

# Functional Trace



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## Icons

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

## Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters that appear on the screen. These include field names, screen titles, pushbuttons as well as menu names, paths and options.  Cross-references to other documentation.
<b>Example text</b>	Emphasized words or phrases in body text, titles of graphics and tables.
EXAMPLE TEXT	Names of elements in the system. These include report names, program names, transaction codes, table names, and individual key words of a programming language, when surrounded by body text, for example, SELECT and INCLUDE.
Example text	Screen output. This includes file and directory names and their paths, messages, source code, names of variables and parameters as well as names of installation, upgrade and database tools.
EXAMPLE TEXT	Keys on the keyboard, for example, function keys (such as F2) or the ENTER key.
<b>Example text</b>	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Pointed brackets indicate that you replace these words and characters with appropriate entries.

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## Functional Trace

### Purpose

You can display raw statistical data (individual records) from SAP R/3 and non-SAP R/3 Systems from complex system landscapes using the functional trace. The statistics data is access using RFC on remote SAP R/3 Systems. For remote non-SAP R/3 Systems, the data is read using the SAPCCMSR [agent \[Extern\]](#).

The raw statistics data can originate from [Distributed Statistics Records \(DSRs\) \[Seite 18\]](#). The name reflects an important property of these records: Components that write statistics records send data from the statistics record with their communication with other components (their [passport \[Seite 20\]](#)), meaning that the originator of an action or a data flow of a business process can be traced even beyond component boundaries.

The DSRs is first stored locally on the relevant component and then read using RFC or the agent. The data is transferred to the monitoring system and you can display it there in the functional trace.

### Integration

The functional trace is an extension of the data selection transaction STAD that can only display raw statistics data for an SAP R/3 System and not for different DSR components, like the functional trace.

The functional trace is also an extension of the Global Workload Monitor (transaction ST03G). The Global Workload Monitor can only display aggregated data for distributed statistics records that has been collected by a special collector. The raw statistics data is transferred directly to the functional trace using RFC or an agent for non-SAP R/3 Systems and you can display it there. For more information, see [Difference Between Functional Trace and Global Workload Monitor \[Seite 6\]](#).

### Features

The functional trace provides the following functions:

- You can use [system selection \[Seite 9\]](#) to choose the systems for which you want to analyze statistics records. You can restrict the analysis to the local system or extend it to include systems in a system landscape or a Business Process. You can create system lists.
- In addition to system selection, you can use [data selection \[Seite 12\]](#) to define a time period for reading the statistics records. The raw statistics records are read for this period for the components specified in the system selection.

You can also specify parameters in the data selection with which you can also filter the raw statistics records, such as by initial user and initial system. The system displays the filtered statistics records in the [analysis view \[Seite 14\]](#).

- If problems occur, you can display the [application logs \[Seite 17\]](#) of the function trace to find the cause of the error.
- You have various [options for displaying and analyzing \[Seite 17\]](#) the raw data. For example, you can display the statistics records sorted chronologically in a call hierarchy or in a list.

### Constraints

You can process statistics files of DSR components as of SAP Web AS 6.20. The Internet Transaction Server and J2EE Engine are the currently only non-SAP R/3 component types for which the statistics records are written.

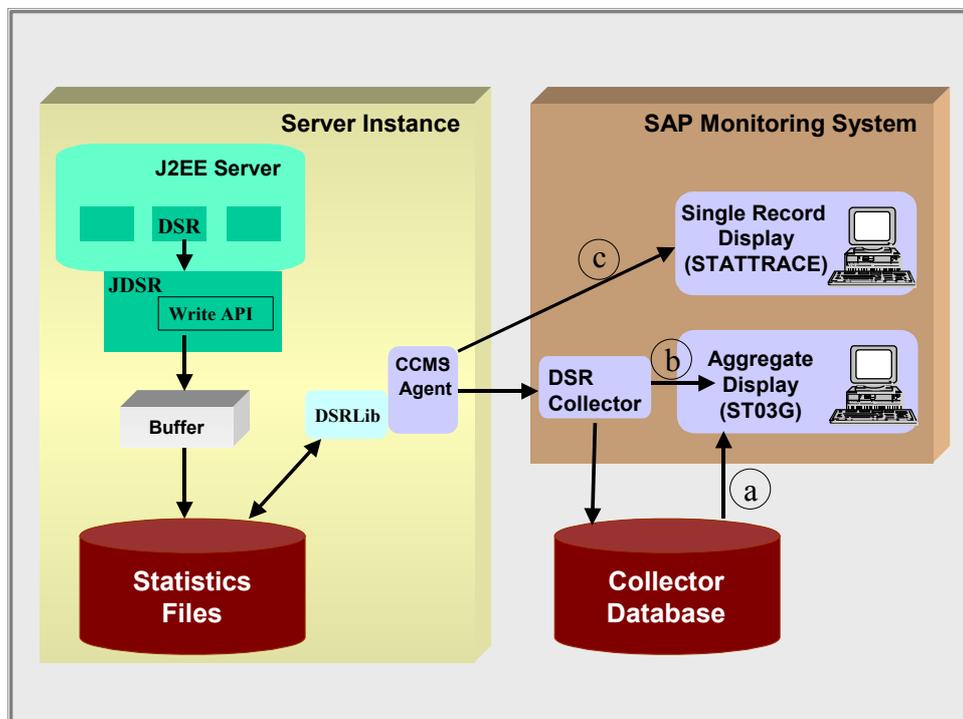
See also:

