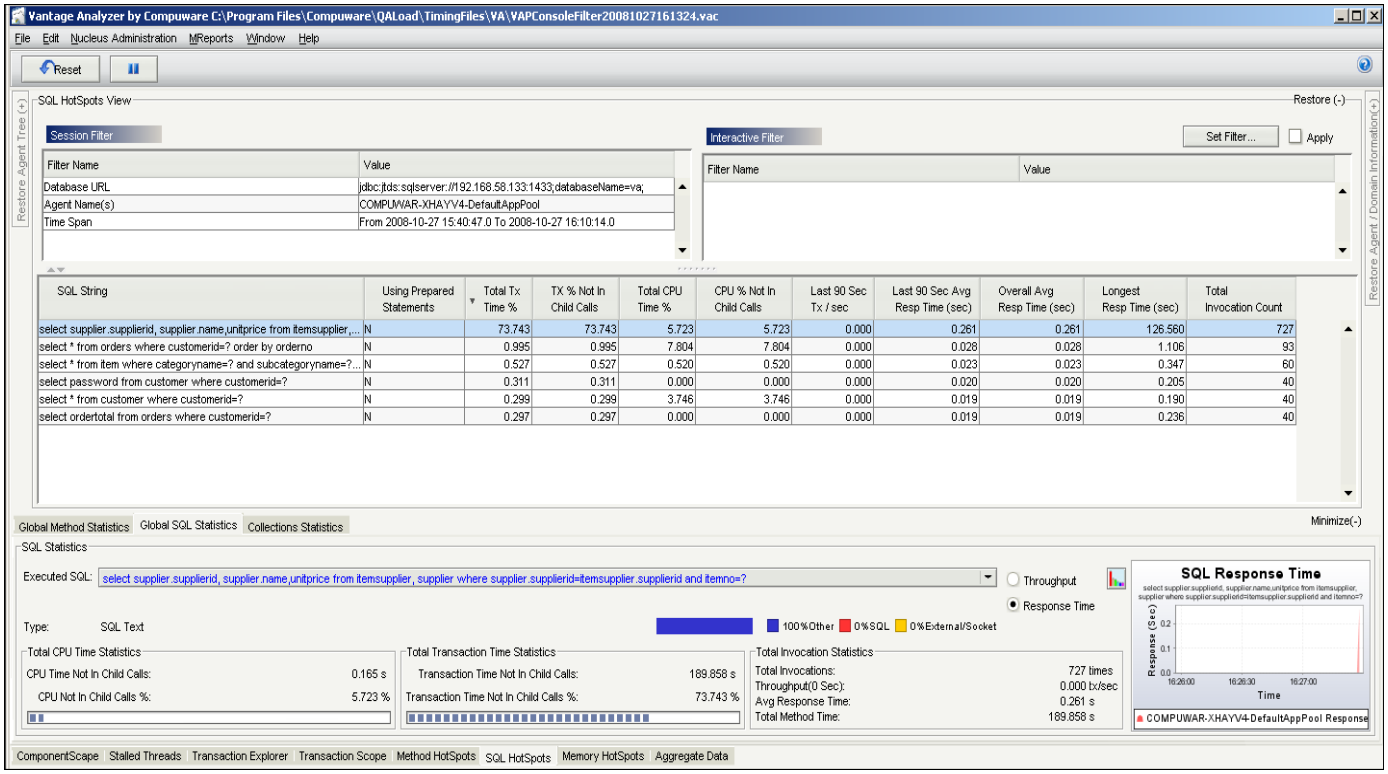


Benefits

- ☑ Previously this was only possible manually.
- ☑ Provides immediate access to application server analytics at the end of a load test.
- ☑ You can extract all data collected during a load test execution or from a user-selectable time slice.

