Profile Dashboard Web Help

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What does the Profile Dashboard do?

The Profile Dashboard displays data collected as profiles in the zPerfmon server.

The Profile Dashboard displays data from all profiles collected in a half-hour timeslot. The data displayed are averaged values of wall time, CPU time, memory used, and call counts.

What are Profiles?

A *profile* is created when a user sends a request from a game to the game server and the installed zPerfmon client decides that this request needs to be profiled. The zPerfmon server collects profiles from all web servers configured to be active zPerfmon clients. The profile contains information about how a program was run, including:

- The name of functions called
- The number of times each function was called
- The overall summary of each profile
- The time each function took to load and run
- The time spent by the CPU to execute the code
- The amount of memory allocated to a function

Each activity performed by the user while playing results in requests being sent to the server. A profile is generated from such requests over a period of time, from multiple machines. Based on the requests sent, thousands of profiles are collected in every half-hour timeslot.

Viewing data in the table

The table displays data from all profiles collected in a half-hour timeslot. Select the profile for which you would like to view data from the list of profiles on the left (for instance, all, gateway.php, handler.php etc). The corresponding data is displayed in the table.

Click the < button beside the table to expand it so as to fit all the columns on one screen without having to scroll.

Click on the column headers to sort data in ascending or descending order. (**Note:** This works only for the non-percent functions.)

To choose which columns you would like to view in the table, click the **Select Column** button and select the columns which you would like to see in the table.

Understanding the columns in the table

Function Name displays the name of the function called.
The **Calls** column shows the number of times each function was called.
Calls% shows a percentage value calculated using the number of calls against the total number of function calls. The total number of function calls is displayed in the Overall Summary.
Incl. Wall Time (microsec) represents the time taken by a page to execute end-to-end, from the first byte of the code to the last byte.
IWall% is the percentage value of the total inclusive wall time against the inclusive wall time of a function.
Excl. Wall Time (microsec) is the time taken by the function to execute, excluding the time taken by its child functions.
EWall% represents the percentage value of the total exclusive wall time of all functions against the exclusive wall time of a function.
Incl. CPU (microsec) is the time taken by the CPU to execute the function code.
ICPU% shows the percentage value of the total inclusive CPU time against the inclusive CPU time of a function. The total inclusive CPU time is displayed in Overall Summary.
Excl. CPU (microsec) is the time taken by the CPU to execute the code, excluding the time taken for additional processing such as to read from the disk, etc.
ECPU% is the percentage value of the total exclusive CPU time of all functions against the exclusive CPU time of a function.
Incl. MemUse (bytes) is the amount of memory used to execute a function.

IMemUse% shows the percentage value of the total amount of memory used against all functions by the inclusive memory usage of a function.
Incl.PeakMemUse (bytes) shows the maximum amount of memory used to execute a function.
IPeakMemUse% displays the percentage value of the maximum amount of memory used to execute a function.
Excl. MemUse (bytes) represents the amount of memory used by a function to execute, excluding the memory used by its child functions.
EMemUse% is the percentage value of the total exclusive memory usage of all functions by the exclusive memory usage of a function.

How do I sort data?

Data displayed in the tabular columns can be sorted in descending order by clicking on the column header. For example, to sort data by the inclusive wall time, click **Incl. Wall Time (microsec)**.

What does the list of profiled files do?

This section displays the pages for which profiles were collected in the selected timeslot. The **all** entry displays the averaged values of all profiles in the list.

How do I search for a specific function?

To search for a particular function, enter the name of the function in the **Function Search** field and hit **Enter**.

How do I interpret and analyze data on the Profile Dashboard?

By examining the data on the Profile Dashboard you can identify parent and child functions that:

- Take longer to execute

- Use more CPU time and memory to complete a request.

After identifying such functions you can analyze and optimize the code to improve the game performance.

Data on the Profile Dashboard can be analyzed using:
- The **all** entry
- Profiles of individual pages
- Pages that received the maximum requests
- Maximum wall time taken by a function and its parent and child functions
- Maximum resources (CPU and memory) used by a page
- The parent and child functions that used the maximum resources

How do I view data for a particular day and time?

Specify the date for which you would like to view data by entering the date in the **Select Date** field.

Select a time slot for which you would like to view data by selecting a specific half-hour time stamp from the drop-down menu in the **Select Time Slot** field.

How do I compare data from different time periods from other profiles?

You can compare your current data with data from other profiles or releases from a different time slot in the previous day or previous week. To do this, click **Compare**. In the **Compare With** pop-up that appears, select the game, array, date and time slot for which you wish to compare data and click **Compare.** A new window appears which juxtaposes data from the chosen time periods. You can also compare data from a previous release by selecting a release from the **Previous Releases** dropdown and clicking **Compare.**

How do I share an analyzed profile?

After you drill down and analyze the functions, you can share the analyzed profile and data with different people in a group. This will help them understand the data you analyzed. The analyzed profile can be shared as a link using the following steps:
1. Right-click the profile in the **Profiled Files list**.
2. Click **Copy Link Address**.

3. Send the copied link to others to view.

The copied link address can be viewed by pasting it into the address bar in a new browser window or tab.

Viewing data in a call graph

To view data in a call graph, click on the **Call Graph** button.

The callgraph provides a visual representation of function call hierarchy and control flow. This representation of data helps you view function calls without getting into the complexity of code details.

Each box in the callgraph displays:

- The inclusive and exclusive run time
- The total number of calls made to that function

zPerfmon uses a yellow highlight for the functions that took the highest time to execute.

Viewing data in pie charts

To view data in pie charts, click on the **Pie Chart** button.

Data of the top six functions on the UI are displayed in pie charts for visual and flexible analysis of data. The pie charts are provided for Exclusive CPU time and Exclusive Wall time.