[Operating the Functional Trace \[Seite 7\]](#)

## Difference Between Functional Trace and Global Workload Monitor

The difference between the functional trace and the Global Workload Monitor is the type of data displayed and the way in which the data is displayed.

The figure below shows an example of the way in which the statistics records for the J2EE Engine are displayed in the two statistics display transactions [Global Workload Monitor \[Extern\]](#) (ST03G) and functional trace (STATTRACE):



As this is a non-SAP R/3 System, the agent exports the statistics records. Depending on the type of display, the agent either passes the data to the DSR collector to be aggregated (display variants a and b in the Global Workload Monitor) or directly in the display transaction (display variant c in the functional trace). There are the following display variants:

**a. Display Collector Aggregates After Hourly Collector Run**

The collector aggregates the data during the transfer. The statistics records collected by the hourly collector run are stored in the database and displayed in the Global Workload monitor (transaction ST03G).

**b. Display Collector Aggregates Between Hourly Collector Runs**

So that you do not have to wait until the hourly collector run to display aggregated statistics files, the Global Workload Monitor (transaction ST03G) provides the *Last Minutes' Load* function, which allows you to aggregate and display statistical data during runtime without storing it in the database.

**c. Display Raw Data as Single Records**

With single record display (c), the raw statistical data is displayed in the functional trace (transaction STATTRACE). The data is read directly by the functional trace from the statistics files for each analysis using the agent.

**See also:**

[Operating the Functional Trace \[Seite 7\]](#)



## Operating the Functional Trace

### Use

This section provides an overview of the functions that the function trace provides and contains links to additional information.

### Features

The functional trace is divided into a navigation area in the subwindow at the left of the screen, which you can show and hide by choosing *Full Screen On/Off* and an analysis area in the subwindow on the right.

### Functions

The following functions are available to you in the navigation area:

Function	Description
<a href="#">Data selection [Seite 12]</a>	<p>You can use the data selection function to select the data to be analyzed. You can filter which individual statistics records (raw records) are to be displayed.</p> <p>You can filter the data records by the following criteria:</p> <ul style="list-style-type: none"> <li>• Start date</li> <li>• Start time</li> <li>• Read period</li> <li>• Initial system</li> <li>• Initial user</li> <li>• Initial action</li> <li>• Transaction ID</li> </ul> <p>The <i>data selection</i> function interacts with the <i>system selection</i> function. In the system selection, you define the systems from which statistics records are read. In the data selection, you define a period for reading the statistics records. The raw statistics records are read for this period for the components specified in the system selection. If you do not specify a specific period, the system uses the default filtering, that is it filters to the first ten minutes after starting the transaction.</p> <p>You can also specify parameters in the data selection with which you can also filter the raw statistics records, such as by initial user and initial system. The system displays the filtered statistics records in the <a href="#">analysis view [Seite 14]</a>.</p>
Settings & log	The following settings and log functions are available:

	<p><a href="#">System selection [Seite 9]</a></p> <p>Use this function to define the components for which you want to display raw statistical data. You can filter the raw statistics records using <i>data selection</i>.</p> <p><a href="#">Display and Analysis Options [Seite 17]</a></p> <p>You can use this function to select the display variant. You can specify whether statistics records are displayed hierarchically or in a list. You can also specify the time zone and the RFC wait time.</p> <p><a href="#">Application Log [Seite 17]</a></p> <p>If an error occurred in the functional trace, you can use this function to find the cause of the error.</p>
--	--

## General Data

If you have performed an analysis and the desired statistics record, the system displays the following general information at the top of the output area:

- Period analyzed (date, time)
- Components analyzed
- Components that do not deliver data
- Time zone

The date and time of the first and last statistics record of the period being considered are also shown.