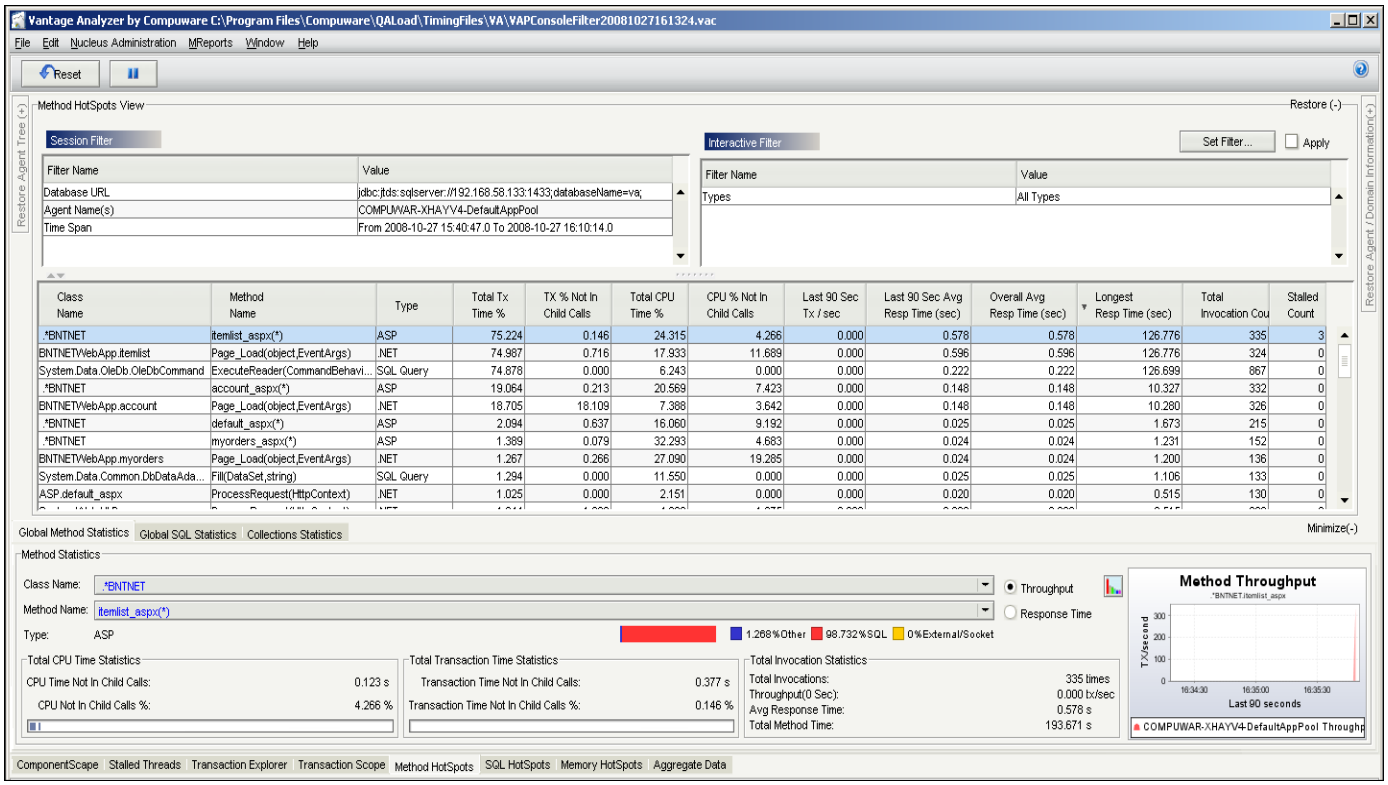
Usage: Identify SQL hotspots

- Identify slow and/or CPU-intensive SQL calls



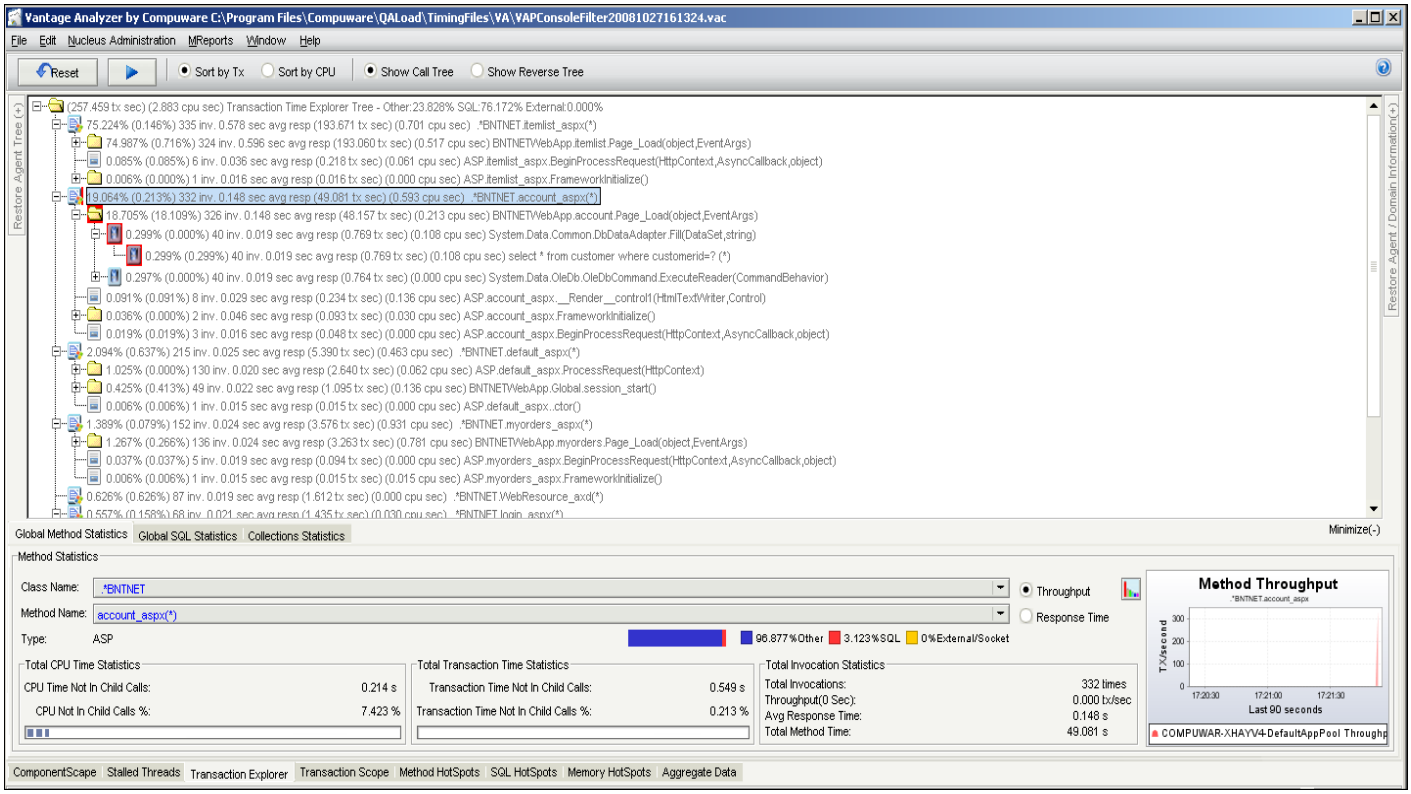
Usage: Identify Method hotspots

- Identify slow and/or CPU-intensive Methods



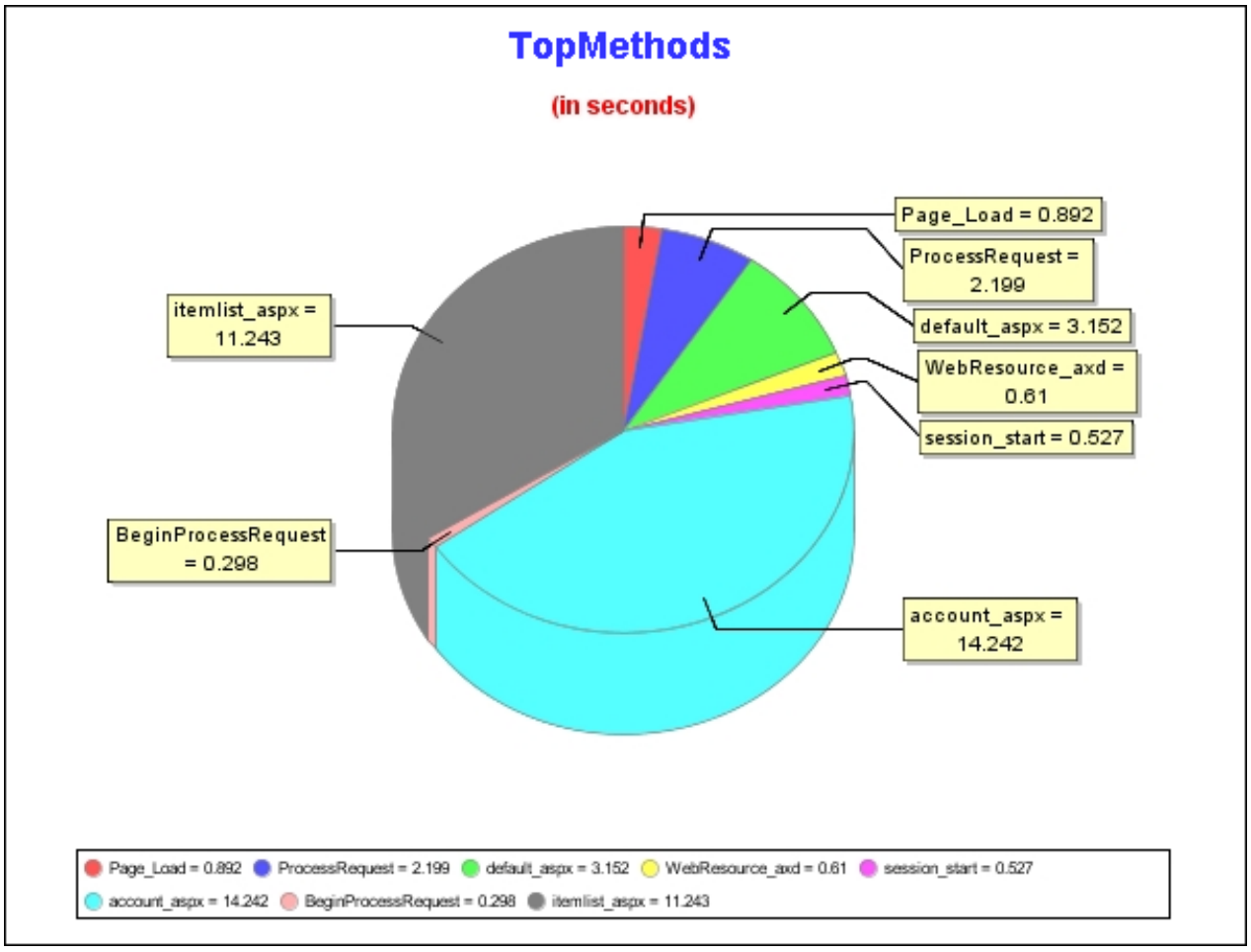
Usage: Identify Critical Path High Resource Utilization

