PeopleSoft

EnterpriseOne JDE5 Analyzer Tool PeopleBook

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OneWorld Analyzer Tool Overview

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J.D. Edwards OneWorld Analyzer Tool is an automated testing tool you use to gain detailed information about OneWorld processes. The tool works with J.D. Edwards OneWorld AutoPilot, which you use to write scripts that test OneWorld applications. OneWorld AutoPilot captures and stores detailed data on each script playback event, including J.D. Edwards database (JDB) and CallObject APIs. You can import this data into OneWorld Analyzer Tool, which displays the data in a variety of readable formats that make analysis of events easier. OneWorld Analyzer Tool assists information technologists charged with keeping enterprise resource planning (ERP) systems running at or near top performance levels because the event data includes:

- The time required to run each event
- Input and output values for parameters in CallObject and JDB application programming interfaces (APIs)
- Identification of event categories, such as database calls, event rules, and business functions
- Names of tables opened and closed during playback
- Names of applications and forms launched
- Identification of user handles and request handles
- Placement of events in threads generated during script playback

OneWorld Analyzer Tool allows you to study test data in several ways. For example, you can view all events in a chronological stream, isolate and view details about a single event, or categorize events, such as JDB calls against a specific table.

The information you capture, import, and view allows you to analyze your system's performance and to determine how efficiently processes run against different environments, operating systems, and servers. The tool clearly shows delays that occur during processing, allowing you to devise solutions that are based on hard data, not guesswork. Using the data, you can scale your system to accommodate users and to debug the system.

OneWorld Analyzer Tool is a useful tool for:

- Application developers
- Information technology managers
- Quality assurance analysts
- Performance analysts interested in establishing performance benchmarks and determining the scale of the operating system

Key Terms

OneWorld Analyzer Tool is part of a software architecture designed to capture, store, and use OneWorld performance data. The other key components of the architecture are:

- OneWorld AutoPilot: an automated testing tool you use to write scripts to test OneWorld functionality. It also captures performance data during script playback, using both internal code and OneWorld code.

- OneWorld Event Capture: an automated testing tool that you use to capture events from a OneWorld session without using a OneWorld AutoPilot script.
- Event stream: the chronological listing of events that occur during a test, including JDB and CallObject API calls to the database and to business functions.
- OneWorld Virtual User Tool: a collection of automated testing tools that you use to create virtual scripts, which you run to simulate many users working on one or more workstations.
- Virtual Script Editor: a utility in Virtual User Tool that you use to edit an event stream and to generate a virtual script.
- Virtual Script Player: a utility in Virtual User Tool you use to run virtual scripts.

The roles of the components in the architecture are:

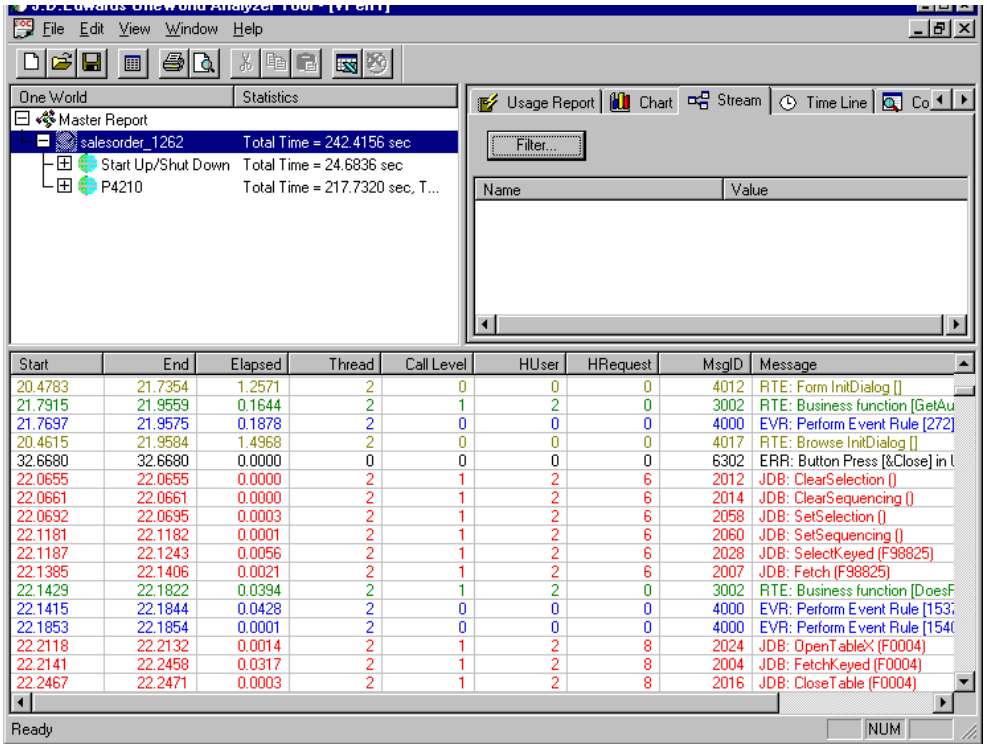
- OneWorld AutoPilot and OneWorld Event Capture capture and store the event stream, either by running a script or by running processes directly in OneWorld.
- OneWorld Analyzer Tool imports the event stream for process analysis and debugging.
- OneWorld Virtual User Tool allows the user to import an event stream and edit it to generate a script that can be run on a single workstation to simulate the actions of one or more OneWorld users.

OneWorld Analyzer Tool Utilities

OneWorld Analyzer Tool allows you to break down test data and view it in a variety of ways. You can use the tool to:

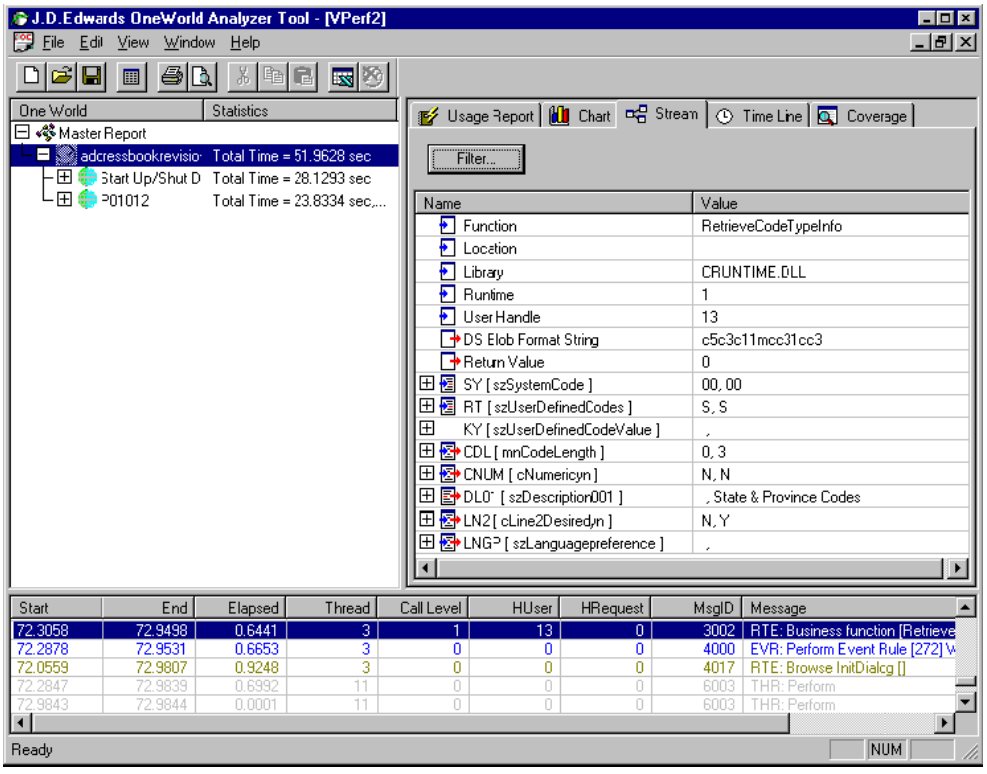
- View the event stream

  OneWorld Analyzer Tool allows you to view the event stream from beginning to end. The tool displays detailed information about each event, including its elapsed time.



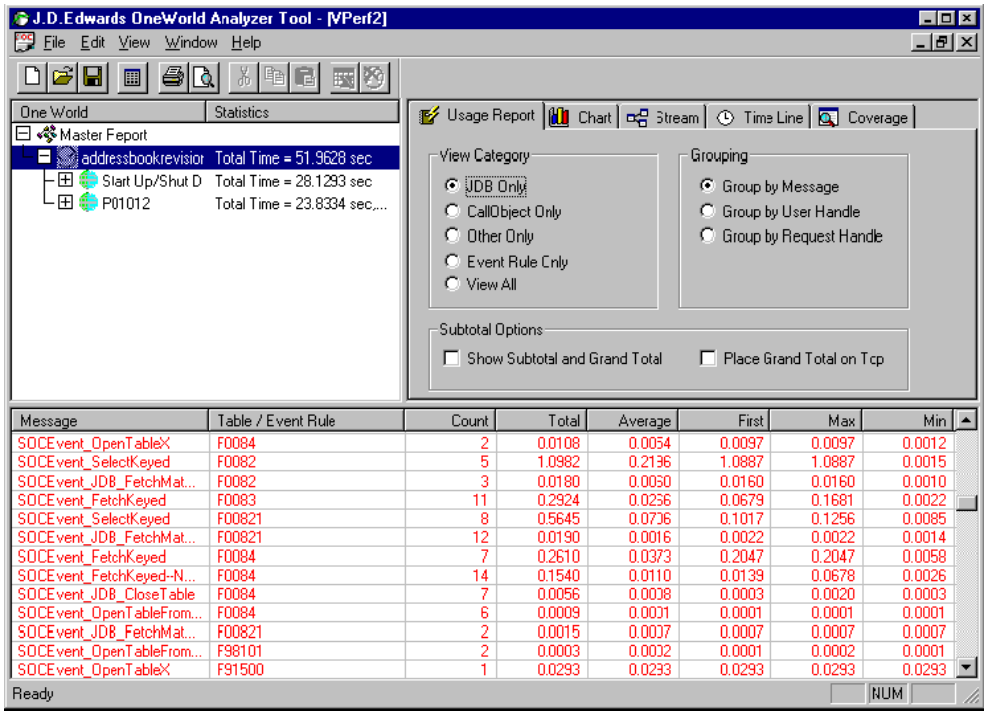
- View the parameters of JDB and CallObject API calls

  For example, you can view the input and output parameter values of an API call.



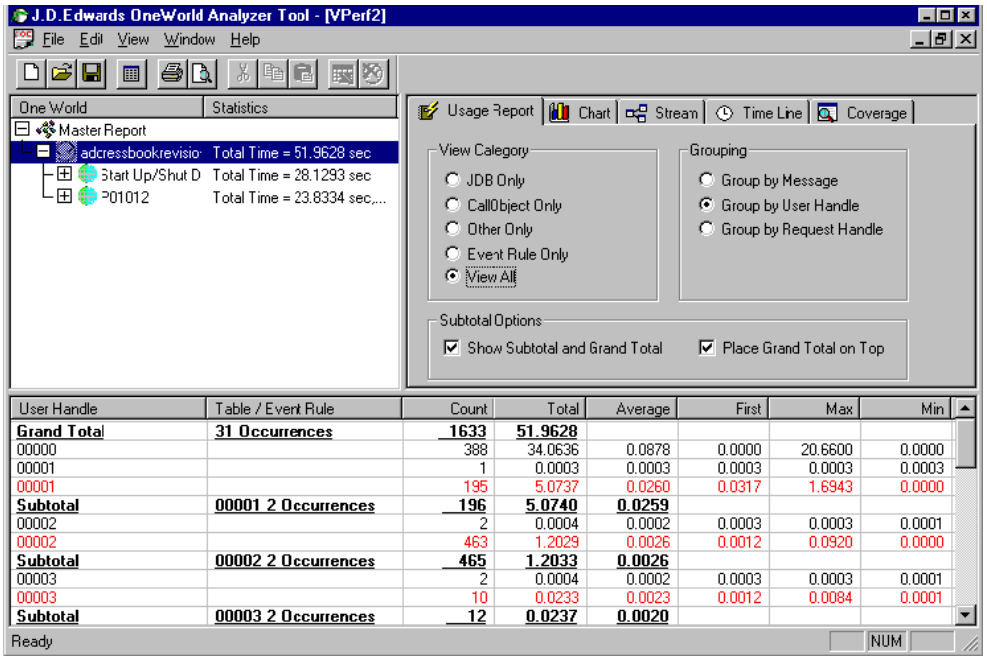
- View details about a particular category of event, such as JDB API calls, or event rules

  For example, you can see the number of API calls on a particular table and the total time required to complete the calls.