## ALV Tree Control

After a successful analysis, the raw statistics data is displayed as a call hierarchy in an ALV Tree Control.

## ALV Grid Control

As there is no sort function for the call hierarchy, you can also display the statistics records as a list. The list display uses an ALV Grid Control, with which you can extensively adjust the selected view to your requirements. Using the standard functions of the [ALV Grid Control \[Extern\]](#), you can

- Show and hide columns
- Sort rows by the contents of a column
- Set and delete filters
- Perform summations
- Export tables as a file type of your choice
- Display tables as graphics
- Save sort orders, filters, and selected columns as your layout

### See also:

[System Selection \[Seite 9\]](#)



## System Selection

### Use

Use this function to define the components for which you want to display raw statistical data. The collection of raw statistical data is independent of this system selection; the system selection is primarily intended to allow you to structure the interface in as clear a manner as possible.

The following functions are also available to you:

- You can check which components are entered in the CCMS System Component Repository (SCR).
- You can save and recall a total of five different sets that each contain a set of monitored components.

### Integration

- In the system selection, you define the systems from which statistics records are read. In addition to system selection, you use [data selection \[Seite 12\]](#) to define a time period for reading the statistics records. The raw statistics records are read for this period for the components specified in the system selection.

You can also specify parameters in the data selection with which you can also filter the raw statistics records, such as by initial user and initial system. The system displays the filtered statistics records in the [analysis view \[Seite 14\]](#).

- With system selection, you can also access the systems that are known to the Solution Manager and, in this way you can, for example, monitor all systems that are assigned a particular business process. However, for this it is necessary that you specify the RFC destination and the name of the data model of the Solution Manager. To do this, choose *SolMan*. The utilized data model is *CBP Data Model*.

### Prerequisites

- Before you can analyze statistical data from remote components with the Global Workload Monitor, you must know system data (such as the RFC destination). You can enter this data in the table manually, or call it up using the *Systems* menu.
- To be able to monitor workload data from SAP R/3 Systems, the function group SAPWL\_GLOB\_STAT must exist in the corresponding system. The function group SAPWL\_GLOB\_STAT is available as of SAP Basis 4.0B.

### Activities

2. Start the functional trace by calling transaction STATTRACE.
3. Choose *System Selection* under *Settings and Log*.

The system displays the current system list.

To display another system list, choose an entry in the *Systems* menu. The *Features* section below contains detailed information about this menu and the structure of system lists.

4. If necessary, you can make changes in the displayed list. In this way, you can (de)activate systems or add new systems. You can also create a new list and save it as a set.

5. To start an analysis for the selected systems of a list, choose *Apply*.

The system first performs a consistency check of the destination to the monitoring system. If the consistency check fails for an entry, this entry is deactivated and a message is created for the [application log \[Seite 17\]](#). The raw statistics data is filtered in accordance with the analysis data entered using data selection.

## Features

To obtain a selection of components that can be monitored, choose the *Systems* menu. The menu has the following entries:

Entry	Description
<i>Local</i>	The locally available components include, of course, the local SAP R/3 System, and also all of the <a href="#">DSR [Seite 18]</a> components for which statistical data is collected in this SAP R/3 System. DSR statistical data is collected in the SAP R/3 System with which the <a href="#">CCMS agent [Extern]</a> SAPCCMSR, which is responsible for the transfer, is registered.
<i>All</i>	All components that are registered in the SCR are displayed here. This is both SAP R/3 Systems and DSR components.
<i>Solution Manager</i>	This displays the components that are known to the Solution Manager. The system first displays a table with the available <i>Solutions</i> . Choose the desired <i>Solution</i> by double clicking it; the associated systems are then displayed.  You can also select systems that belong to a particular business process. To do this, choose the <i>Business Process</i> pushbutton, choose the desired process by double clicking it, and choose the desired system in the following table by double clicking it.
<i>Set No. 1 – 5</i>	The components that you have previously saved as one of the five possible sets are displayed here.
<i>Current List</i>	The current list contains those components that were active when the system selection was called.