- Identify resource hungry ‘child calls’ from individual application server components.



Automatic generation of Vantage Analyzer reports

Upon completion of a load test user-selected Vantage Analyzer reports are automatically generated and associated with the relevant *QA*load timing file. These reports can be retained or discarded once the timing file is closed.

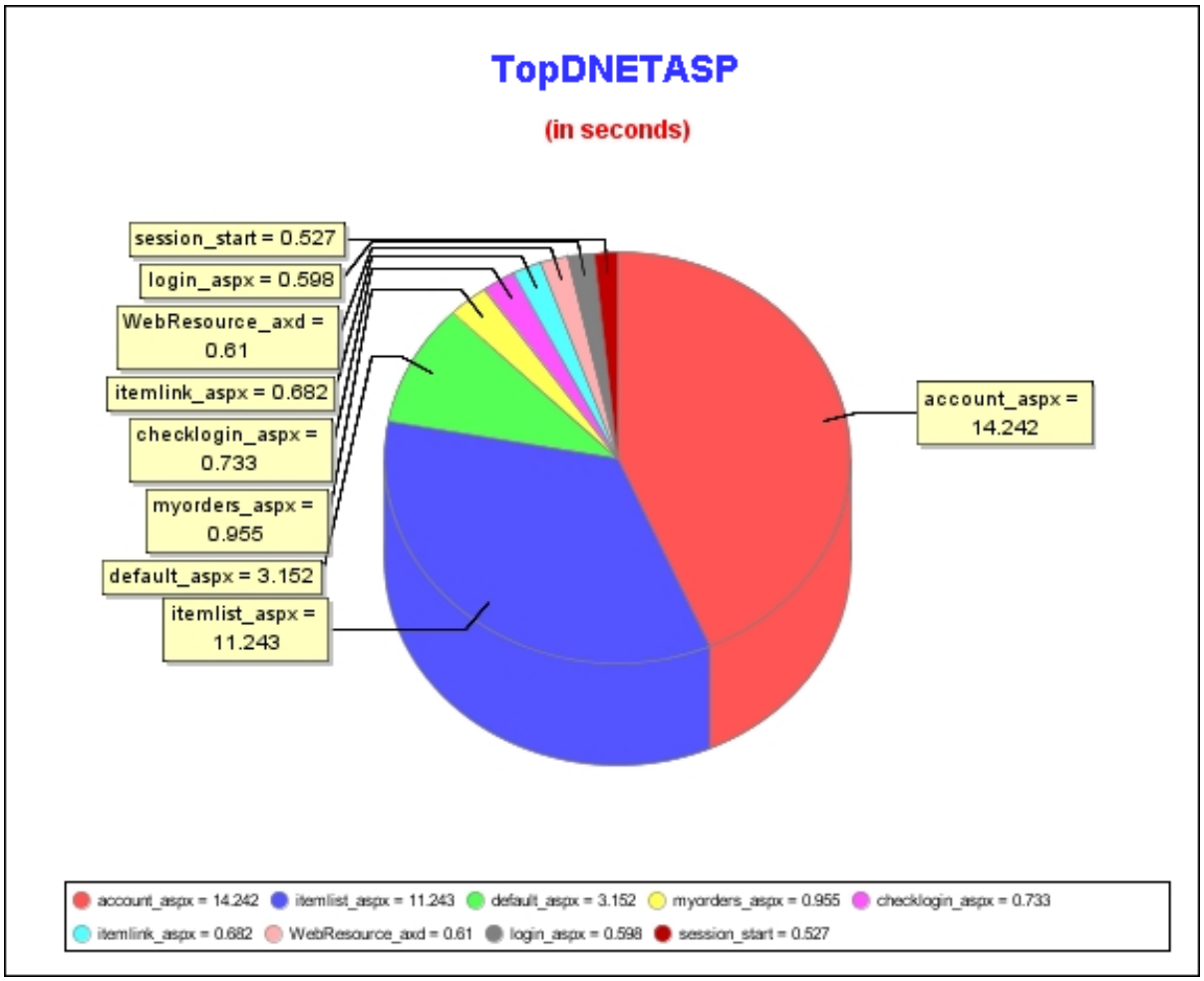


Benefits

- ☑ Previously report generation was a manual exercise.
- ☑ Reports are automatically linked to timing files.
- ☑ Provides immediate access to slowest methods, SQL and other application server components at the end of a load test.
- ☑ You can extract all data collected during a load test execution or from a user-selectable time slice.