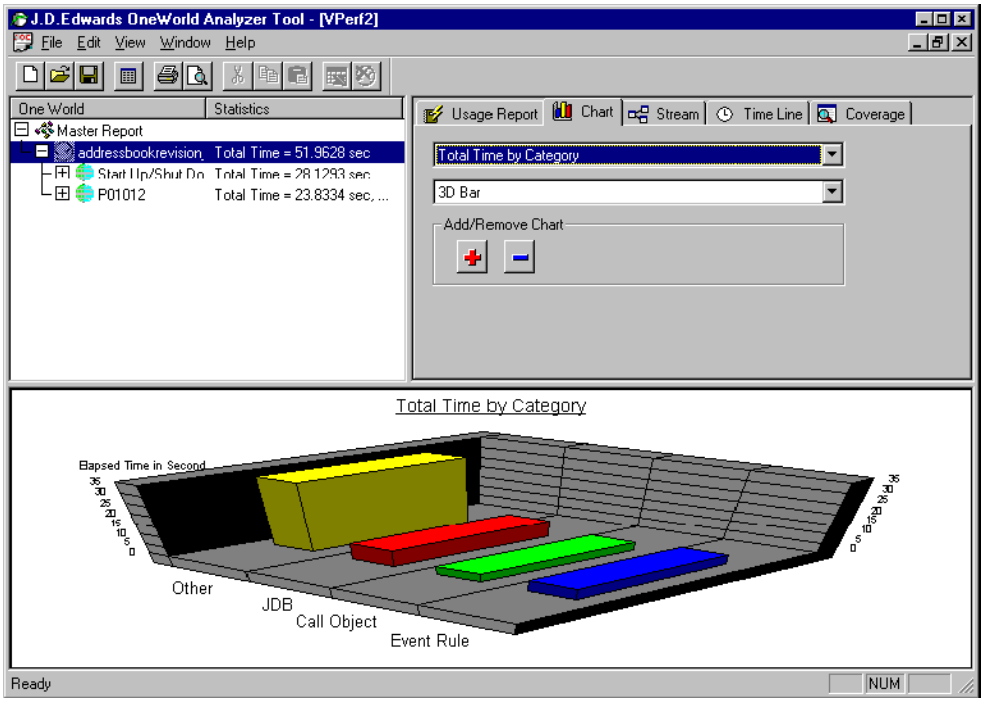
- View all events that occurred during playback

  For example, you can view events grouped by user handle.



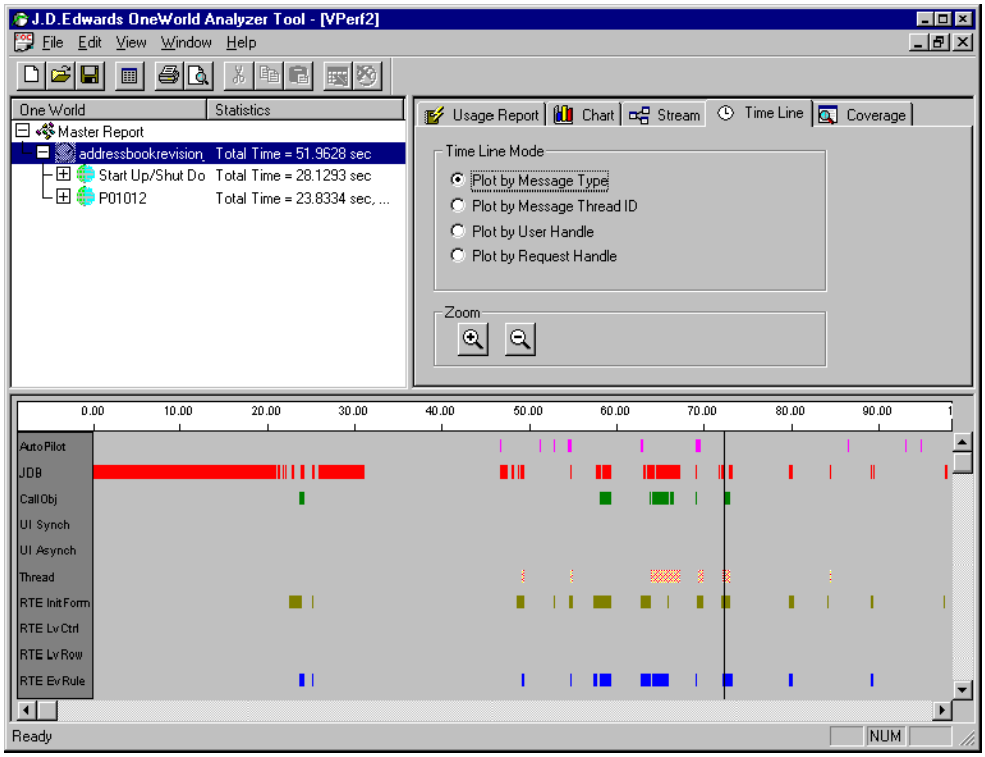
- View in graphic form, such as bar or pie charts, the total time the system required to complete categories of events

  For example, you can create a bar graph that shows the total time the script took to complete all JDB calls, CallObject calls, and event rules.

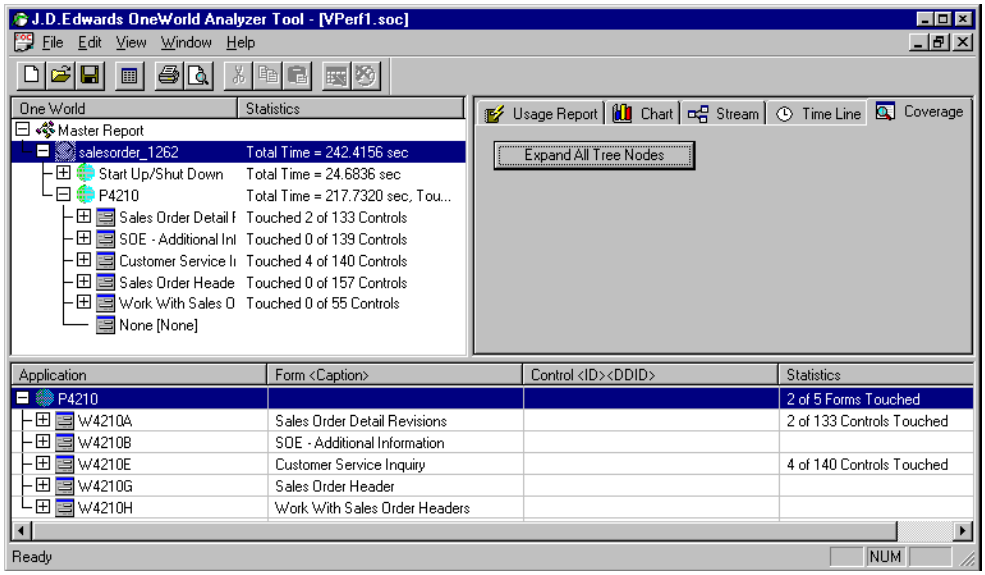


- Plot various timeline modes, which display the time of occurrence and duration of playback events

  For example, you can simultaneously view the time required to run threads, hRequest handle calls, and user handle calls during script playback.



- Display the code coverage you accomplished during playback: the number of forms in an application, as well as the number of controls in each form, that OneWorld AutoPilot touched during a test



See Also

- *AutoPilot* documentation
- *Virtual AutoPilot* documentation

Capturing Data for OneWorld Analyzer Tool

Capturing Data for OneWorld Analyzer Tool

Before you can use OneWorld Analyzer Tool, you must capture and store data on OneWorld processes. You do this by configuring OneWorld AutoPilot to capture script playback data and to store it as an event stream, which is a time-stamped record of test events. You then run a OneWorld AutoPilot script to test OneWorld events, including button clicks, entries to header controls and grid columns, form and row exits, and so on.

OneWorld AutoPilot captures data during script playback through code placed in both OneWorld AutoPilot and OneWorld. This code records information about each script playback event and writes the data to the AutoPilot Playback Results Detail Table (F97214), where it is stored. This table is a test results repository that can be shared by all members of your organization.

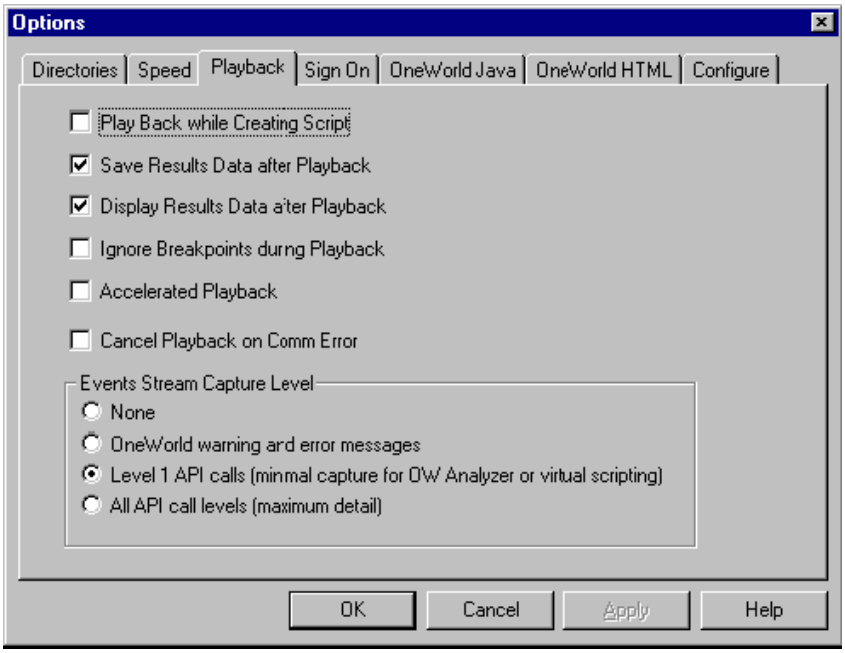
If you do not have the resources to write and to run OneWorld AutoPilot scripts, you can use Event Capture, which captures and stores performance data when you run tasks in OneWorld, without involving OneWorld AutoPilot. Using Event Capture, you can import test results to OneWorld Analyzer Tool, just as you can when you run OneWorld AutoPilot scripts. You can activate Event Capture for a limited set of OneWorld processes, and then turn it off when these processes complete.

Whether you use OneWorld AutoPilot or Event Capture, you import the event stream to OneWorld Analyzer Tool to study and analyze the test data, with the goal of studying OneWorld processes and improving OneWorld performance.

OneWorld AutoPilot Playback Tab

Before you can use OneWorld Analyzer Tool, you must be able to capture data about OneWorld processes. You can set OneWorld AutoPilot to capture and store the event stream during and after script playback.

To capture the event stream, you configure playback by choosing Options from the Tools menu of the J.D. Edwards OneWorld AutoPilot form. Under the Playback tab, you find options that allow you to set up script playback and data capture during script playback. For playback configuration purposes, the Playback tab is the only tab in the Options form with which you must work.



Under the Playback tab, you choose options to save and display results data after playback. The first option ensures that OneWorld AutoPilot stores the captured data in a results repository, AutoPilot Playback Results Detail Table. The second option allows OneWorld AutoPilot to display a form summarizing the events that occurred during playback.

The options in the Events Stream Capture Level box specify the type of data you want OneWorld AutoPilot to capture. Call level refers to an API call's position in the sequence of calls. The more primary an API call's position, the lower the call level. For example, an EditLine business function that invokes a JDB Fetch API has a call level of 1 because it spawns the JDB call. The JDB Fetch API has a call level of 2 in this example.

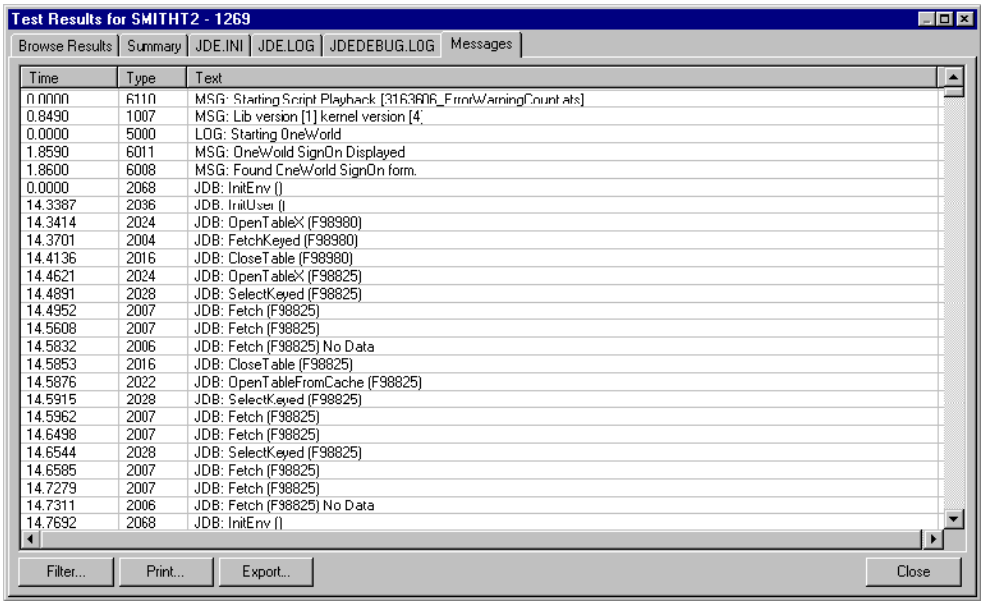
OneWorld AutoPilot Capture allows you to capture either level 1 calls only or all levels of calls. When you import the results into OneWorld Analyzer Tool, the event stream displays the API calls at the level you specified. For an additional discussion of call level, see also the Virtual User Tool Guide.