The following data is displayed for each of the displayed components:

Column	Description
<i>Activated</i>	Indicator with which you can activate and deactivate the analysis of the component
<i>Component</i>	Component name (from the SCR) and, for SAP R/3 Systems, the name of the SAP R/3 System
<i>Comp. Type</i>	Name of the component type (from the SCR) and, for SAP R/3 Systems, the entry <i>SAP R/3</i>
<i>Mon.Sys</i>	Monitoring system in which the statistical data of the component is collected; for SAP R/3 Systems, the system itself
<i>Dest. MonSys</i>	RFC destination of the monitoring system; this entry is empty if the monitoring system is the local SAP R/3 System
<i>Indirect Dest.</i>	RFC destination of an SAP R/3 System (for example, the system of the Solution Manager) in which the destination of the monitoring system is known; access to the statistical data of the monitoring system is then performed indirectly through this intermediate system
<i>Release</i>	SAP Basis or SAP Web Application Server release of an SAP R/3 System; is automatically entered by the system



- The specifications for component name, component type, and the name of monitoring system are mandatory.
- An empty field for a destination and the entry *NONE* are equivalent.
- Note that all field of the table are case-sensitive.

You can change the specified data in the table. To save the table contents to the database, choose the *Save* menu and one of the five sets available.

**See also:**

[Selecting Data for the Functional Trace \[Seite 12\]](#)



## Example: System Selection with Indirect Destination

The indirect destination is the RFC destination of an SAP System (such as the Solution Manager system), in which the destination of the monitoring system (monitored system) is known. The statistical data for the monitoring system is then accessed indirectly using this intermediary system.

For example, you have three SAP R/3 Systems: A, B, and C, and you want to monitor systems B and C from system A. The RFC destination of system C is, however, only known to system B. In this case, the destination of system A to system B is the indirect destination. To create a system list in the system selection for this example, follow the procedure below:

6. Open the functional trace using transaction STATTRACE.
7. Choose *System Selection* → *Systems* and then any free set.
8. Insert three rows by choosing *Insert Rows*; one for each system. The columns of the rows mean the following:

Column	Description
<i>Activated</i>	Indicator with which you can activate and deactivate the analysis of the component
<i>Component</i>	Component name (from the SCR) and, for SAP R/3 Systems, the name of the SAP R/3 System
<i>Comp. Type</i>	Name of the component type (from the SCR) and, for SAP R/3 Systems, the entry <i>SAP R/3</i>
<i>Mon.Sys</i>	Monitoring system in which the statistical data of the component is collected; for SAP R/3 Systems, the system itself

<i>Dest. MonSys</i>	RFC destination of the monitoring system; this entry is empty if the monitoring system is the local SAP R/3 System
<i>Indirect Dest.</i>	RFC destination of an SAP R/3 System (for example, the system of the Solution Manager) in which the destination of the monitoring system is known; access to the statistical data of the monitoring system is then performed indirectly through this intermediate system
<i>Release</i>	SAP Basis or SAP Web Application Server release of an SAP R/3 System; is automatically entered by the system

9. Enter *A*, *B*, and *C* as component names.
10. Enter the component type, in this case *SAP R/3*.
11. Specify the system in which the statistics records are collected as the monitoring system for the system.  
For SAP R/3 systems, this is always the SAP R/3 System itself, that is, for system *A*, enter *A* as the monitoring system, entering the monitoring system *B* for system *B*, and so on.
12. The fields *RFC Destination to the monitoring system (dest. MonSys)* and *Indirect Destination for the Monitoring System (Ind. Dest)* remain empty in the row for system *A*, as it is the local system.
13. Insert the RFC destination from system *A* to system *B* in the *Dest. MonSys* field of the row for *B*. *Ind. Dest* remains empty, as this is not an indirect destination.
14. In the row for system *C*, enter the RFC destination from system *A* to system *B* as the *Ind. Dest* and the RFC destination from *B* to *C* as *Dest. MonSys*
15. Finally, activate all systems in the *Activated* column and save the set.