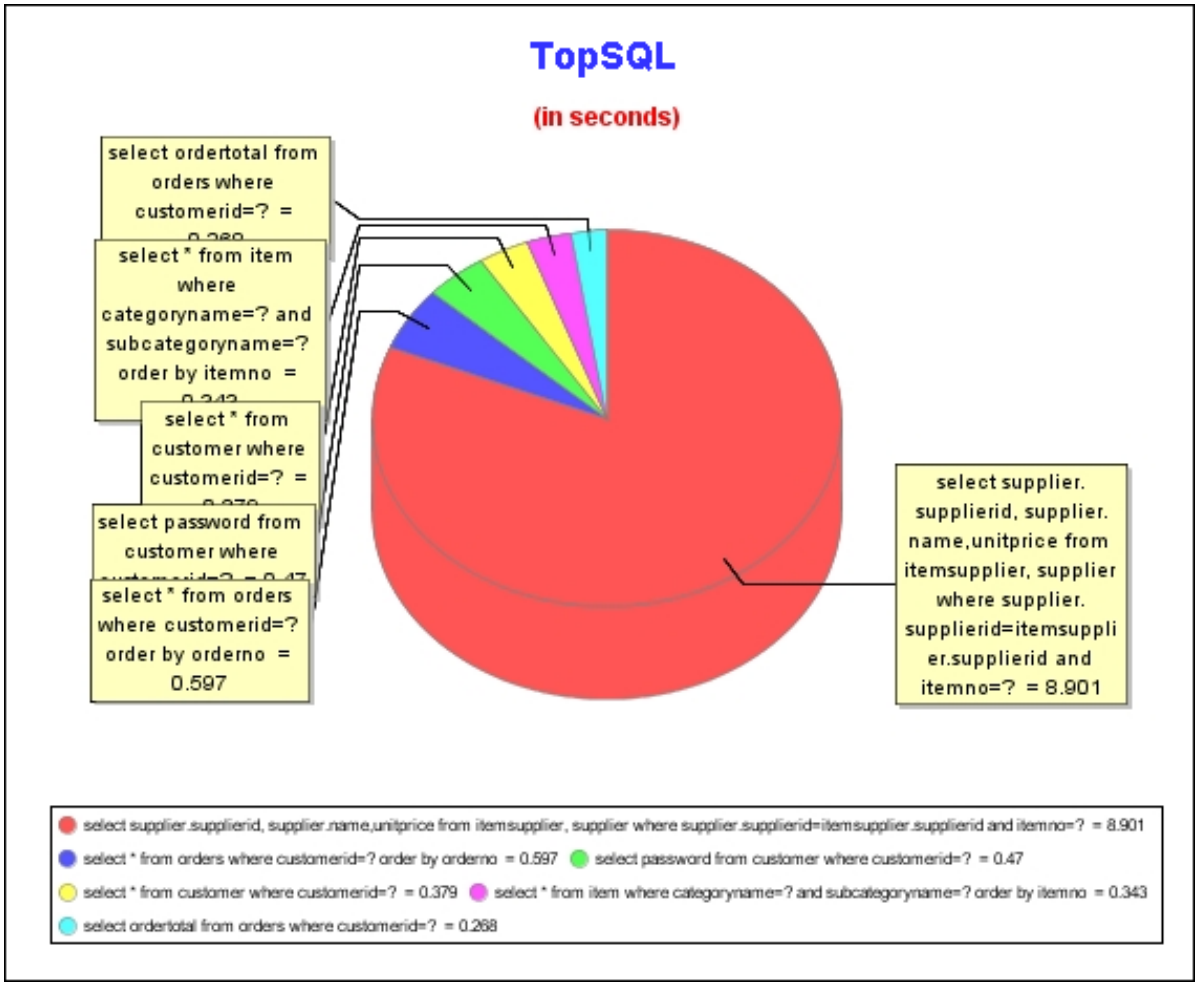
Usage: Top DNETASP Report

- Displays slowest .NET ASP components for date/time period selected



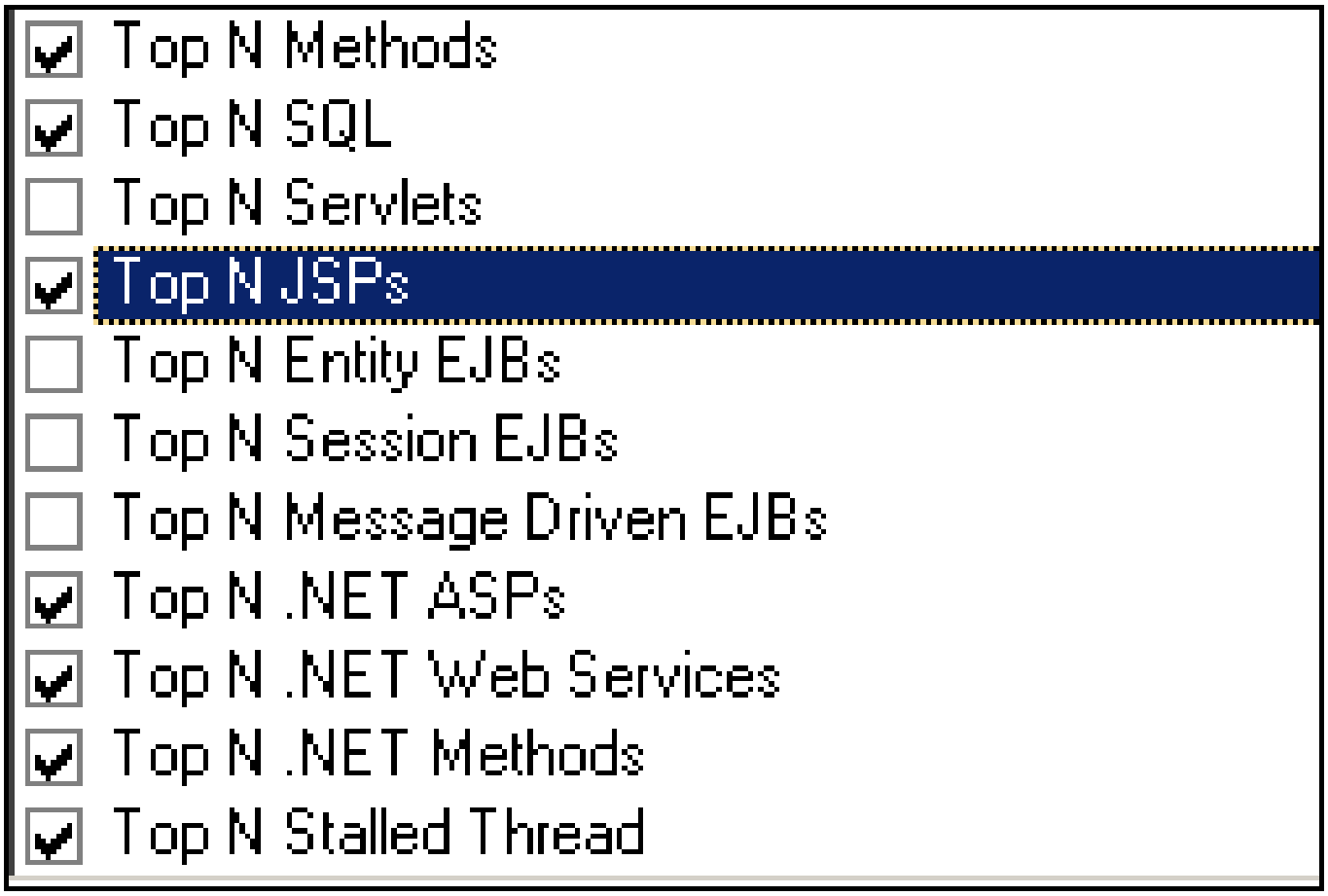
Usage: Top SQL Report

- Displays slowest database SQL calls for date/time period selected



Usage: Vantage Analyzer report options

- Displays available Vantage Analyzer report options for integration with *QA*Load