The event stream capture level options are:

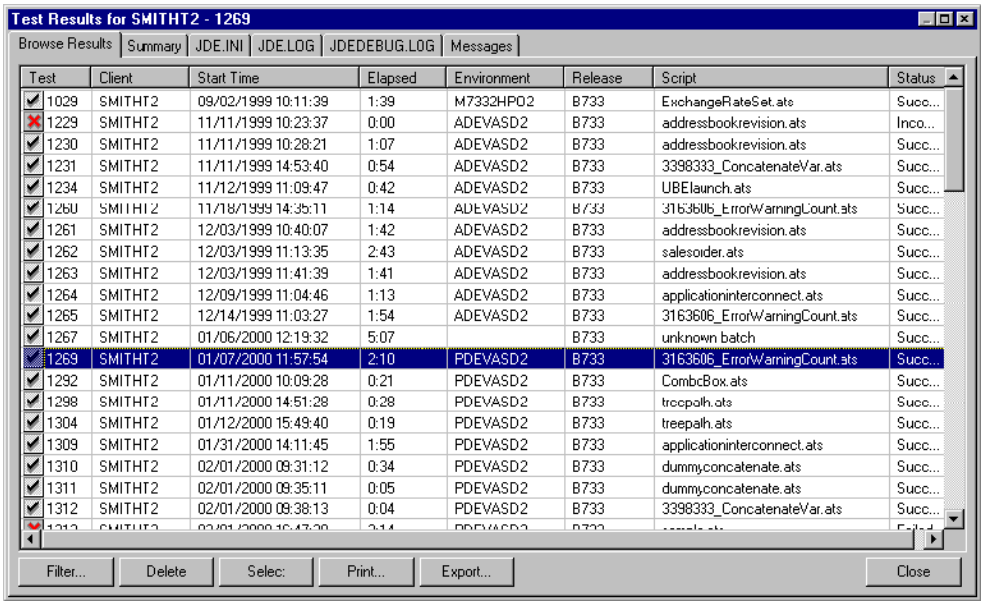
- None, which means that OneWorld AutoPilot does not capture script playback data
- OneWorld warning and error messages, which means that OneWorld AutoPilot captures OneWorld messages, but does not capture data about OneWorld processes
- Level 1 API calls, which means that OneWorld AutoPilot captures data about all events except those API calls with a call level greater than 1
- All API call levels, which means that OneWorld AutoPilot captures data about all events, including those API calls with a call level greater than 1

With playback configured, you will need to write a OneWorld AutoPilot script, if you have not already done so, and play it back. For details on writing and playing back OneWorld AutoPilot scripts, see the OneWorld AutoPilot Guide.

If you configure playback to capture and display the results, OneWorld AutoPilot displays the Test Results form after you have run a script to completion or have cancelled playback. The Test Results form shows the event stream and other data about the test you ran.



OneWorld AutoPilot stores all the test results you have generated. If you choose Results from the Tools menu, you can view all the tests available for import to OneWorld Analyzer Tool.



OneWorld Event Capture

You can capture OneWorld performance data without using OneWorld AutoPilot by launching the OneWorld Event Capture executable. Using OneWorld Event Capture is advantageous if no one in your organization can create and run a OneWorld AutoPilot script, or if time and manpower resources are scarce. If either is the case, you simply launch the executable and perform a set of tasks in OneWorld. Code in OneWorld captures all the data from the session and passes it on to OneWorld Event Capture via a shared file in memory. OneWorld Event Capture stores the data in the results repository, AutoPilot Playback Results Detail Table (F97214).

Once you have generated test results using OneWorld Event Capture, you can save them to a file and export them to the OneWorld Analyzer Tool, just as you would if you used OneWorld AutoPilot. The only difference is that the event stream generated by OneWorld AutoPilot includes both OneWorld AutoPilot and OneWorld events. The event stream generated by OneWorld Event Capture does not include OneWorld AutoPilot events.

OneWorld Event Capture can be particularly useful if you:

- Lack the time or resources to write OneWorld AutoPilot scripts
- Want to preserve data from a particular OneWorld process that you suspect is causing a performance problem

Once you capture the data from a OneWorld session and save the results, customer support, even from a remote location, can use the OneWorld Analyzer Tool to generate the event stream, analyze the events of the OneWorld session, and attempt to identify and correct any problems that might exist, obviating the need for costly site visits.

Call Level Option

Like OneWorld AutoPilot, OneWorld Event Capture allows you to capture either level 1 calls only or all levels of calls. When you import the results into the OneWorld Analyzer, the event stream displays the API calls at the level you specified.

Caution Concerning the Default Setting for Top Level Calls

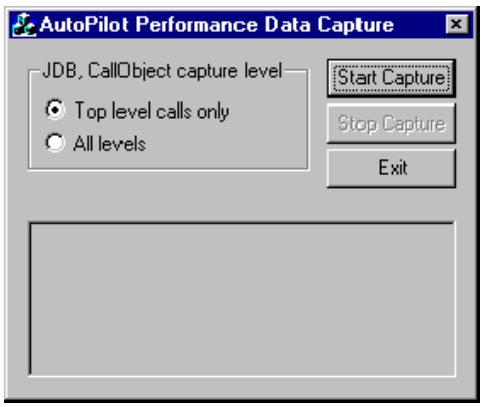
The default setting is for the All levels option. However, you should begin all OneWorld Event Capture sessions with the Top level call only option chosen. Capturing all API calls at all levels will significantly increase the size of your saved results files and could make customer support analysis of the event stream a more difficult task. Use the All Levels option only if customer support requests additional data to make a diagnosis.

See Also

- *OneWorld AutoPilot Playback Tab*
- *AutoPilot* documentation
- *Virtual AutoPilot* documentation

Start Capture Button

You begin data capture with OneWorld Event Capture by launching the executable and clicking the Start Capture button. The OneWorld Event Capture form appears.



After you click the Start Capture button, you can provide a script name for identification purposes. Clicking the Start Capture button means that you will collect results of your OneWorld session in the results repository continuously until you click either the Stop Capture or the Exit button.

Stop Capture Button

When you finish the OneWorld session, you click the Stop Capture button, which ends OneWorld Event Capture collection of data. At this point, you can export the collected results to a file, which OneWorld Event Capture prompts you to name. In addition to the script name, saved results contain the following identifying information:

- Workstation
- Environment
- OneWorld release
- Capture date
- Capture time
- Elapsed time

After you stop data capture, the data from the OneWorld session resides in the results repository and is available to you when you launch OneWorld Analyzer Tool to import data.

Capturing Test Data

OneWorld AutoPilot allows you to capture data when you play back a script that tests OneWorld applications. To do so, you use settings under Tools/Options/Playback on the OneWorld AutoPilot menu bar and choose the option to capture the Virtual OneWorld AutoPilot event stream. After script playback completes, or you cancel playback, OneWorld AutoPilot saves the results to a repository, from which you can import them into OneWorld Analyzer Tool.

Alternatively, you can capture data about a OneWorld session by launching OneWorld Event Capture, which eliminates the need for you to write a OneWorld AutoPilot script.

This chapter details the steps necessary to capture data about OneWorld functions and to view the captured data in OneWorld Analyzer Tool.

Configuring OneWorld AutoPilot to Capture Test Data

You set OneWorld AutoPilot to capture test data either before, during, or after you write your OneWorld AutoPilot script. With the setting intact, OneWorld AutoPilot captures and stores the record of OneWorld AutoPilot and OneWorld events that occurred during playback.

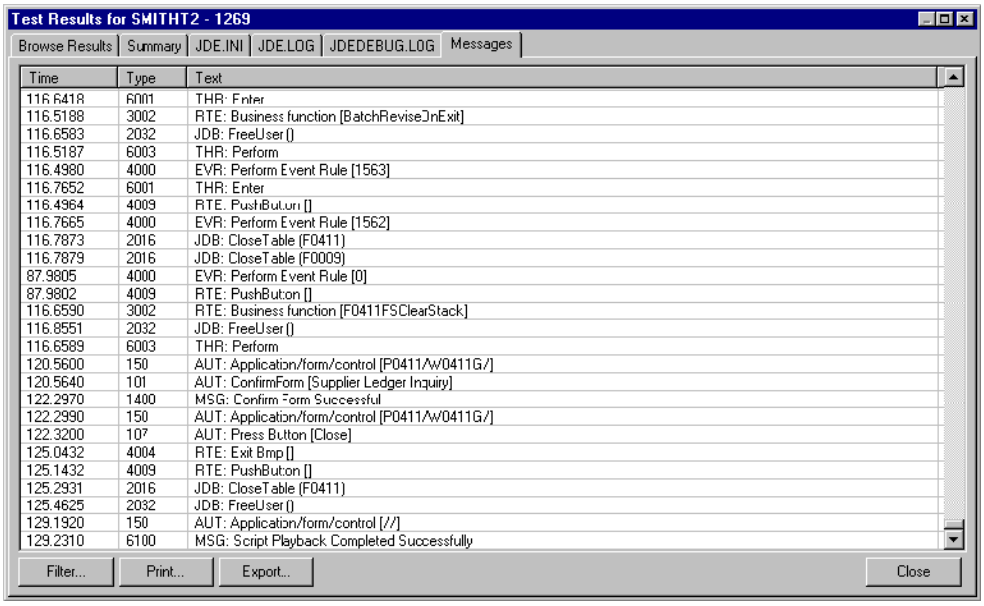
► To configure OneWorld AutoPilot to capture test data

1. From the Tools menu of the OneWorld AutoPilot form, choose Options.
2. In the Options form, click the Playback tab.
3. Choose the Save Results Data after Playback and Display Results Data after Playback options.

   Note
   Choosing these options ensures that OneWorld AutoPilot can capture and display event data. The kind and amount of data, if any, that will be displayed is determined by choosing an Event Stream Capture Level option.

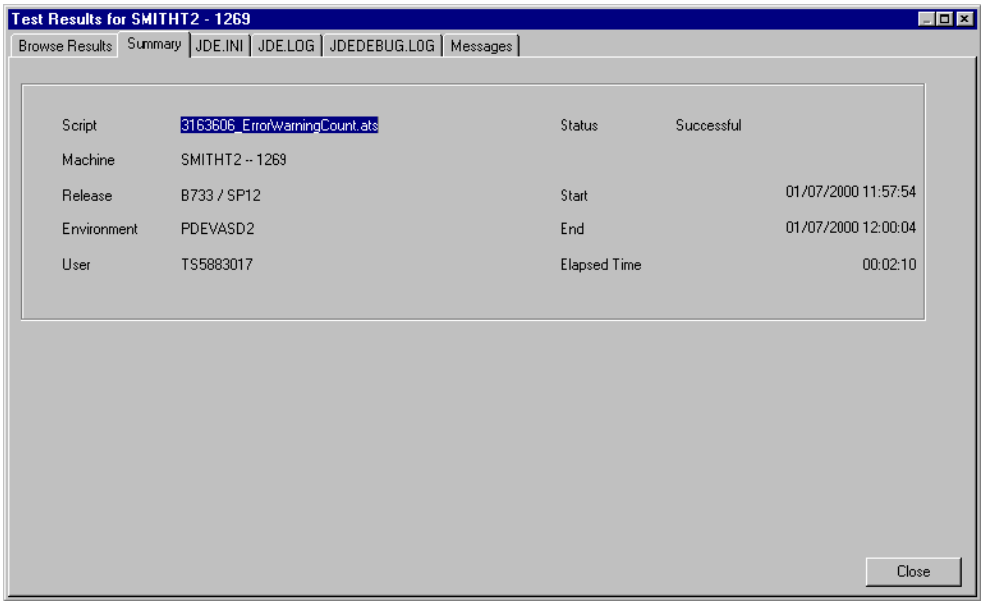
4. In the Events Stream Capture Level box, choose the Level 1 API calls option.
5. Click OK.
6. Choose Play from Top.

   After playback runs to completion or you cancel playback, OneWorld AutoPilot displays the Test Results form, which contains information about the script that you ran. This is the chronological record of the events that occurred during script playback.



7. Click the Summary tab and note next to the Machine heading the number of the test.

You use the number of the test to identify it later when you import a test into OneWorld Analyzer Tool.



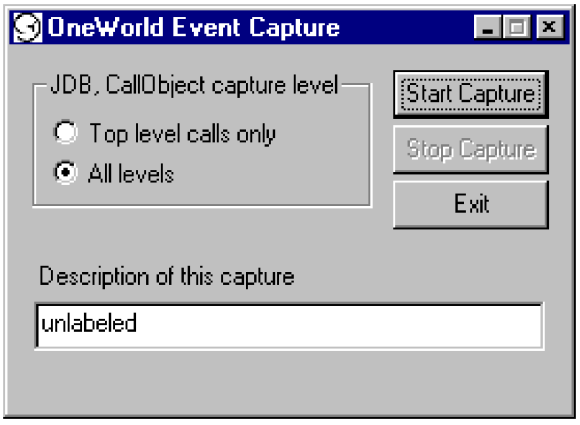
Using OneWorld Event Capture to Capture Test Data

You can capture test results without creating a OneWorld AutoPilot script by using OneWorld Event Capture. After you start OneWorld Event Capture, you perform any OneWorld tasks that you want to test. OneWorld Event Capture stores the results in the results repository. You can export the results to a file, and then you or customer support can import the data to OneWorld Analyzer Tool.

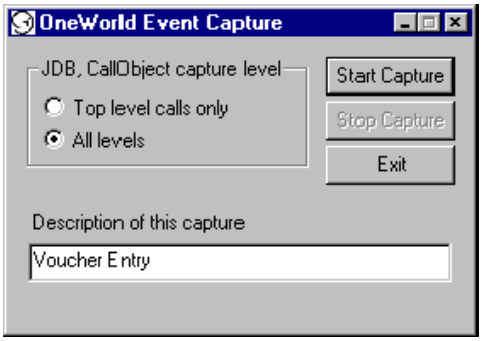
▶ To use OneWorld Event Capture to capture test data

From your desktop or the appropriate directory, click the OneWorld Event Capture executable.