**See also:**

[System Selection \[Seite 9\]](#)

[Selecting Data for the function trace \[Seite 12\]](#)



## Selecting Data for the Functional Trace

### Use

You can use the *data selection* function to select the data to be analyzed. With this function, you filter which statistics records (raw records) are to be displayed in the [analysis view \[Seite 14\]](#) of the functional trace (transaction STATTRACE).

### Prerequisites

You have defined the systems from which statistics records are to be analyzed in the [system selection \[Seite 9\]](#).

### Procedure

Follow the procedure below to select data for the functional trace:

1. Start the functional trace (transaction STATTRACE).
2. Choose the *data selection* function in the left subwindow of the initial screen.

You can show and hide the left subwindow by choosing *Full Screen On/Off*.

3. To determine the analysis interval, specify *start date*, *start time*, and the *read period* (in minutes).
4. You can optionally restrict the individual records to be displayed using the following specifications:
  - *Initial system*
  - *Initial user*
  - *Initial action*
  - *Transaction ID*

With these input parameters, the system filters using the [passport \[Seite 20\]](#), which contains values for these parameters. If statistics records are written beyond component boundaries, the passport is sent together with the communication between the components. You can use the passport to determine which steps belong to an action, even if they were performed on different components.

The initial system is the starting system of an action that runs over multiple components. The action that is started in this system is the initial action that is started by an initial user and for which the transaction ID is assigned. The transaction ID is the GUID from the passport that identifies all dialog steps.

5. If desired, you can choose the options *Read Additional Records* and *No ADM Records*:
  - If you determine that the delivered data is not sufficient for your requirements and want to fill out a new time window, activate *Read Additional Records*, so that the newly collected statistics records are added to the statistics records that have already been collected. If you do not activate this option, the previously read statistics records are deleted, and the system displays only the statistics from the new query.
  - The *No ADM records* option is activated by default; that is, the ADM statistics records are hidden. This is useful, as there is a large number of ADM statistics records, but they contain only a small amount of information.

6. Confirm your entries.

## Result

The system displays the statistics records with their general information. You have the following options for a new data selection:

- Fill out a new time window using *New Selection*
- Choose *1 Time Unit Previously* to display the statistics records that were written one time unit earlier, where the time unit corresponds to the read period that you used for the previous data selection
- Choose *1/2 Time Unit Previously* to display the statistics records that were written half a time unit earlier
- Choose *1/2 Time Unit Later* to display the statistics records that were written half a time unit later
- Choose *1 Time Unit Later* to display the statistics records that were written one time unit later

For more information about individual statistics records, double click the relevant record to display the corresponding record in the [Detail View \[Seite 16\]](#).

**See also:**

[Analysis View \[Seite 14\]](#)



## Analysis View

### Definition

The analysis view of the functional trace (transaction STATTRACE) displays the raw statistical data that has been filtered in accordance with the [system selection \[Seite 9\]](#) and the [data selection \[Seite 12\]](#).

### Structure

- A data record contains the most important basic data, such as:
  - Action performed
  - User
  - Service
  - Subrecords for DSRs, where the following abbreviations are used among others:
    - RS for RFC server
    - RC for RFC client
    - CL for client
    - AD for ADM message
    - TB for table records
    - HC for HTTP Client Records
    - CS for call subrecords (a DSR component calls an external component)
  - Response, DB, DBP, and CPU time
  - Call, wait, load, and generation times
  - Process and thread IDs
  - Memory usage

You can use the usual layout functions to add columns, such as the GUID from the [passport \[Seite 20\]](#) or the component name.

- The analyzed (filtered) raw statistical data is displayed in one of the following display types, depending on your settings in the [display and analysis options \[Seite 17\]](#):

***Hierarchy Display:***

In the hierarchy display, the system first displays a list of initial systems; that is, systems in which an action was started. When an action was also processed in other components or instances, the system indicates this with >>>. The system displays a

complete statistics record next to an initial system. This contains the totals of the values of all statistics records that are involved in the action triggered by the initial system.

If you want to display what this complete statistics record consists of, the call hierarchy that was used, expand the tree for the corresponding initial system. The system displays all components that the action ran through and the associated raw statistics records.



An administrator determines that a particular background job repeatedly lasts too long. To determine exactly how the time was spent, the administrator enters the time period to be investigated in *data selection* and specifies the background job as the initial action. A list of systems from which the background job was initially started then appears. The administrator can expand the tree for an initial system whose action lasted a long time and display the call hierarchy. This means that the administrator can see the individual stations that the action ran through. The statistics records for the individual stations are always displayed in chronological order.