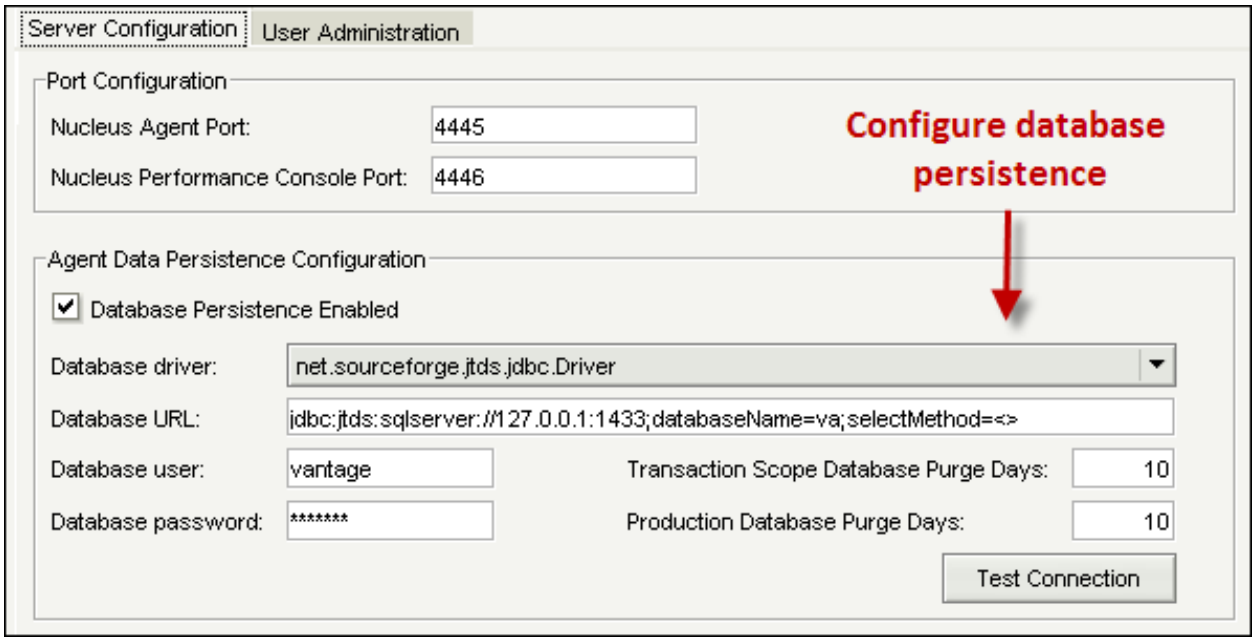


Configuration Process

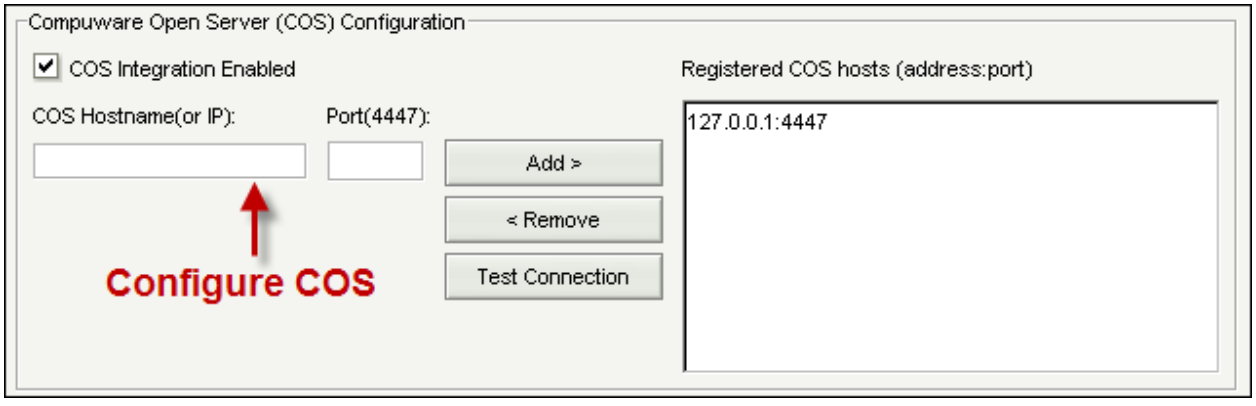
For quick reference, below is the process involved in configuration.

Pre-requisites

- *QA*load 5.7 installed.
- Vantage Analyzer 10.1 SP1 Performance Console installed on same machine as the *QA*load Conductor. (Note VA 10.2 is not yet supported.)
- Nucleus server database persistence configured as shown below:

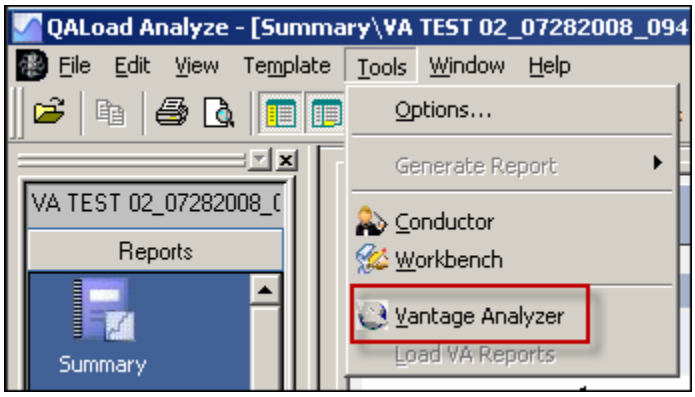


- Compuware Open Server (COS) installed and configured in Nucleus Server as shown below:

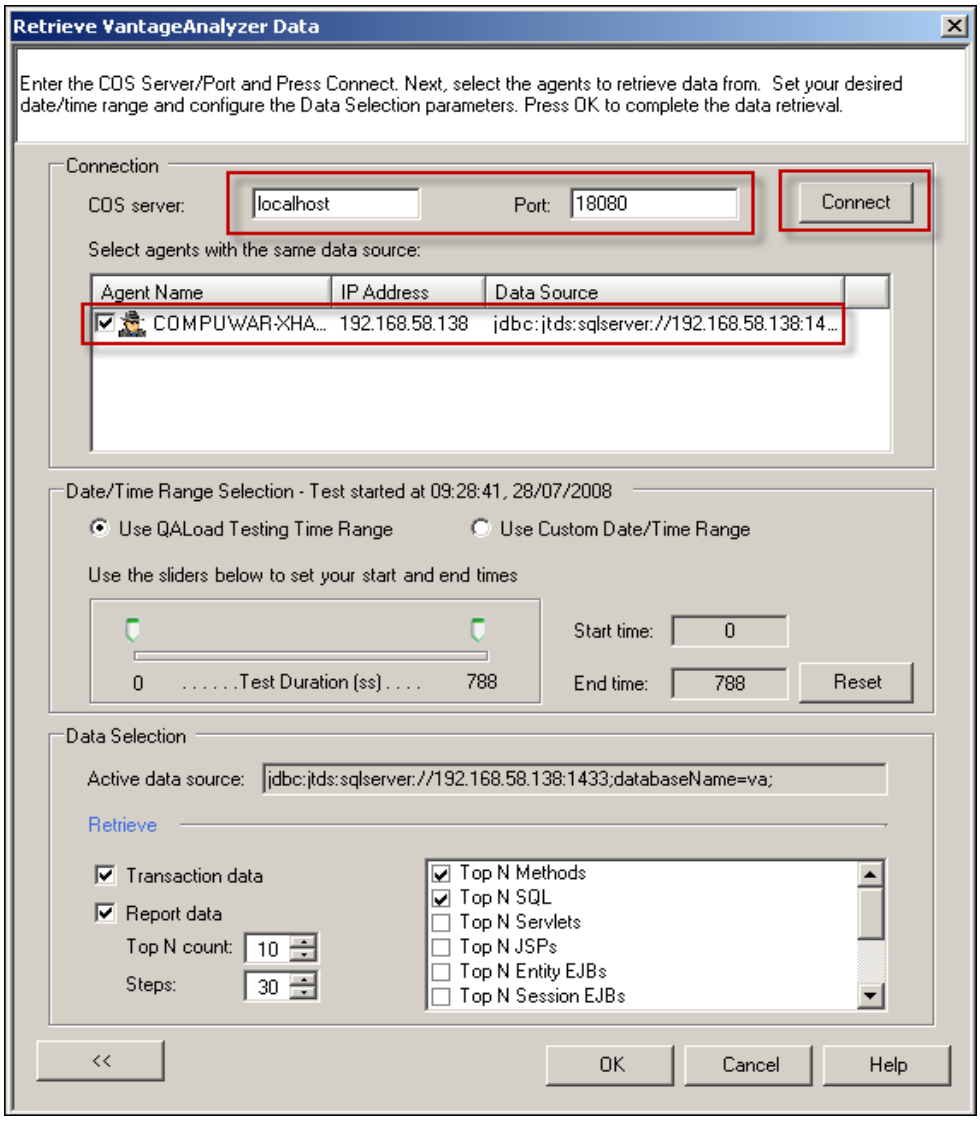


Agent selection

- New menu option in *QA*load Analyze module

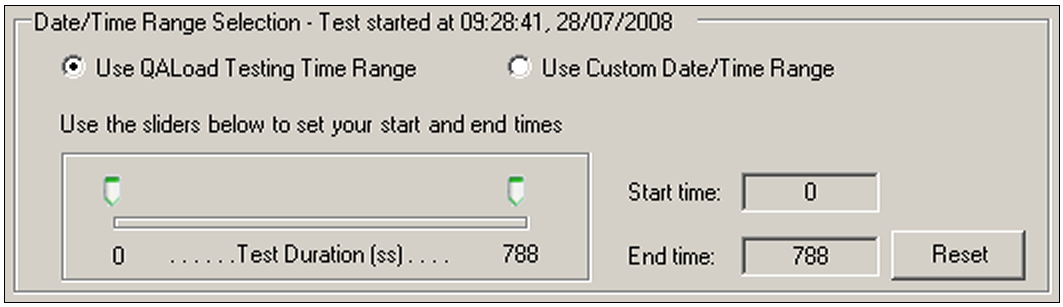


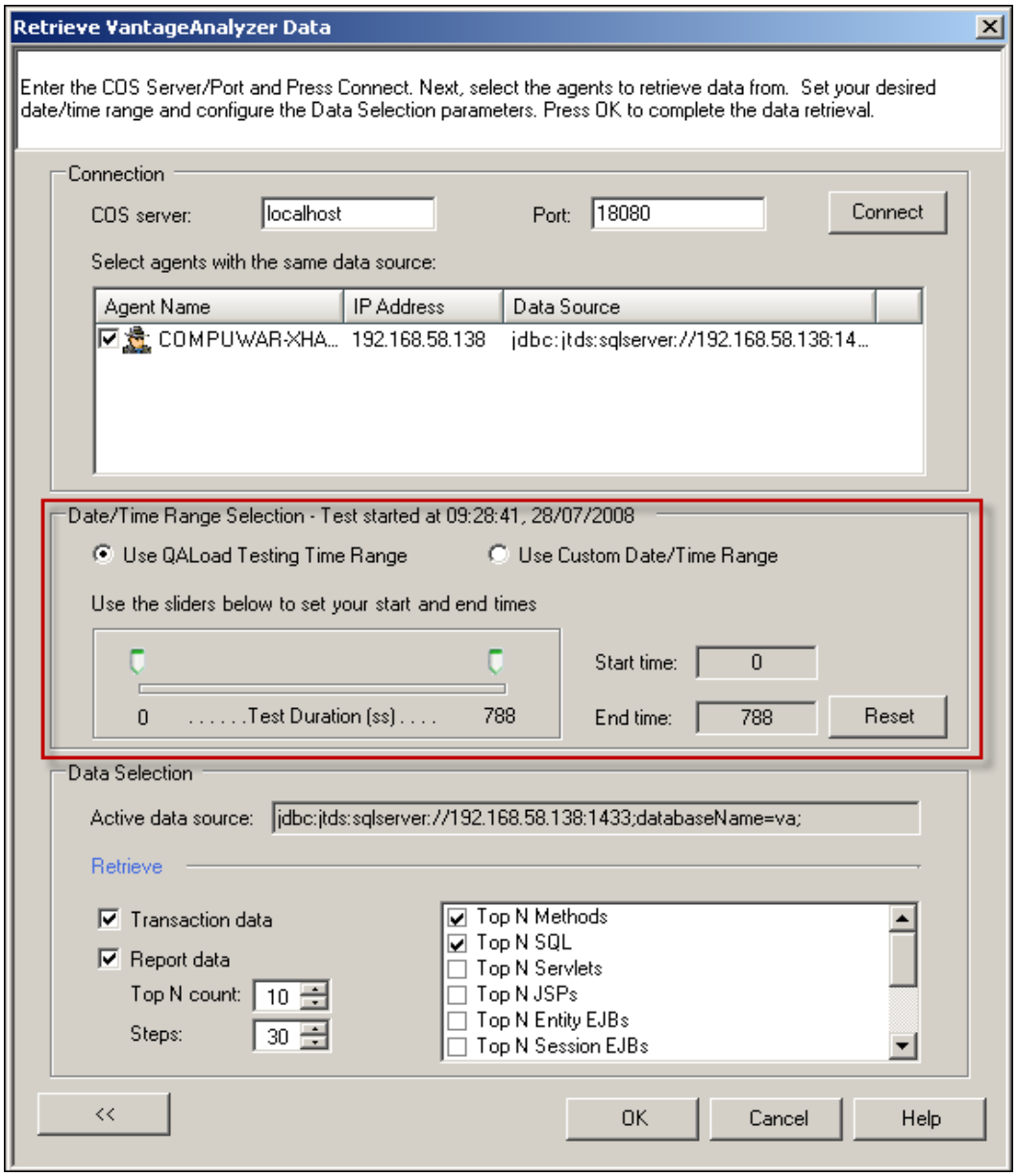
- Connect to COS and then select agents



Date/time range selection

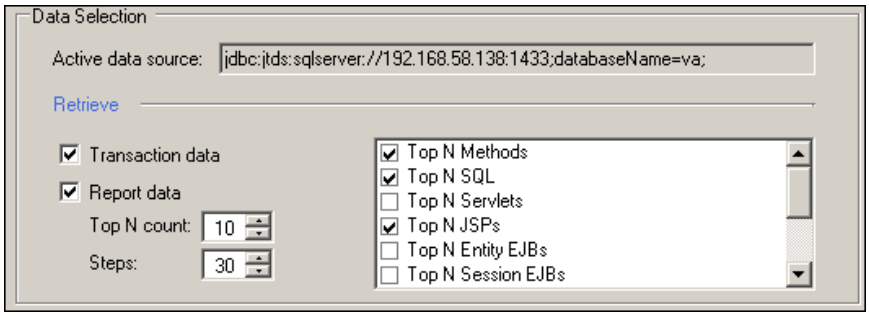