The OneWorld Event Capture form appears.



1. Choose a JDB, CallObject capture level option:
   - Top level calls only
   - All levels
2. Click Start Capture.
3. Assign a script name, if you desire, to the data to be captured and stored.



4. In OneWorld, perform any tasks that you want to test.
5. When you have completed the OneWorld tasks, click Stop Capture.

Note
To stop the process, click Exit.

6. Assign a file name to the results and click Save.

Importing Data for OneWorld Analyzer Tool

Importing Data for OneWorld Analyzer Tool

After you save event stream data from a OneWorld AutoPilot script playback session, you can view the data in OneWorld Analyzer Tool by importing it. The Result Sets form provides general information about each test that you ran. You can choose one or more tests from this form and import the result data into OneWorld Analyzer Tool. This allows you to view the specific details of the playback session.

From the Result Sets form you can also export results to a file on your hard drive. OneWorld Analyzer Tool stores the results as a binary file that you can e-mail to an outside source, who can import those results to OneWorld Analyzer Tool to troubleshoot the test. This feature enables customer support, for example, to work on OneWorld performance problems from a remote location.

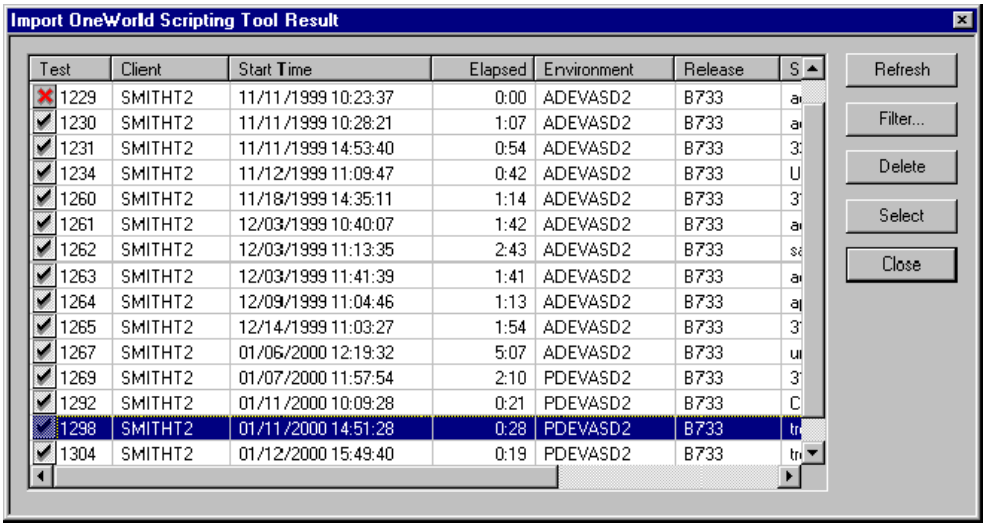
Result Sets Form

Using the Result Sets form, you can view general information about the results that you saved for each script. You can select one or more tests from the form and import the results to OneWorld Analyzer Tool, export the results to a file on your hard drive, filter the results, or delete tests from the repository.

Data Categories in the Result Sets Form

From your desktop or the appropriate directory, click the OneWorld Analyzer executable. On J.D. Edwards Analyzer Tool, choose Results, and then choose either Choose or Get External.

The number of each test that you ran to capture test results appears in the Result Sets form. Other categories of information provided include client name, the start time of the test, the elapsed time of the test, the environment in which you ran the test, the OneWorld release against which you ran the test, the script path, and the status of the test: successful, failed, or cancelled. On the Results Set form, a checkmark next to the number of the test indicates that the test ran successfully. An X next to the number of each test indicates that the test failed or was canceled.

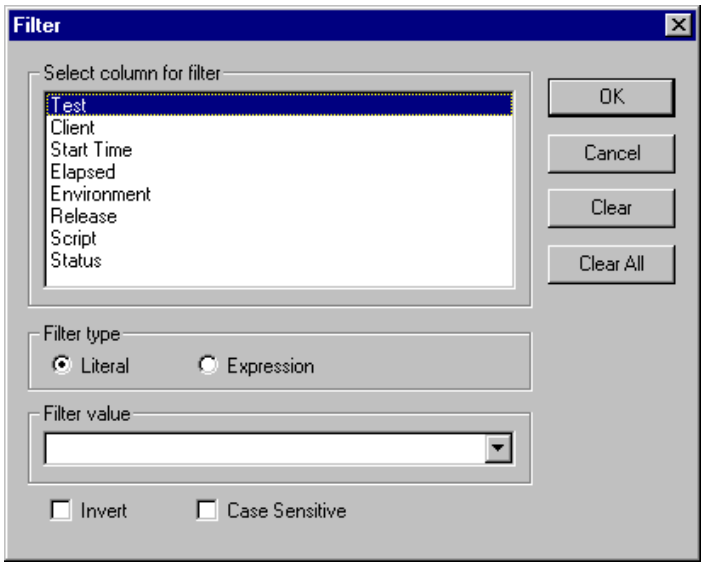


You can sort the contents of each category by clicking the category name. OneWorld Analyzer Tool sorts alphabetically, in ascending, or in descending numeric order. For example, if you click the Elapsed category, OneWorld Analyzer Tool displays the test with the shortest elapsed time first, followed by other tests in ascending order of elapsed time. The test with the longest elapsed time appears at the bottom of the category list. If you click the Script category, OneWorld Analyzer Tool sorts the list alphabetically by the name you assigned the test. The Refresh button allows you to restore the contents of a category to its original state.

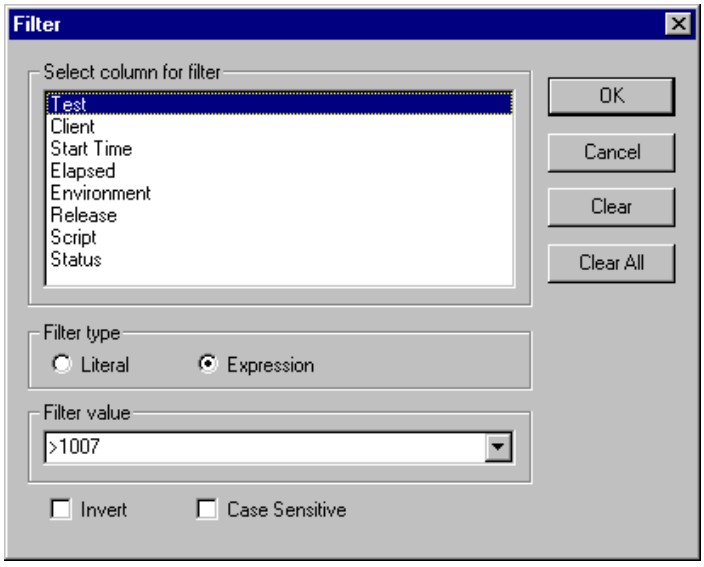
Result Sets Form Filter Button

From your desktop or the appropriate directory, double-click the OneWorld Analyzer executable. On J.D. Edwards Analyzer Tool, choose either Choose or Get External from the Results menu.

From the Result Sets form, you can filter the view using any of the categories in the form as selection criteria. To do so, click Filter on the right side of the form.



From the Filter form, choose a column name as a selection criterion. From the two options, Literal and Expression, you can further refine the filter. When you choose one of these options, you enter a value to the unpopulated Filter Value list. If you choose Literal as a filter type, type an integer into the Filter Value list. If you choose Expression as a filter type, type in a string. You can also type in expressions for greater than, less than, equal to, and so on. For example, if you want to filter for tests with numbers greater than 1007, choose Expression as a filter type, then type >1007 in the Filter Value list.



OneWorld Analyzer Tool filters the entries in the Result Sets form so that only those tests with a number greater than 1007 appear. If you choose the Invert option, OneWorld Analyzer Tool reverses the criterion and filters in only those tests with a number less than 1007.

After you have set up the filter criteria to your satisfaction, click OK. Click Clear All to restore the Result Sets form to its original state.

Result Sets Form Analyze Button

From your desktop or the appropriate directory, double-click the OneWorld Analyzer executable. On J.D. Edwards Analyzer Tool, choose either Choose or Get External from the Results menu.

OneWorld Analyzer Tool allows you to choose one or more sets of OneWorld AutoPilot results to import. This feature could be particularly useful if you want to compare the results of two separate scripts that you wrote to test the same application against different OneWorld releases or against different environments. You can choose to import more than one test by holding down either the Control or the Shift key and clicking multiple lines on the form. After you have made your selection, click the Analyze button. The OneWorld Analyzer Tool user interface appears, and you can view in detail the results of a particular test.

Result Sets Form Export to File Button

The Export to File button allows you to export test results from the Result Sets form to a directory on your local drive. The default file extension is .owr (OneWorld Results Archive). OneWorld Analyzer Tool stores the results as a binary file, which you can e-mail to customer support if you need assistance solving a performance problem. Customer support can import the binary file to OneWorld Analyzer Tool and troubleshoot the problem.

Get External Test Option

From your desktop or the appropriate directory, double-click the OneWorld Analyzer executable. On J.D. Edwards Analyzer Tool, choose Get External from the Results menu.

If you have been e-mailed a binary file containing test results, you can import it to OneWorld Analyzer Tool by clicking Get External in the Result Sets form or by choosing Get External from the Results menu of the OneWorld Analyzer Tool form. The .owr file opens, revealing any exported files. When you open a file, OneWorld Analyzer Tool imports the results for analysis.

Result Sets Form Delete Button

From your desktop or the appropriate directory, double-click the OneWorld Analyzer executable. On J.D. Edwards Analyzer Tool, choose either Choose or Get External from the Results menu.

You can also delete tests from the Result Sets form. You select a test by clicking the line in the form that contains it and click Delete. OneWorld Analyzer Tool deletes the test. To delete more than one test, hold down the Control or the Shift key, select the lines containing the tests you want to delete, and click Delete. Remember that each test contains a large amount of data. Therefore, you should regularly purge tests from the results repository to avoid consuming a great deal of disk space.

Importing Test Results

OneWorld Analyzer Tool allows you to import the results of OneWorld AutoPilot tests, using features available in the Result Sets form. You can restrict the number of tests available for

view in the form by using OneWorld Analyzer Tool's filter functionality. You can import one set of test results, or you can import more than one set to compare test results to one another. You also can delete one or more tests from the Result Sets form.

Filtering Test Results

Before you import the results of a OneWorld AutoPilot test, you can simplify the view in the Result Sets form by filtering the list of test results. To do this, click the Filter button and use the Filter form to:

- Select a column for filtering
- Invert the filter value
- Refresh the OneWorld AutoPilot Result form after filtering

Selecting a Column for Filtering

On the Filter form, the Select Column for Filter list contains the name of each column in the Result Sets form. To filter the entries in the Result Sets form, choose a column from this list. Establish filtering criteria using the Filter Type options and Filter Value. When you apply these criteria, OneWorld Analyzer Tool filters into the Result Sets form only those tests that match your criteria.

► To select a column for filtering

From your desktop or the appropriate directory, double-click the OneWorld Analyzer executable.

1. On J.D. Edwards OneWorld Analyzer Tool, choose Choose from the Results menu.
2. On Result Sets, click Filter.

   The Filter form appears.

3. On Filter, choose the name of a Result Sets form column from the Select Column for Filter list.
4. Choose a filter type, either literal or expression.
5. Type an entry to the unpopulated Filter Value list, in the form of either a literal value or an expression.

   Note
   If you choose Literal, type integers only. If you choose Expression, type a string. Choosing Expression also enables you to type a conditional, such as greater than, less than, or equal to.

6. Click OK.

Inverting the Filter Value

After you filter entries in the Result Sets form, you can use the Invert option to invert your selection criteria to change the view in the form.

► To invert the filter value

From your desktop or the appropriate directory, double-click the OneWorld Analyzer executable.

1. On J.D. Edwards Analyzer Tool, choose either Choose or Get External from the Results menu.
2. On Result Sets, click Filter.
3. On Filter, choose the Invert option.
4. Click OK.

   OneWorld Analyzer Tool inverts the selection criteria and reflects those changes in the Result Sets form.

Refreshing the Result Sets Form after Filtering

After you filter the entries in the Result Sets form, you can restore the form to its original state using the Filter form.

► To refresh the Result Sets form after filtering

From your desktop or the appropriate directory, double-click the OneWorld Analyzer executable.

1. On J.D. Edwards Analyzer Tool, choose either Choose or Get External from the Results menu.
2. On Result Sets, click Filter.
3. On Filter, click Clear All.
4. Click OK.

   OneWorld Analyzer Tool refreshes the Result Sets form so that you can once again view the available tests.