### **List Display**

In the list display, the individual records are grouped and listed by transaction ID with color coding. The list display uses an [ALV Grid Control \[Extern\]](#), with which you can extensively adjust the selected view to your requirements. You can use the standard functions of the ALV Grid Control to

- Show and hide columns
- Sort rows by the contents of a column
- Set and delete filters
- Perform summations
- Export tables as a file type of your choice
- Display tables as graphics
- Save sort orders, filters, and selected columns as your layout

You can switch between the *Hierarchy* and *List* displays by selecting the appropriate entry in the *Display* tree in the lower left subwindow.

You can show and hide the left subwindow by choosing *Full Screen On/Off*.

## **Integration**

By double clicking a raw statistics record, you can switch to the detail view, which provides more detailed information.

### **See also:**

[Display and Analysis Options \[Seite 17\]](#)



## Detail View

### Use

If you have performed an analysis, the system displays the basic information for the raw statistics records in the [analysis view \[Seite 14\]](#). You can view more detailed information in the detail view.

### Activities

Follow the procedure below to display detail views:

1. Double click a statistics record in the analysis view.

The *Detail Analysis of Selected Statistics Record* screen appears, in which you can display detail information in list form. The detail information is displayed using different detail views. There are detail views, among others, for the times, databases, data quantities transferred, and so on.

2. If you require a different detail view, open the *Detail View* dropdown menu.

You can select a detail view in this menu. The following detail views are especially important:

Detail View	Description
<i>Client Info</i>	<p>The <i>Client Info</i> detail view corresponds to the client info record (certificate subrecord) of the <a href="#">passport [Seite 20]</a>.</p> <p>With distributed statistics records (DSRs), the passport is sent with the communication so that it is possible to trace, for example, the initiator of an action or the data flow of a business process even beyond component boundaries.</p> <p>The <i>Client Info</i> detail view contains the following information:</p> <ul style="list-style-type: none"> <li>• Name and type of the initial components, such as component ECA of type SAP R/3</li> <li>• Service type, such as background</li> <li>• Initial user</li> <li>• Initial action performed, such as a background job</li> <li>• Action type</li> <li>• Name of the calling component, such as BCE</li> </ul> <p>This means that component ECA starts a background job in BCE.</p>
<i>RFC Dest.Records Client</i>	<p>This RFC detail view and the following RFC detail views provide detailed information about the actions of the DSR components.</p> <p>The components that call other components (destinations) are called clients.</p> <p>This detail view shows which components the client has called. The following details are displayed, among others:</p> <ul style="list-style-type: none"> <li>• Local destination</li> <li>• Remote destination</li> <li>• Number of calls</li> </ul>

	<ul style="list-style-type: none"> <li>• Call time</li> <li>• Received data (in bytes)</li> </ul>
<i>RFC Single Records Client</i>	<p>The individual data records for the client's calls are displayed in this view.</p> <p>This detail view provides the following information in addition to that provided by <i>RFC Dest. Records Client</i>:</p> <ul style="list-style-type: none"> <li>• Program name</li> <li>• Name of the executed function</li> </ul> <p>The system always displays the statistics records that had the highest performance demands. The system displays up to five statistics records.</p>
<i>RFC DEST.Records Server</i>	<p>Like <i>RFC Dest.Records Client</i> with the difference that the component is functioning as a server here. The components that are called by other components (destinations) are called servers.</p> <p>This detail view shows which components called this server.</p>
<i>RFC Single Records Server</i>	<p>Like <i>RFC Single Records Client</i> with the difference that the individual data records displayed here are for the calls of the server.</p>

**See also:**

[Analysis View \[Seite 14\]](#)

[Display and Analysis Options \[Seite 17\]](#)



## Display and Analysis Options

### Use

You have the following options through the *Display and Analysis Options* function:

- You can change the display variant of the [analysis view \[Seite 14\]](#) (default setting: hierarchy). The statistics records are sorted chronologically, as far as possible, in the functional trace. Using the display and analysis options, you can choose whether the records in the analysis view are to be displayed in a call hierarchy or in a list. You can choose between list display and a hierarchy after an analysis has been performed. The options are displayed in the lower left subwindow.
- You can change the timeout with *RFC Wait Time*, that is, the period that the system waits for a remote system to deliver data (default setting: 2 minutes).
- You can also select a different time zone (default setting: CET).