- Choose default test time range or custom date - time range

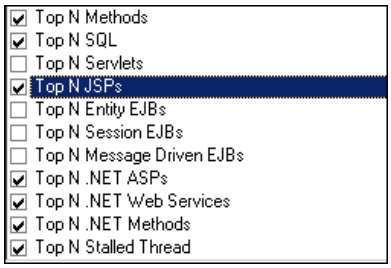


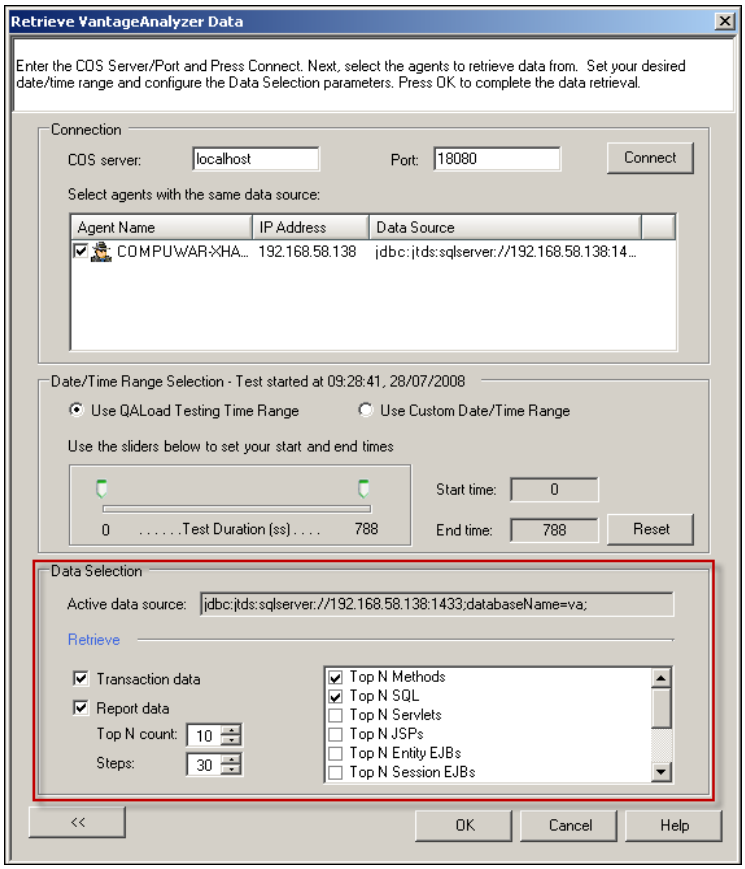


Data selection

- Select **Transaction data**
- Select **Report data**
  - Select **Top N count**
  - Select number of **Steps** to include
- Click **OK** button or **Cancel**