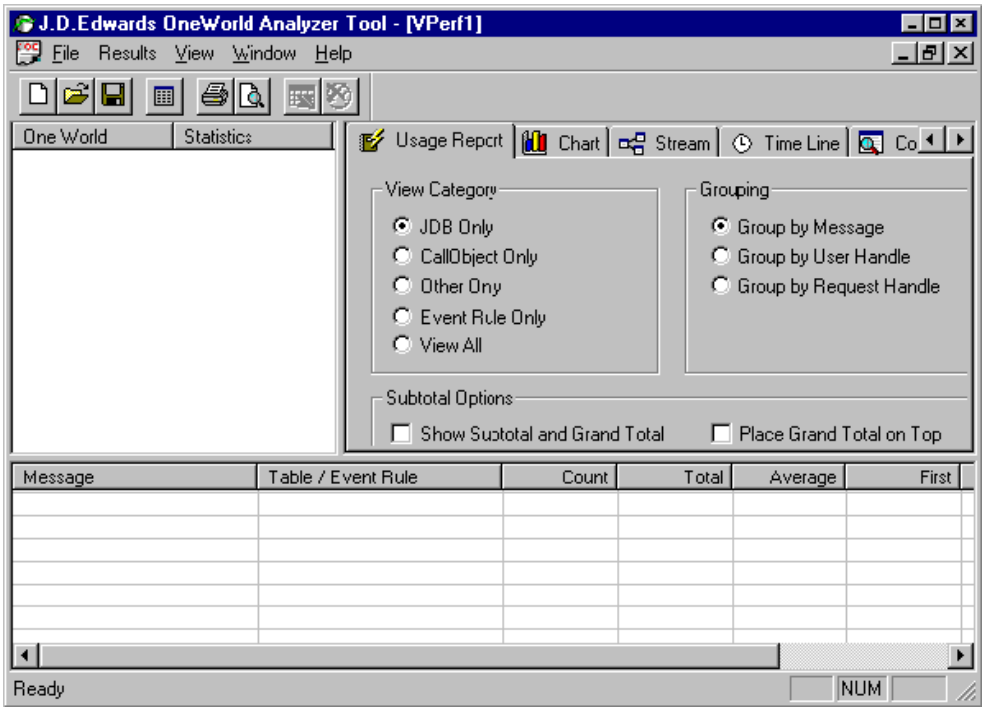
Importing Test Results to OneWorld Analyzer Tool

Once you capture an event stream, you can open OneWorld Analyzer Tool, select one or more tests that you ran and import the event stream data for analysis.

► To import test results to OneWorld Analyzer Tool

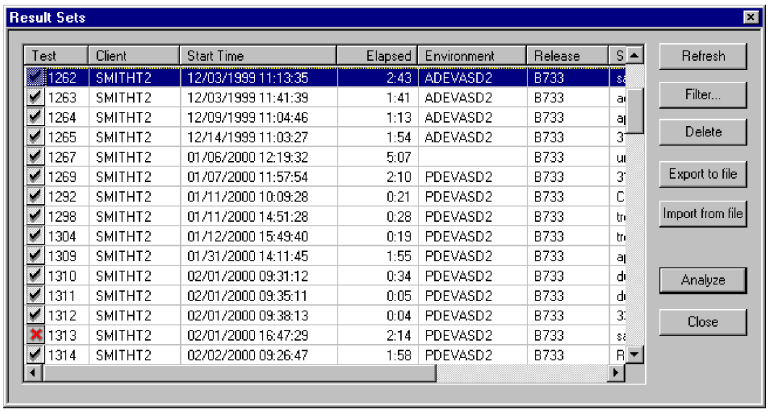
From your desktop or the directory in which you store it, double-click the OneWorld Analyzer Tool icon.

The J.D. Edwards OneWorld Analyzer Tool form appears.



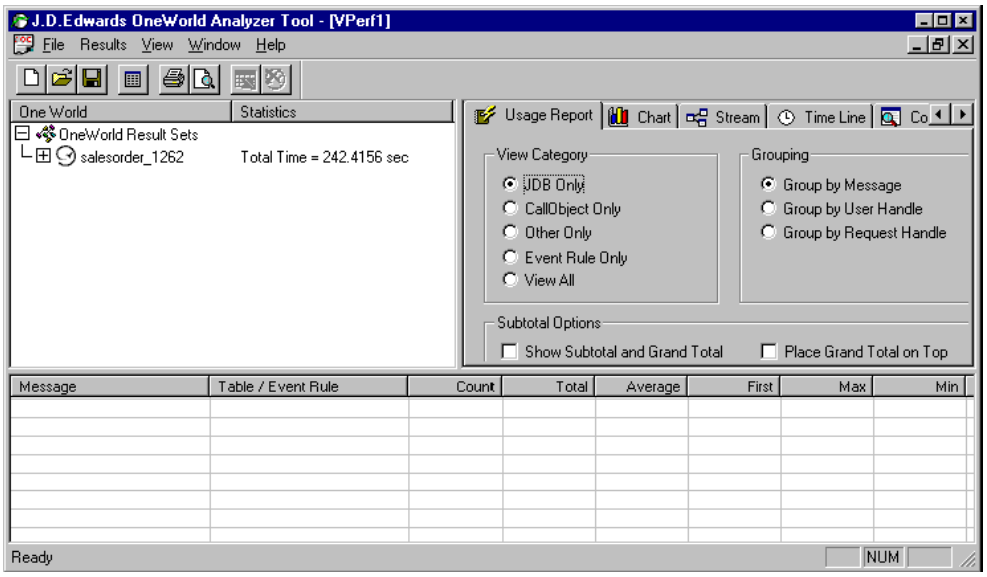
1. Choose from the Results menu.

   The Result Sets form displays information about each test that you saved.



2. Select the test that you want to import.
3. Double-click the test or click Select.

   OneWorld Analyzer Tool imports the results of the test.



4. Click the title of the test you imported.

   The event stream appears in the detail area of the form.

Exporting Test Results to a File

You can export the results of a test to a file for sending to an outside source such as customer support. OneWorld Analyzer Tool saves the results as a binary file to a directory of your choice.

▶ To export test results to a file

1. In the toolbar of the OneWorld Analyzer Tool form, click the List Result Sets button.
2. In the Result Sets form, select one or more tests.
3. Click the Export to file button.
4. Assign names to the tests and click the Save button.

   OneWorld Analyzer Tool saves the results as a binary file. To send the file to someone else, attach it to an e-mail.

Getting Test Results from an External Source

People within or outside of your organization can import to OneWorld Analyzer Tool results that you save as a binary file.

▶ To get test results from an external source

1. If you have received the binary file as an attachment to an e-mail, save the attachment to a directory and file of your choice.
2. Open OneWorld Analyzer Tool.
3. Choose Get External from the Results menu.

4. Open the file where you saved the binary file.
5. Select the file name and click Open.

   OneWorld Analyzer Tool imports the test results from the binary file.

Deleting Test Results

To avoid filling up the results repository, you should regularly delete test results that are out of date or no longer useful.

► To delete test results

1. In the OneWorld Analyzer Tool form, click the List Result Sets button.
2. Select a test whose results you want to delete.
3. Click Delete.

Analyzing Data with OneWorld Analyzer Tool

Analyzing Data with OneWorld Analyzer Tool

After you import the results of one or more tests, you work in the OneWorld Analyzer Tool form, using three panes to break down and to analyze the test data:

- Report pane contains general details about each test that you import into OneWorld Analyzer Tool.
- Analysis pane allows you to choose a variety of formats in which to present test data. You can also filter the list of events by applying limiting criteria, such as event type.
- Event pane allows you to view individual or aggregated details of test events after you have selected in the report pane the test level you want to view, such as a particular application or form, and in the analysis pane the limiting criteria you want to apply to the view.

Together the three panes allow you to analyze OneWorld operations from different perspectives. The tool enables you to move with precision to a low level of script playback detail or to aggregate detail. Using this information about the application you tested, you can evaluate the script playback, noting, for example, processing delays that might have occurred.

OneWorld Analyzer Tool Interactive Panes

After you import one or more scripts from the Result Sets form, you can view the test results at various levels of detail. The OneWorld Analyzer Tool form displays three panes. You work in each of these panes to set up the way that you want the form to display information about events that occurred during script playback.

The report pane contains information about the test you imported into OneWorld Analyzer Tool, including its name, any applications you tested, and so on.

The analysis pane contains tabs that allow you to establish the view of events from a variety of perspectives. For example, you can view the entire event stream captured during script playback, or you can isolated event types, such as JDB API calls.

The event pane displays details about the script playback. You determine the view that appears in the event pane by the choices you make in the analysis pane. For example, if you choose Chart in the analysis pane, the event pane displays the amount of time required to complete events, such as JDB calls, in a chart.

OneWorld Analyzer Tool Report Pane

The report pane contains the following general details about each script that you import into OneWorld Analyzer Tool:

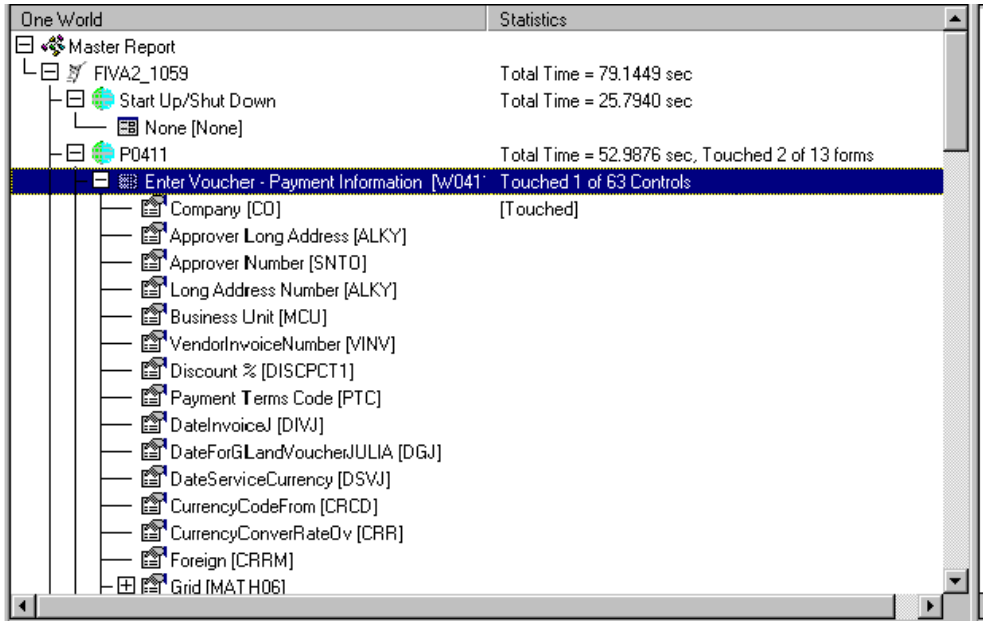
- Name of the script
- Time required for startup and shutdown
- Name of the applications tested
- Names of all forms in the applications

- Names of all header controls and grid columns in the forms

In addition, the report pane indicates which OneWorld forms, header controls, and grid columns that OneWorld AutoPilot touched during script playback, as well as the time required to run the entire script and various subsets thereof.

OneWorld Analyzer Tool displays the contents of the report pane in a parent/child relationship format. The ultimate parent is Master Report, which subsumes as children all the scripts that you import into OneWorld Analyzer Tool. You view the following information by expanding each node in the Master Report tree:

- Name of the script
- Start Up/Shut Down time for script playback
- Applications called and the total time the script spent running the application
- The number of forms in the application that were touched during script playback
- The forms that were touched during script playback
- The number of form header controls and grid columns touched during script playback
- Names of all form header controls and grid columns and their data dictionary aliases and whether they were touched during script playback



OneWorld Analyzer Tool displays the total time consumed in running the entire script, startup and shutdown alone, and applications alone. The total time figure does not include time intervals between events.

The following table summarizes the information displayed in the report pane of OneWorld Analyzer Tool form:

Entry to OneWorld Column of the Report Pane	Entry to Statistics Column of the Report Pane
Master Report	N/A
AP Script Name	Total time to run script without time intervals between events
Start Up/Shut Down	Total time required for startup and shutdown
Application	Total time required to run the application and the number of forms touched during playback
Form	Number of header controls and grid columns touched during playback
Header Controls	Controls touched during playback
Grid Columns	Columns touched during playback

Note

When you click a node in the report pane, that choice determines what you see in the event pane or the analysis pane. For example, if you click the application node in the report pane, script events that appear in the event pane are events that occurred during the playback of that application only.

OneWorld Analyzer Tool Analysis Pane

The analysis pane allows you to view some or all of the events that occurred during any stage of script playback. It also allows you to choose how you will view the events.

You work in the analysis pane in conjunction with the other two panes. In the report pane you choose a level of the test. For example, you might choose to analyze the events from the level of the entire test. Using options in the analysis pane, you can apply a selection criterion to limit the number of events you view in the event pane. For example, you might choose to view only JDB API calls.

Usage Report Tab

The Usage Report tab allows you to choose:

- The type of script events that you want to view, by category
- The criteria by which you group the events

For example, you might decide to view only CallObject APIs. Based on that choice, OneWorld Analyzer Tool displays only CallObject APIs. If you want to group these CallObject APIs by message, meaning that you want to see each CallObject API invoked by OneWorld

during playback, you choose message as the criterion by which OneWorld Analyzer Tool groups the CallObject APIs.

The following options are available on the Usage Report tab:

- View Category option
- Grouping option
- Subtotal options

View Category Option

The View Category options are:

- JDB API Only
- CallObject API Only
- Other Only
- Event Rules
- View All

Use these options to choose the type of playback event that you want to analyze.

Grouping Option

After you choose a category of event, you can group those events. Grouping options are:

- Group by Message
- Group by User Handle
- Group by Request Handle

Subtotal Options

You can view aggregate numbers of events within an event category and the total time required to run the events during script playback using Subtotal Options. The Subtotal Options are:

- Show Subtotal and Grand Total
- Place Grand Total on Top

You use the Subtotal Options options with the View Category and Grouping options. For example, suppose you choose the CallObject Only option in View Category and the Group by Message Option option in Grouping. If you choose both Subtotal options, OneWorld Analyzer Tool displays at the top of the event pane the total number of CallObject APIs called during playback, the total number of times these APIs were called during playback, and the total amount of time required to run all of the calls.