## Application Log

### Use

You can determine the cause of an error in the function trace using the application log function.

## Activities

3. Select the application log function.

The *Display Log* screen appears. The system displays the current log and, if appropriate, the associated message list in the upper half of the screen.

The following message types exist:

 *Termination*

 *Error*

 *Warning*

 *Information*

4. The message texts are displayed in the lower half of the window.
- 5.

### See also:

6. [Operating the Functional Trace \[Seite 7\]](#)



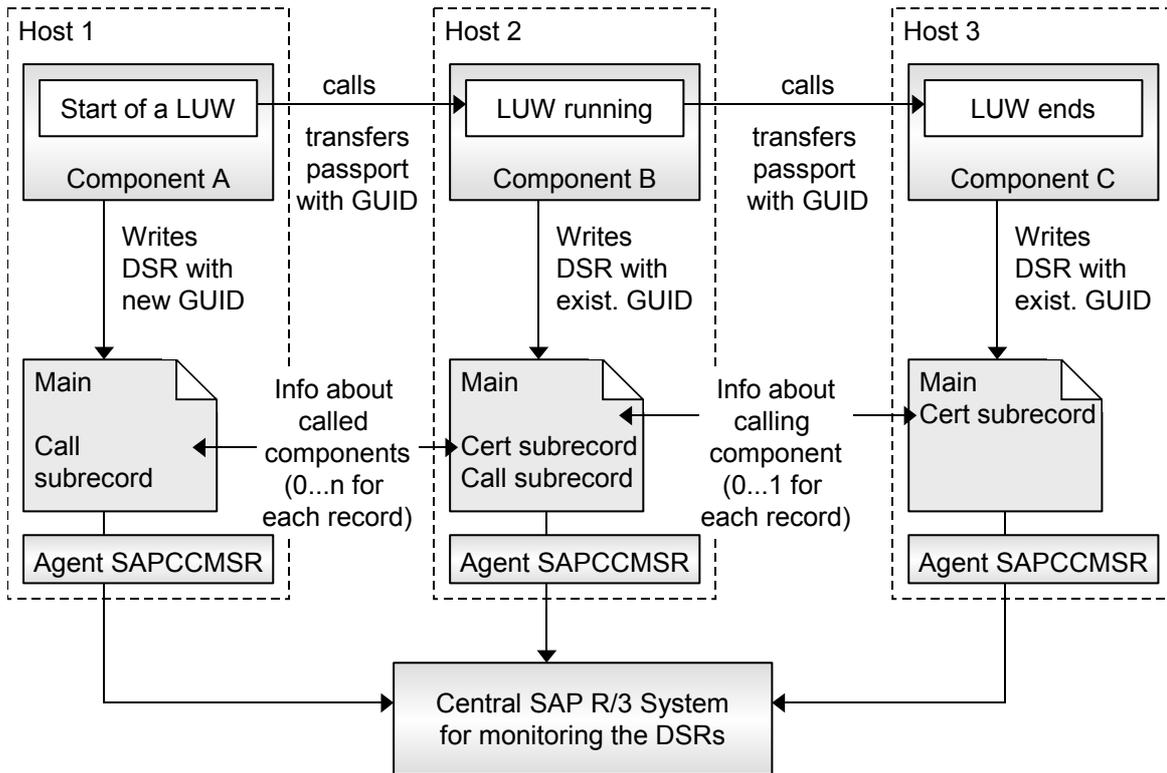
## Distributed Statistics Records (DSRs)

### Definition

Statistics records are created to enable you to monitor the performance of an SAP System and its components. These statistics records provide information about the workload generated and the resources used in the system by actions. This provides you with a very exact picture of the quality of a system. Distributed Statistics Records (DSRs) extend this concept for any components (such as the J2EE Engine). With DSRs, unlike the statistics records for an SAP System, you can trace actions that are processed over several components.

For this reason, there is a [passport \[Seite 20\]](#) that is sent together with every communication. Among other things, the passport contains a GUID that is generated with a new Logical Unit of Work (LUW) and which is used when calling other components within the LUW. By evaluating the DSRs globally, you can collect and analyze all of the data for a LUW.