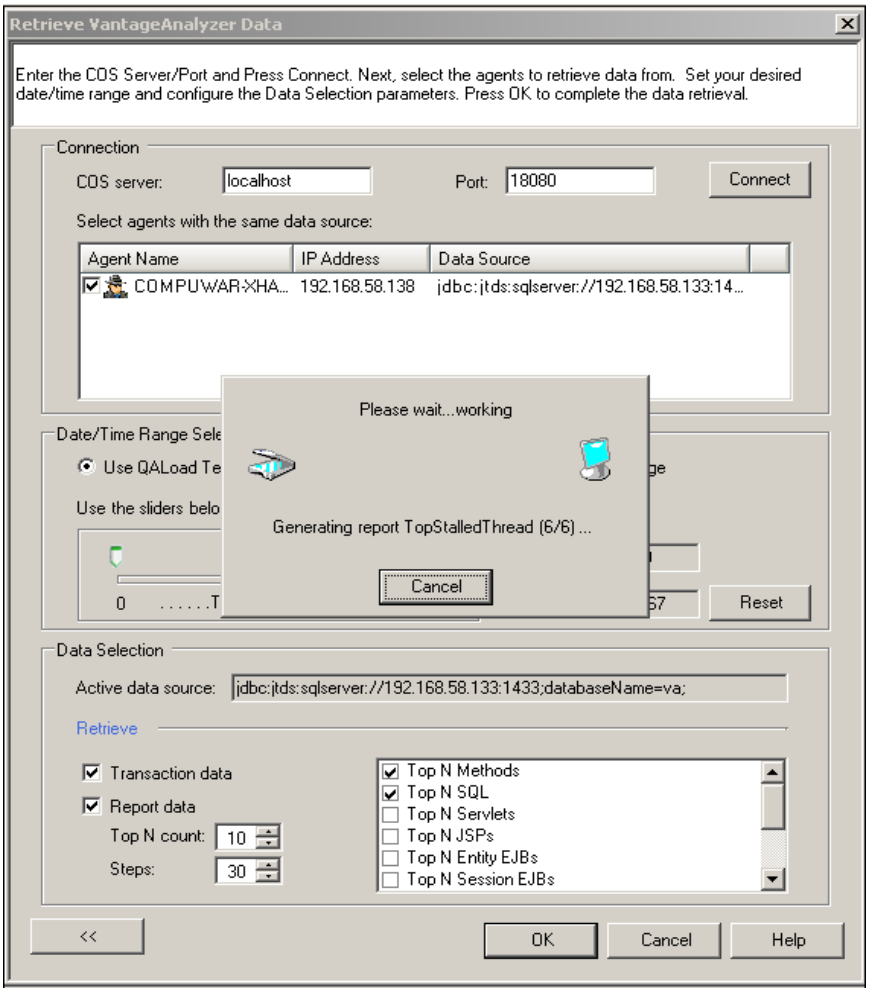






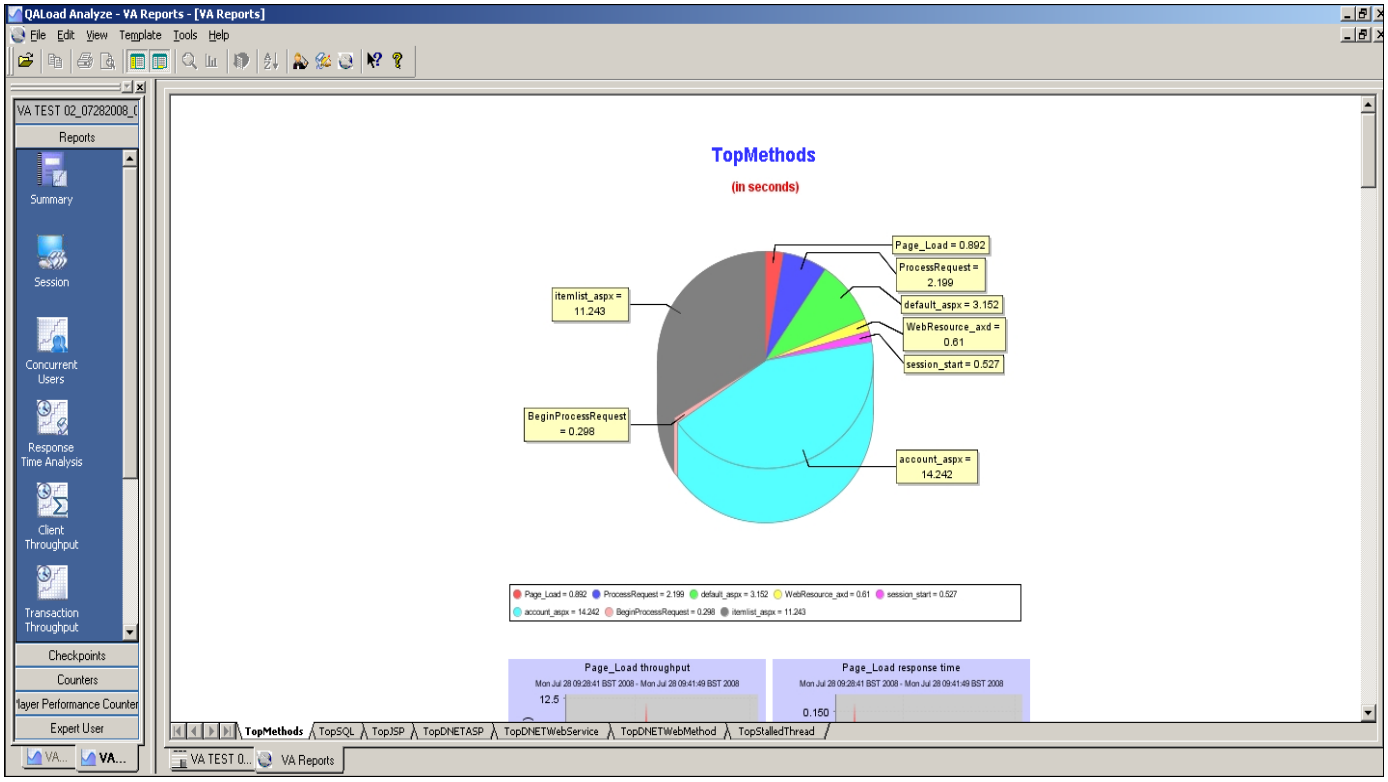
Execution

- The following dialog displays while data is extracted and reports are generated



Timing file output

- Finally the timing file will redisplay this time with a new tab, VA Reports.
- If you have selected **Transaction data** in the Data selection step then the Vantage Analyzer Performance Console will also appear.



Troubleshooting Tips

Question: When I try and connect to the COS from *QA*Load Analyze I get an error dialog saying that the COS is not available.

Answer: Check the following points:

- Make sure that the COS is running by checking that the appropriate windows service is active on the machine that you are trying to access.
- Make sure that the Vantage Analyzer Nucleus Server is running on the machine that you are trying to access.
- Make sure that the COS host name/IP and port that you have entered are correct.
- Make sure that the version of Vantage Analyzer you are trying to connect to is supported.

Question: Some of the Vantage Analyzer reports that are generated have blank content.

Answer: Check the following points:

- Make sure that you have only selected reports that are relevant to the application servers being monitored. i.e. Don't select Java reports for .NET and vice versa.

- Make sure that the date-time range you have selected matches the execution period for the load test you are looking to report on.

Further Reading

This has been a brief overview of using *QA*Load 5.7 and Vantage Analyzer. For more information, you can refer to the *QA*Load 5.7 documentation on http://frontline.compuware.com