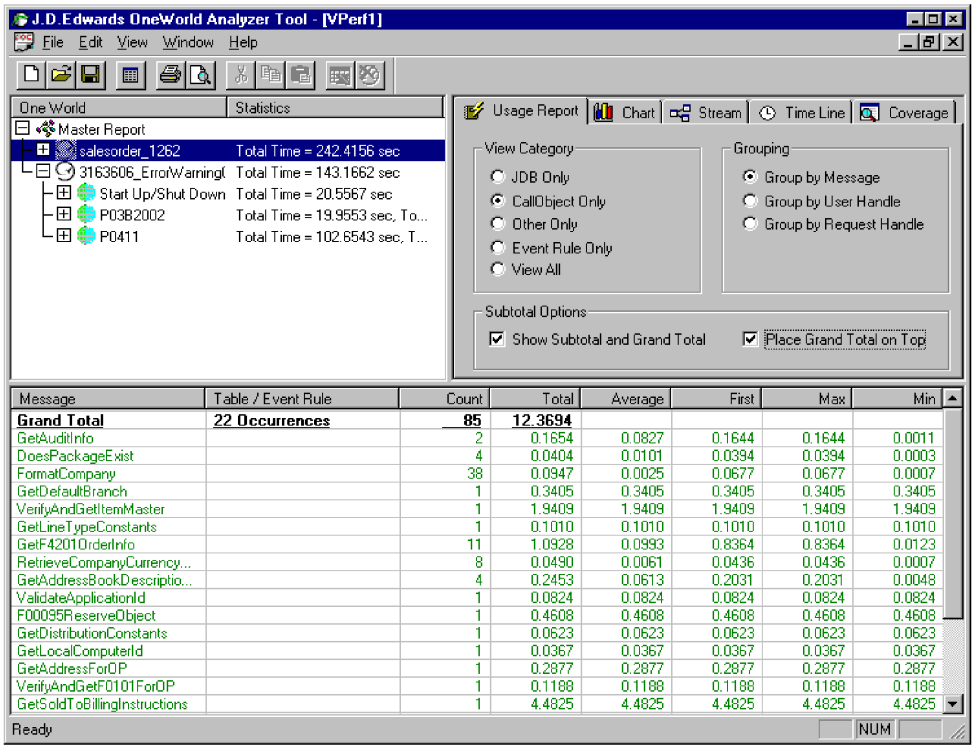


Chart Tab

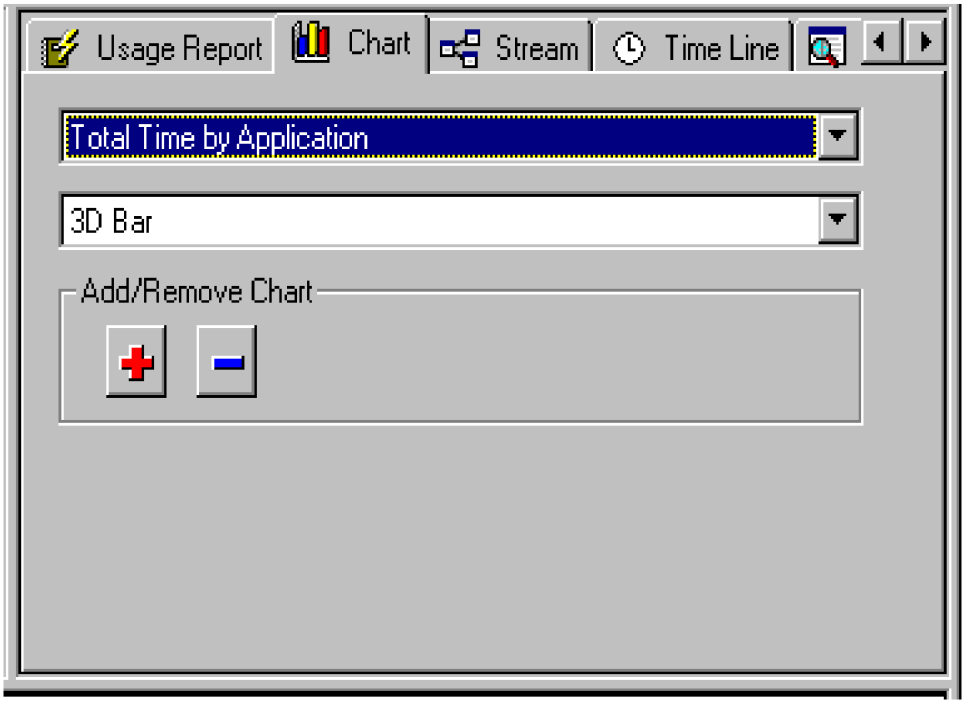
The Chart tab allows you to view script playback events and the time required to complete them graphically. You use the Chart tab with the other panes. In the report pane, you choose the playback level you want to analyze; how you will view events in the analysis pane. OneWorld Analyzer Tool presents the results, based on the choices, in the event pane.

The following components of the analysis pane appear when you click the Chart tab:

- Total Time list
- Presentation list
- Add/Remove Chart options

Total Time List

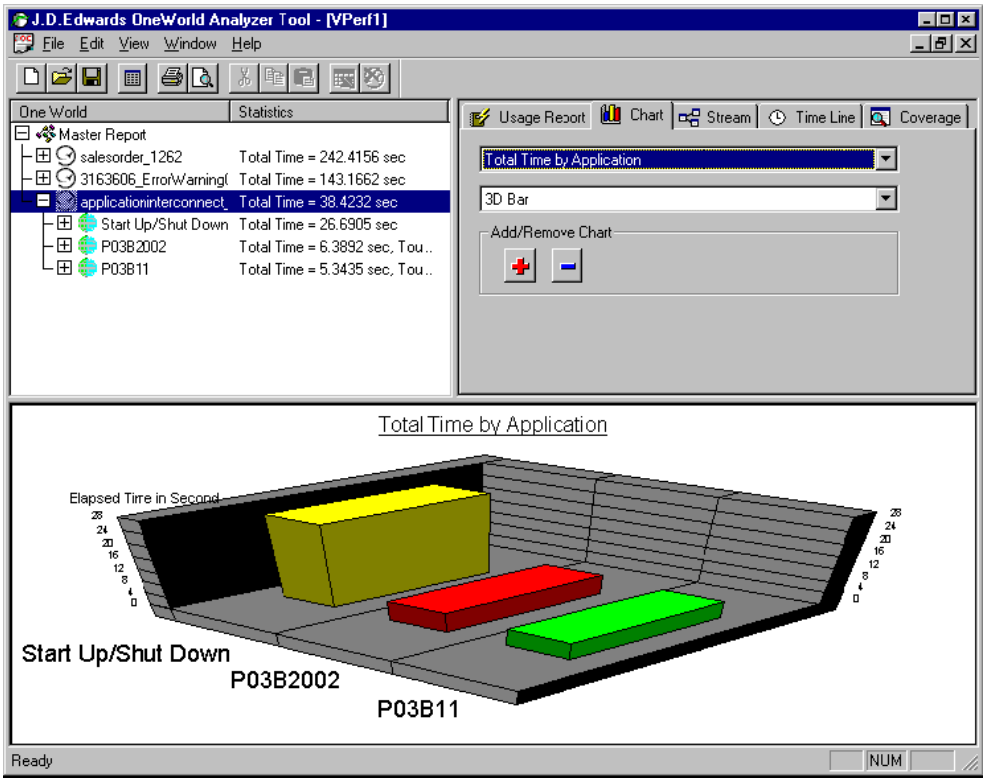
In the Total Time list, you choose a criterion that governs how you view the time required to complete an aspect of script playback. For example, you might choose to view the time OneWorld AutoPilot needed to run events in the applications touched by the script.



Alternatively, you might choose to view the event execution time by event category, for example, JDB API calls, CallObject calls, event rules, and so on.

Presentation List

After you choose a selection criterion for presenting total script playback time, you can decide how you want to present the view of the time. Your choice determines how OneWorld Analyzer Tool graphically displays the script playback time in the event pane. You use the presentation list with the Total Time list. For example, you might choose in the Total Time list to view total script playback time by application, then choose in the presentation list to present that time in a 3D bar graph. That presentation appears in the event pane.



Add/Remove Chart Options

To view graphical presentations simultaneously, you use the Add/Remove Chart options. You might want to add a graphical presentation to the event pane for comparative purposes. For example, you might view the total time that OneWorld AutoPilot required to run the events in the applications that it touched. You might want to also view the time the script required to run events by category. To do so, you use the Total Time and presentation lists to create a new view, and then click Add. You click Delete to remove a chart.

Note Concerning the Master Chart

The chart that you originally create is the master chart. Although you can add charts to the event pane and remove them, you cannot remove the master chart.

Stream Tab

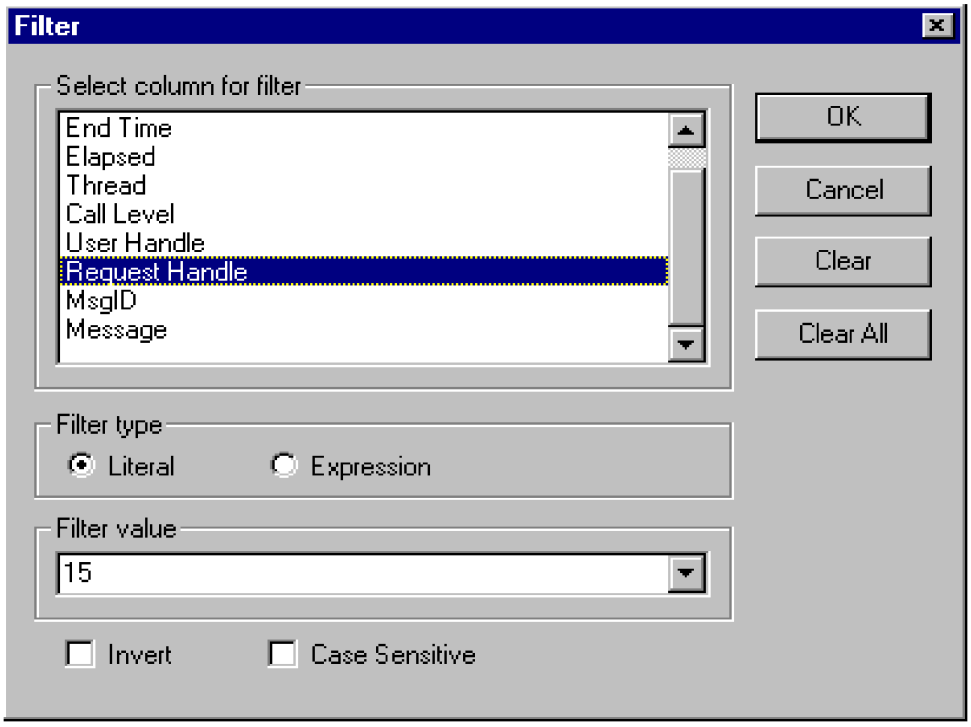
Click the Stream tab to view the event stream in the event pane. The Stream tab contains the complete record of all events that occurred during playback of the OneWorld AutoPilot script and the elapsed time for each event. For a complete discussion of the event stream, see *OneWorld Virtual Scripting Tool*.

The Stream tab also has a Filter button that lets you change the view of the event stream in the event pane. When you click the Filter button, a Filter form appears that allows you to sort events by the following:

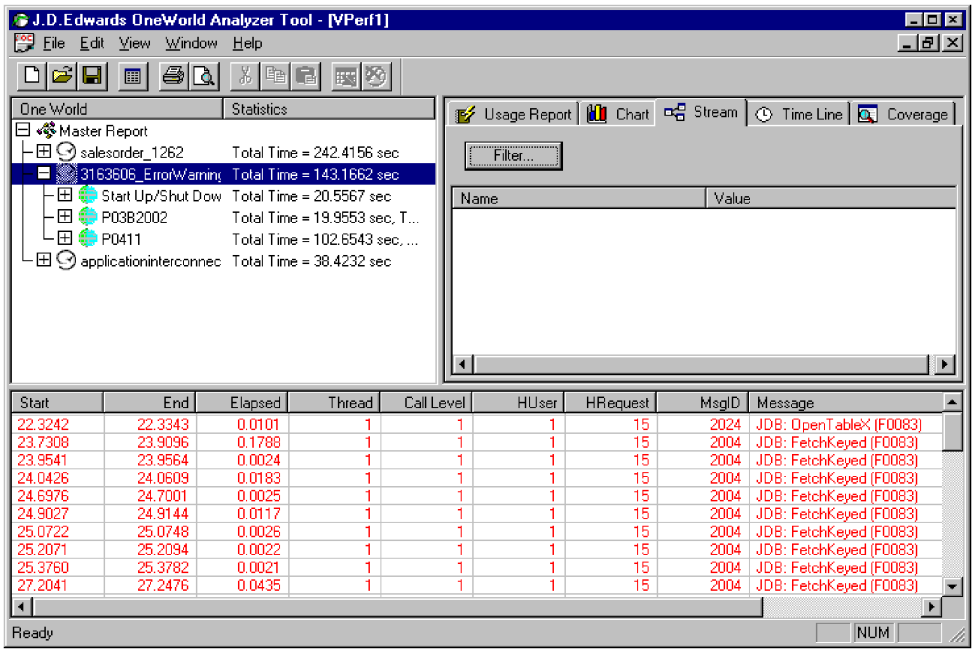
- Start time
- End time

- Elapsed time
- Thread ID
- API call level
- User handle
- Request handle
- Message ID
- Message (such as OpenTable)

This form limits the number of tests that you view. Using the Filter form in the analysis pane, you might, for example, choose request handles equaling 15 as a filter.