## DSRs for Actions Over Multiple Components



## Structure

A DSR (= an action) consists of a main record and the subrecords connected to it:

- Main record  
The main record contains performance and administration information about the action of a component.
- Certificate Subrecord (Cert Subrecord)  
The certificate subrecord specifies the source of the LUW. The data contained in this subrecord forms the passport, together with the GUID. There is a maximum of one certificate subrecord for each main record.
- Call Subrecord  
The call subrecord contains information about the called component. There can be any number of call subrecords for each main record.

## Integration

You can display the DSR in the monitoring SAP System using the Global Workload Monitor and the functional trace:

- The raw statistical data (single record analysis) is displayed in the [functional trace \[Seite 1\]](#) (transaction STATTRACE).
- The data is displayed in the [Global Workload Monitor \[Extern\]](#) (transaction ST03G) after the collector aggregates it. You can display the aggregated data from different points of view, such as workload overview or time profile.

For more information, see [Difference Between Functional Trace and Global Workload Monitor \[Seite 6\]](#).



## Passport

### Definition

If the system is generating [Distributed Statistics Records \(DSRs\) \[Seite 18\]](#), which write statistics over component boundaries, the passport is sent together with the communication between the components. Among other things, the passport contains a GUID that is generated with a new Logical Unit of Work (LUW) and which is used when calling other components within the LUW. By evaluating the DSRs globally, you can collect and analyze all of the data for a LUW. The passport contains a trace flag with which performance trace information can be written for every component involved in a LUW for exactly this LUW.

### Structure

The passport corresponds to the certificate subrecord (cert subrecord) of the DSR and contains the following fields:

- *TransID/GUID*
- *TraceFlag* to set the trace flag
- *Initial SysID/ComponentID* with the ID of the initial system or initial component
- *Initial ServiceType* with the initial service type
- *Initial Action* with the initial action
- *Initial ActionType* with the initial action type
- *Initial UserID* with the initial user ID.

These fields are only filled when the passport is created. All subsequent components leave these fields unchanged.

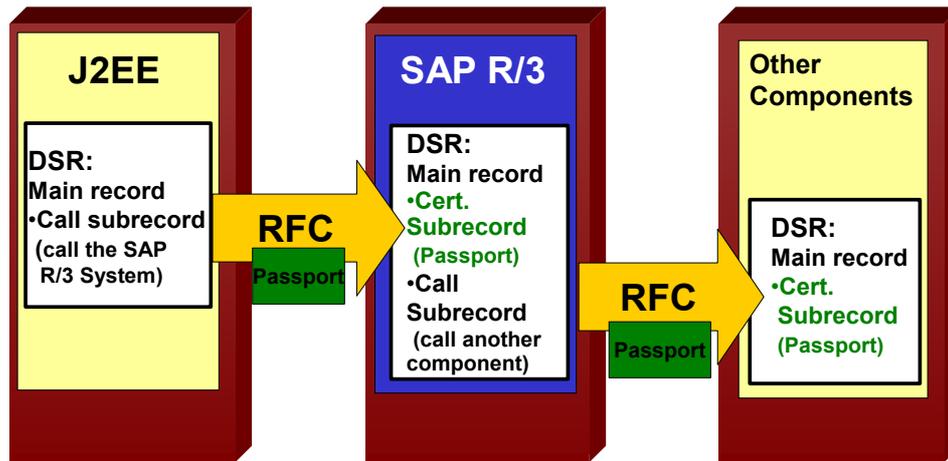
- *PreSysID/PreComponentID* with the ID of the previous system or previous component



The ID of the previous system or previous component is always filled with a system or component's own ID before the passport is sent. This means that the direct predecessor can be identified when the passport is received.

### Integration

- The [functional trace \[Seite 1\]](#) (transaction STATTRACE) can filter raw statistics records using the data of the certificate subrecord (also known as client info record). To do this, you must enter the appropriate values in the [data selection \[Seite 12\]](#) input parameters.
- The figure below shows how the passport is forwarded and linked to the relevant statistics records:



7. The passport is created in the component in which a LUW is initiated. In this example, this is the J2EE Engine. The J2EE Engine sends the passport to the SAP R/3 System and writes a Call subrecord.
8. The SAP R/3 System receives the passport and stores its data as a certificate subrecord. It calls another component, for which a call subrecord is written.
9. The passport is transferred to another component during the RFC call and the certificate subrecord is written in turn into the statistics there.
10. The complete statistics records are transferred to the central SAP R/3 monitoring system (CEN) and displayed.