If you apply this filter, the event pane displays only the playback events that match the criterion of an hRequest parameter of 15.

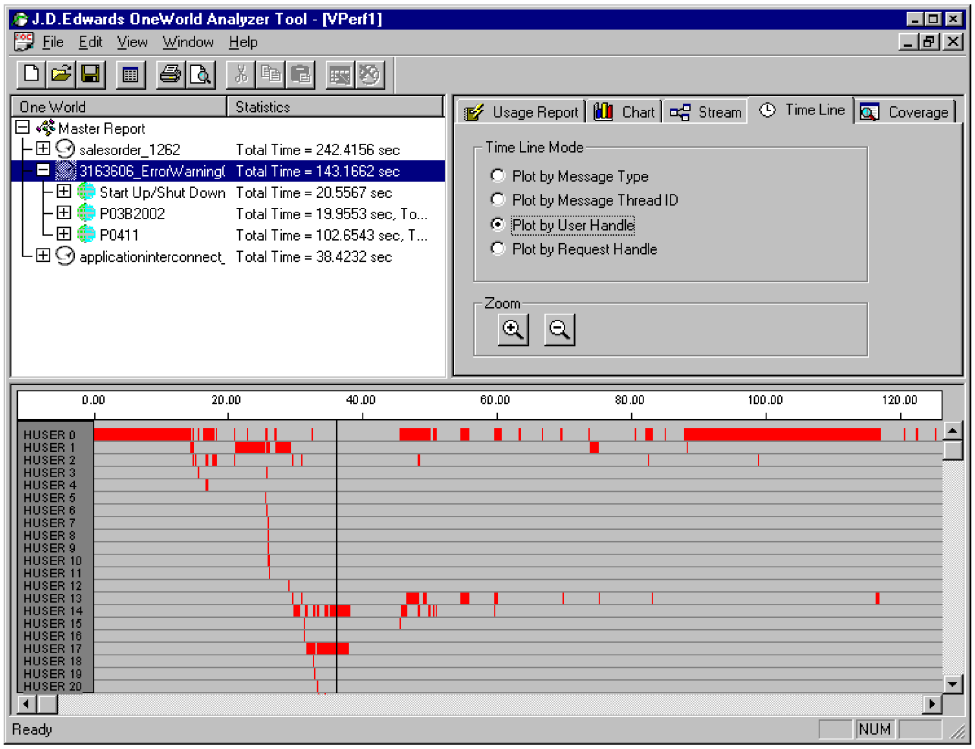


Time Line Tab

Click the Time Line tab to view the execution of script playback events plotted against a time line. You choose a time line mode from the following options:

- Plot by Message Type
- Plot by Message Thread ID
- Plot by User Handle
- Plot by Request Handle

When you choose a time line mode, the event pane displays a time line that allows you to view the time OneWorld AutoPilot required to run script events, based on the criterion you chose. Time is displayed in seconds along the x-axis of the time line. The values of the mode are displayed along the y-axis. For example, if you choose to display the timing of events by user handle, the Y axis displays all User parameters used during script playback, along with the point in time that each occurred and its duration.



Coverage Tab

The Coverage tab enables you to see how extensively your script tested an application. When you click this tab, OneWorld Analyzer Tool displays in the event pane nodes that represent any applications that OneWorld AutoPilot touched during script playback. You can click these nodes to see how many forms in an application and how many header controls and grid columns in a form OneWorld AutoPilot touched.

OneWorld Analyzer Tool Event Pane

You use the OneWorld Analyzer Tool event pane to view the details of OneWorld AutoPilot playback events after you have selected:

- The level of playback that you want to view, from the report pane
- The limiting criteria you want to apply to the view, from the analysis pane

You can use the following features when you work in the event pane:

- Sort mechanism
- View API call parameters
- Export playback event details to Microsoft Excel

Sort Mechanism

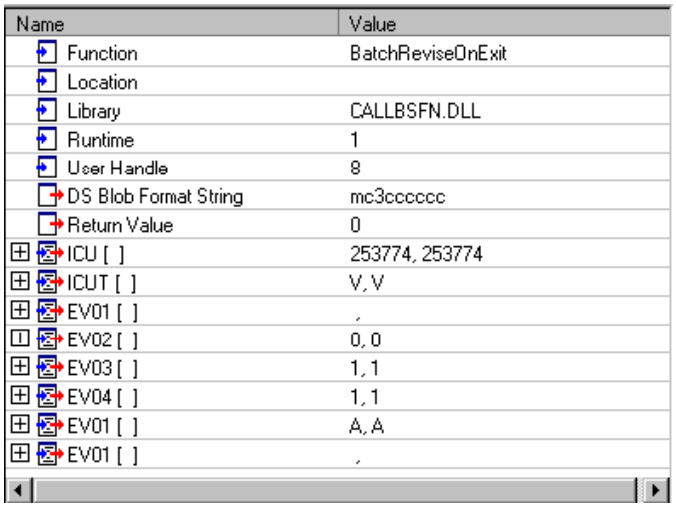
The event pane views that appear when you click the Usage Report and Stream tabs in the analysis pane have a sort mechanism you can use to manipulate the order of playback events. When you click a category in either one of these event pane views, OneWorld Analyzer Tool sorts the contents of the column:

- If the contents are integers, OneWorld Analyzer Tool sorts them in ascending or descending order.
- If the contents are strings, OneWorld Analyzer Tool sorts them in alphabetical or reverse alphabetical order.

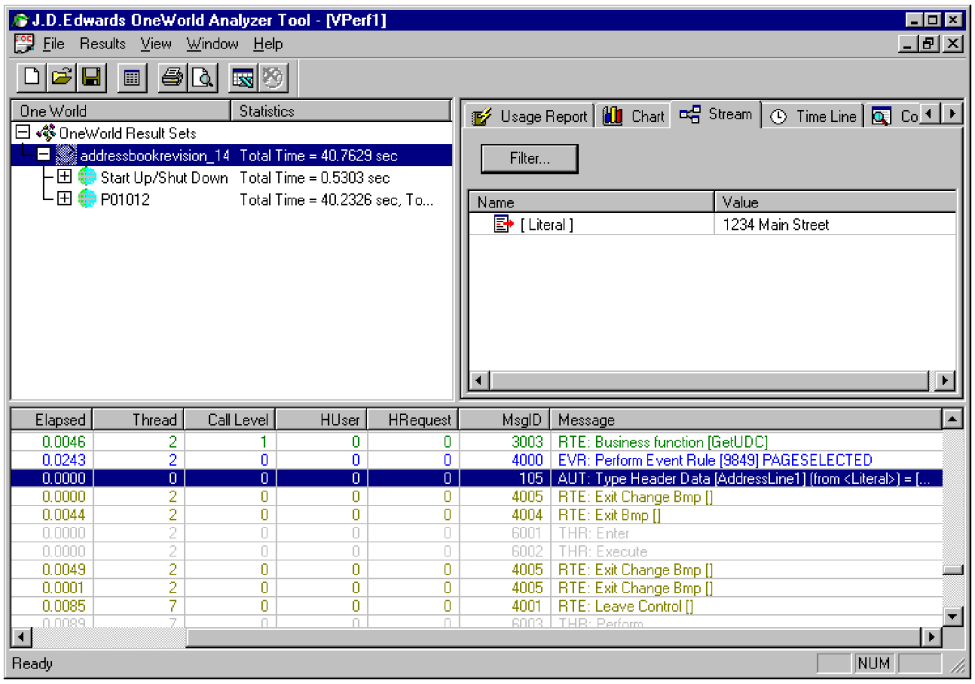
View API Call Parameters

With the event stream in the event pane, you can click a line containing the details of a JDB or CallObject API call and view the parameters of that call in the analysis pane.

The analysis pane view contains the name and value of each parameter, as well as directional arrows that indicate whether the parameter value was used as input to or an output from an API call. An arrow positioned to the left of the box next to the parameter name indicates an input value. An arrow to the right of the box indicates a value returned from an API call.



You can also click a line containing details of some OneWorld AutoPilot event and view details of that event in the analysis pane. For example, you can view the application and form you chose in the OneWorld AutoPilot script and entries you made to header controls and grid columns.



Export Playback Event Details to Microsoft Excel

You can export the playback details contained in an event pane view to a Microsoft Excel document. However, to do so, you must:

- View by clicking the Report Usage or the Stream tab in the analysis pane
- Click inside the report pane

The Export to Excel button in the toolbar is enabled. Otherwise, OneWorld Analyzer Tool disables the Export to Excel button.

Using OneWorld Analyzer Tool to Analyze Data

OneWorld Analyzer Tool user interface consists of three panes, each of which enables you to view in various ways the details of your OneWorld AutoPilot script's playback. You use the panes to analyze the script playback data contained in the event stream.

The report pane allows you to choose the level of detail that you want to view for a test. For example, you might want to view all the events that occurred during script playback, or you might want to view only the events that occurred during the playback of one application.

The analysis pane allows you to choose criteria that further limit the number of events that you view and to choose the manner in which OneWorld Analyzer Tool presents those events, such as in a table or a graph.

The event pane contains the details of the events, presented in the manner that you chose.

Choosing a Report Level

You work in the report pane to choose the level of detail that you want to view in the event pane. You can also choose more than one test and view the comprehensive totals in the event pane.

▶ To choose a report level in the report pane

1. In the report pane of OneWorld Analyzer Tool form, choose a report level by clicking it.
2. If you have imported two or more sets of test results, click the Master Report node.

   OneWorld Analyzer Tool displays in the event pane the combined results of all the tests you imported.

Note
The event pane displays the events that occurred at the report level that you choose. You might want to click a tab in the analysis pane to alter the presentation of the view. For example, if you want to see the events displayed in a table format, click either the Usage Report tab or the Stream tab in the analysis pane.

Choosing Criteria for Event Analysis

When you work in the analysis pane, you can choose criteria that limit the type and number of script playback events that you view in the event pane, and you can choose the graphical presentation of the events. To accomplish these goals, you work with five tabs. Each of these tabs offers options in the analysis pane that allow you to change the view in the event pane.

Working with the Usage Report Tab

Clicking the Usage Report tab produces radio button options in the analysis pane. These options allow you to view all the script playback events in the event pane, or you can choose a criterion that limits the playback events that you view. Once you choose a criterion, you choose a radio button option to group the events that you view by message, user handle, or request handle. You can also use the analysis pane view under the Usage Report tab to display aggregate numbers of details related to script playback events. For example, you can display the total number of CallObject API calls made during script playback.

Viewing Details of Playback Events Using the Usage Report Tab

The Usage Report tab enables you to view details of playback events. You can view all the events at the test level that you chose in the report pane, or you can choose a criterion to limit the kinds of events that you view. You can choose a criterion by which you group the events, such as by request handle.

▶ To view details of playback events using the Usage Report tab

In the analysis pane on the OneWorld Analyzer Tool form

1. Click the Usage Report tab.

2. Choose a radio button option in the View Category subpane to view, in the event pane, all the script playback events or a category of playback events, such as CallObject APIs.
3. Choose a radio button option in the Grouping subpane to group the category of script playback events.

Displaying Playback Event Subtotals

With the script playback events displayed in the event pane, you can view event subtotals, including number of events by category and the total time that script playback required to complete the events in that particular category. You can also display the grand totals, either at the bottom or at the top of the event pane.

► To display playback event subtotals

1. In the analysis pane on the OneWorld Analyzer Tool form, click the Usage Report tab.
2. Choose a radio button option in the View Category subpane.
3. Choose a radio button option in the Category subpane.
4. To show subtotals for events, with the grand totals displayed at the bottom of the event pane, click the Show Subtotal and Grand Total option only.
5. To show subtotals for events, with the grand totals displayed at the top of the event pane, click both the Show Subtotal and Grand Total and Place Grand Total at Top options.

Working with the Chart Tab

Clicking the Chart tab lets you choose a selection criterion to limit the view of script playback events, and the time OneWorld AutoPilot required to run them, in the event pane. For example, you might decide that you want to see the total time OneWorld AutoPilot required to run CallObject APIs. It also enables you to choose from a variety of graphical presentations of that time, such as 3D charts, pie graphs, and so on. You can also additional views of charts to the event pane and remove views of charts.

Viewing Details of Playback Events Using the Chart Tab

Clicking the Chart tab allows you to view in the event pane the total time that the script playback required to complete a category of events. You can also choose how you want OneWorld Analyzer Tool to graphically present the time.

► To view details of playback events using the Chart tab

1. In the analysis pane of OneWorld Analyzer Tool form, from the Total Time drop down menu, choose a selection criteria.

   This allows you to view, for example, the total time OneWorld AutoPilot required to run events in an application.

2. From the presentation drop down menu, choose a graphical presentation.

   This allows you to choose the way that OneWorld Analyzer Tool displays the time OneWorld AutoPilot required to run events.

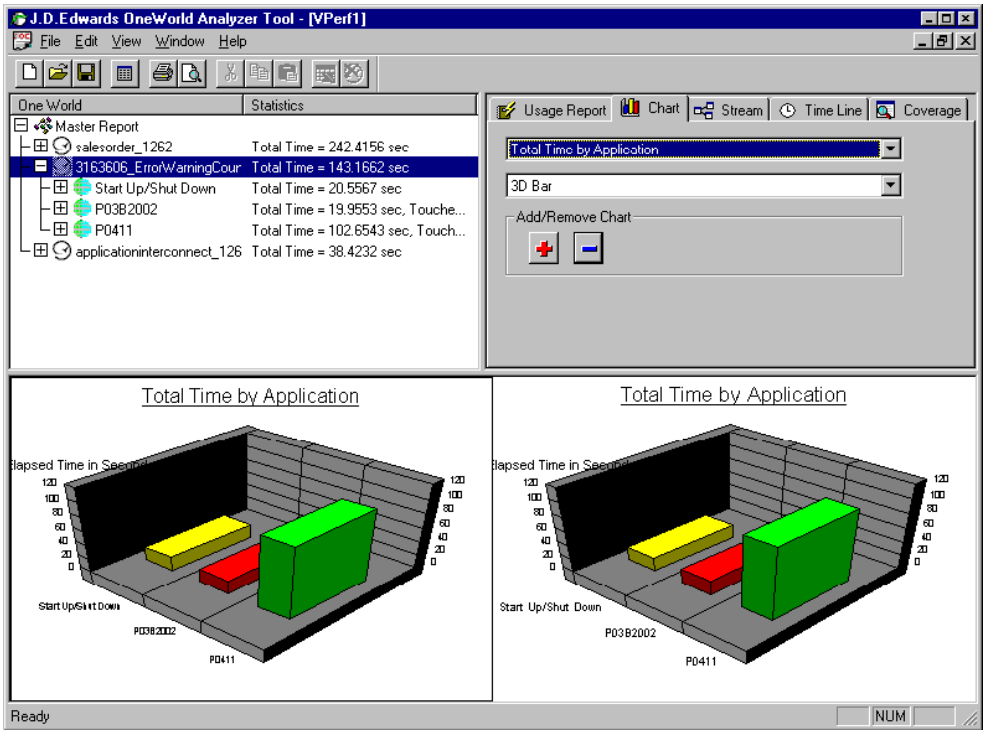
Adding a Char

Once you display a chart in the event pane, you can use the Chart tab in the analysis pane to add another chart. OneWorld Analyzer Tool inserts another chart to the event pane based on the choices you make in the Total Time and presentation lists.

► To add a chart

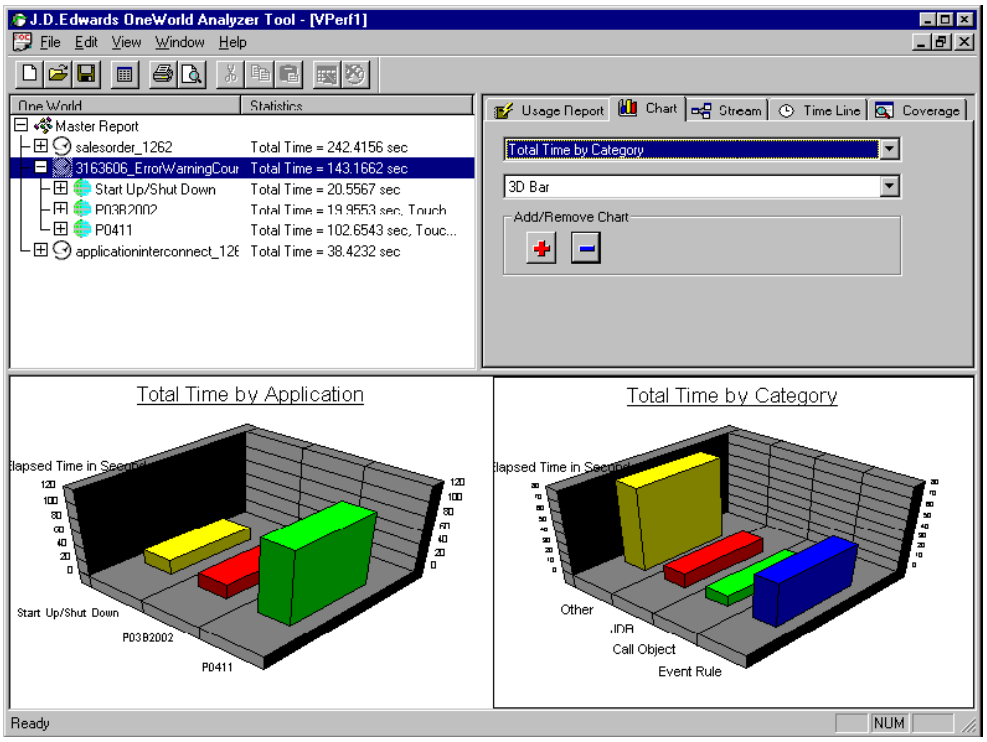
1. In the Add/Remove subpane, click Add.

   OneWorld Analyzer Tool adds a chart that duplicates the chart currently in the event pane view.



2. In the event pane, click one of the graphics.
3. In the analysis pane, choose a criterion from the Total Time list.
4. Choose a graphical presentation from the presentation list.

   OneWorld Analyzer Tool replaces the selected chart in the event pane with the new chart with the characteristics you established.



Removing a Chart

If you no longer want to view a certain chart in the event pane, you use the Chart tab in the analysis pane to remove it.

▶ To remove a chart

1. In the event pane of OneWorld Analyzer Tool form, with two or more graphic images present, click one of the images.
2. In the Add/Remove subpane of the analysis pane, click Remove.

> **Note**
> Do not click the original image that you created. If you do, and you attempt to remove it, OneWorld Analyzer Tool displays a dialogue box warning that the master chart may never be removed.

Working with the Stream Tab

Clicking the Stream tab in the analysis pane produces the event stream in the event pane. This is the complete record of script playback events. You can view this complete record or use the Filter button in the analysis pane to limit the kind and number of events that you view in the event pane.

Viewing Details of Playback Events Using the Stream Tab

The Stream tab allows you to view the event stream in the event pane. The event stream displays the script playback events in chronological order.

▶ To view details of playback events using the Stream tab

In the analysis pane of OneWorld Analyzer Tool form, click the Stream tab.

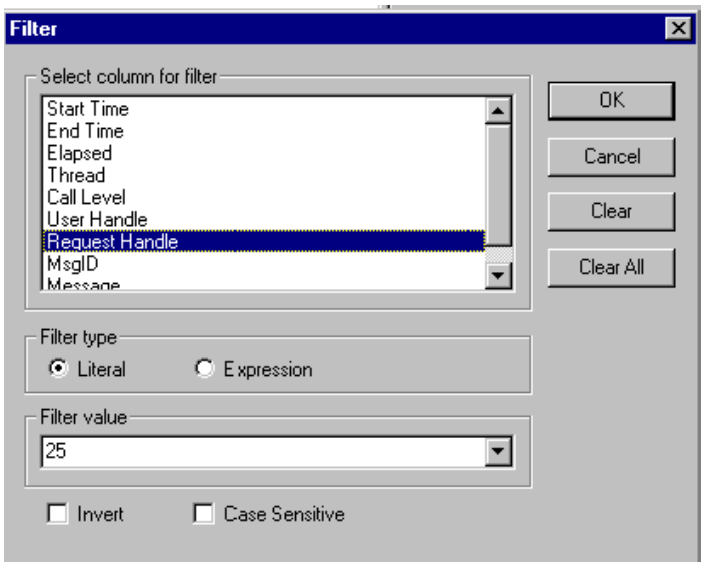
The event stream appears in the event pane.

Filtering Events in the Event Stream

To manipulate your view of the event stream in the event pane, you use the Filter button under the Stream tab. Working in the Filter form you can limit the number and kind of events that appear in the event pane.

▶ To filter events in the event stream

1. In the analysis pane of OneWorld Analyzer Tool form, click the Stream tab.
2. Click the Filter button.
3. In the Filter form, choose from the Select Column for Filter list a column in the event stream.
4. To refine your filter criterion, choose either the Literal or Expression / Contains radio button option.
5. Enter a value in the Filter Value field.



6. Click OK.

   OneWorld Analyzer Tool filters the event stream for the value that you specified in the Filter form and displays the new view in the event pane.

Note
To invert the view in the event pane so that it filters out the value you enter in the Filter form, click the Invert option and click OK.

Working with the Time Line Tab

The Time Line tab allows you to view the time OneWorld AutoPilot required to run categories of events. OneWorld Analyzer Tool plots categories of events along the y-axis of a time line and the time, in seconds, on the x-axis. Using the Time Line tab, you can view in the event pane the number and duration of different kinds of events.

▶ To view details of events using the Time Line Tab

1. In the analysis pane of OneWorld Analyzer Tool form, click the Time Line tab.
2. In Time Line Mode, choose a selection criterion.

   You can plot the time line by

   - Message type, message thread ID
   - User handle
   - Request handle

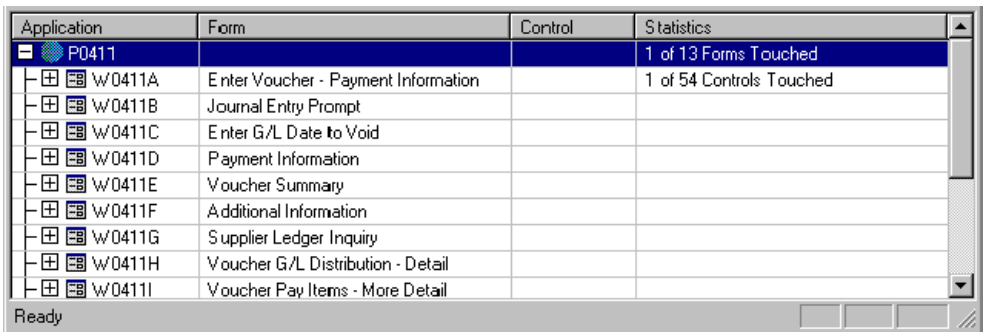
   OneWorld Analyzer Tool represents each event separately, with a bar. The bar allows you to see the starting point, ending point, and duration of the event.

Working with the Coverage Tab

The Coverage tab allows you to view how extensively your OneWorld AutoPilot script covered the code in a OneWorld application or form. You choose a test level in the report pane, and then click the Coverage tab. The event pane displays statistics on the applications, forms, header controls, and grid columns OneWorld AutoPilot touched during script playback. Click a test level, such as application, to view the coverage for that level of the test.

▶ To view code coverage using the Coverage tab

1. In the report pane of OneWorld Analyzer Tool form, click the level of the OneWorld AutoPilot test that you want to view.
2. In the analysis pane, click the Coverage tab.
3. In the event pane, click the level of the test that you want to view.



Viewing Details of Events

The event pane allows you to view script playback events. OneWorld Analyzer Tool displays these events based on the criteria you choose in the report and analysis panes. You choose actions in the event pane that alter your view of the script playback events, present a more detailed view of individual events, and offer you the opportunity to export the view to a Microsoft Excel spreadsheet.

Sorting Events in a Category

When you click the Usage Report tab or the Stream tab in the analysis pane, OneWorld Analyzer Tool displays the script playback events in a table with eight and nine columns, respectively. You can sort these categories in the event pane by clicking the category name. When you do so, OneWorld Analyzer Tool sorts in alphabetical or reverse alphabetical order those events described by a string. OneWorld Analyzer Tool sorts those events described by integers from least to greatest or from greatest to least.

For example, when you click the Usage Report tab, then choose from the View Category and Grouping options, OneWorld Analyzer Tool displays the events under eight categories in the event pane. In the Message column, the events initially appear in alphabetical order. When you click the column, OneWorld Analyzer Tool arranges the messages in reverse alphabetical order. In the Count column, the events initially appear in order of those that occurred the least number of times to those that occurred the greatest number of times. When you click the column, those that occurred the greatest number of times appear first.

► To sort events in a category

1. In the analysis pane of OneWorld Analyzer Tool form, click either the Usage Report tab or the Stream tab.
2. If you click the Usage Report tab, choose the options from View Category and Grouping.

   Note
   If you click the Stream tab, the View Category and Grouping options do not appear, and you can proceed to Step 3.

3. In the event pane, click a column name.

Enabling the Parameter View in the Analysis Pane

When you display the event stream in the event pane, you can click a JDB or CallObject API event to view the parameters of that call. OneWorld Analyzer Tool displays the parameters and other information about the call in the analysis pane.

► To enable the parameter view in the analysis pane

1. In the analysis pane of OneWorld Analyzer Tool form, click the Stream tab.
2. In the event pane, click a line containing a JDB or CallObject API call.

   A view of the parameters of the call appears in the analysis pane. You can also view details of some OneWorld AutoPilot events, such as application launches and entries to header controls and grid columns.

Exporting Script Playback Event Details to a Microsoft Excel Spreadsheet

You can export script playback event details from the event pane to a Microsoft Excel spreadsheet when you have created an event pane view using the Usage Report tab or Stream tab in the analysis pane. Using this feature enables you to arrange the playback event details as you desire.

► To export script playback event details to an Excel spreadsheet

1. In the analysis pane of OneWorld Analyzer Tool form, click the Usage Report tab or the Stream tab.
2. If you click the Usage Report tab, choose options from View Category and Grouping.

   Note
   If you click the Stream tab, the View Category and Grouping options do not appear, and you can proceed to Step 3.

3. Click inside the event pane, either on a line containing an event or on a column heading.

   The Microsoft Excel icon on the Word toolbar is enabled.

4. Click the Export to Excel icon on the toolbar.

   OneWorld Analyzer Tool exports the contents of the event pane table to a Microsoft Excel spreadsheet.