

PRIMERGY ServerView Suite ServerView Online Diagnostics

ServerView Operations Manager 4.80

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Certified documentation according to DIN EN ISO 9001:2000

To ensure a consistently high quality standard and user-friendliness, this documentation was created to meet the regulations of a quality management system which complies with the requirements of the standard DIN EN ISO 9001:2000.

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Contents

1	Preface	5
1.1	Changes since the last edition	6
1.2	Notational conventions	7
2	Online Diagnostics (overview)	9
3	Test variants	13
3.1	Standard test (predefined)	13
3.2	Stress test (predefined)	15
3.3	User-defined test	17
4	Starting Online Diagnostics	19
5	Using Online Diagnostics	23
5.1	Notes on test execution	24
5.2	“Predefined Tests” tab	25
5.3	“Custom Test” tab	26
5.3.1	Details window for the memory test (Memory Test)	30
5.3.2	Details window for the CPU stress test (CPU Stress Test)	34
5.3.3	Details window for the hard disk test (HD test)	37
5.3.4	Details window for the optical drive test (Optical Drive Test)	41
5.4	“Status and Control” tab	44
5.4.1	Detailed information on the memory test	49
5.4.2	Detailed information on the CPU stress test	50
5.4.3	Detailed information on the hard disk test	51
5.4.4	Detailed information on the optical drive test	52

Contents

Related Publications 53

Index 59

1 Preface

ServerView Online Diagnostics allows you to carry out a range of hardware tests on the managed PRIMERGY server from the remote workstation:

- Memory test
- CPU stress test
- Hard disk (HD) test
- Optical drive test

In doing so, you can either make use of preconfigured test scenarios or adjust the test parameters to match the particular needs of your PRIMERGY server.

Online Diagnostics is installed on the managed server together with the ServerView agents.

Prerequisites on the managed PRIMERGY server

Managed PRIMERGY servers that you wish to test with Online Diagnostics must meet the following prerequisites:

- ServerView agents of Version 4.80 must be installed and running on the server. Note also the release information on the agents in the readme file.



Online Diagnostics is not yet supported on managed Linux servers.

- At least 512 MB of RAM must be fitted.
- To perform the hard disk tests, the selected hard disks must make at least 100 MB of free disk space available to the program.

1.1 Changes since the last edition

This edition is valid for ServerView Online Diagnostics and replaces the following online manual: “ServerView S2 Online Diagnostics”, February 2008.

New designations for the ServerView products

- As of Version 4.7, ServerView S2 has been redesignated as the ServerView Operations Manager (abbreviated to Operations Manager).
- As of Version 4.7, RemoteView has been redesignated as ServerView Remote Management (abbreviated to Remote Management).

The manual has been revised as follows:

- The names of the ServerView products have been adapted.
- Call to ServerView Online Diagnostics from the ServerView Operations Manager has been changed.

1.2 Notational conventions

The meanings of the symbols used in this manual are as follows:

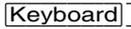
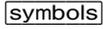
	Warning	This symbol is used to draw attention to risks which may represent a health hazard or which may lead to data loss or damage to the hardware.
		This symbol is used to highlight important information and tips.
		This symbol indicates an action which you must carry out.
<i>Text in italics</i>		In running text, commands, menu items, and the names of buttons, options, variables, files and paths are shown in <i>italics</i> .
Monospaced font		Output from the system is shown in monospaced font.
Monospaced font Bold monospaced font		Commands to be entered at the keyboard are shown in bold, monospaced font.
<abc>		Angle brackets identify variables that have to be replaced by real values.
 		Keys are shown as they appear on the keyboard. If uppercase characters are to be entered explicitly, this is indicated, for instance, by  -  for A. If two keys have to be pressed simultaneously then this is indicated by a hyphen between the key symbols.

Table 1: Notational conventions

If reference is made to passages elsewhere in this manual, the title of the chapter or section is named and the page number given refers to the start of the section.

Screenshots

Please note that screen output sometimes varies from system to system and the screen output shown in this manual may not correspond to the output from your system in every detail. System-related differences between the menu items available can also arise.

2 Online Diagnostics (overview)

This section provides an overview of the installation variants, tests and test scenarios supported by ServerView Online Diagnostics (referred to below simply as Online Diagnostics).

Installation variants for ServerView Online Diagnostics



Online Diagnostics requires ServerView agents as of Version 4.80 to be installed.

Online Diagnostics

The following components interact when Online Diagnostics is running:

- Web browser
- ServerView Operations Manager (referred to below simply as Operations Manager)
- Online Diagnostics

Since Online Diagnostics is installed on the managed server together with the ServerView agents, the following installation variants are possible:

- Installation on **a single** system, i.e. the Web browser, the Operations Manager and Online Diagnostics all run on the managed server.
- Installation on **two different** systems:
 - The Web browser and the Operations Manager run on the central management station,
 - Online Diagnostics runs on the managed server.
- Installation on **three different** systems:
 - The Web browser runs on a separate management console,
 - The Operations Manager runs on the central management station,
 - Online Diagnostics runs on the managed server.

Testing server hardware components with Online Diagnostics

Online Diagnostics allows you to carry out the following tests on the managed server:

– **Memory test**

The memory test tests the main memory (RAM) of the managed server by carrying out a number of subtests. Since part of the main memory is used by the operating system, the memory test in Windows systems cannot test the entire main memory, but only individual areas. The size of these areas depends on the size of the main memory made available by the system configuration of the managed server. To avoid incorrect operation, no further applications should run while the memory test is being performed.

– **CPU stress test**

The CPU stress test tests a number of CPU components such as Core and FPU (Floating Point Unit).

– **Hard disk (HD) test**

The hard disk test verifies the entire free hard disk space on the logical drives on the managed server. The test creates a folder named *temp* on each logical hard disk drive. The temporary test files *SWR*.tmp* (for the sequential read/write test) and *BFT*.tmp* (for the butterfly test) are stored in this folder. These temporary files are generated one after the other during the test and are each 30 MB in size.

– **Optical drive test**

This test checks all the optical drives (CD-ROM/DVD-ROM, CD/DVD copier) on the managed server. The optical drive test for a given optical drive can only be performed if a CD-ROM/DVD-ROM with a capacity of at least 500 MB is inserted in the drive. The maximum duration of the test is restricted to 15 minutes.

Test scenarios, standard and stress tests

In designing these tests, you can either make use of preconfigured test scenarios or adjust the test parameters to match the particular needs of your PRIMERGY server (user-defined tests). You start the tests either immediately or configure a schedule in order to start the tests automatically at defined times. You can choose whether to run the tests once only or to run them periodically at daily, weekly or monthly intervals.

The configured tests can be run as required as:

- **Standard tests** with short run times and at moderate system loads.
- **Stress tests** with long run times and high system loads.

Test monitoring and system messages

At any time during the Online Diagnostics session, you can obtain information about the individual tests and intervene in test execution.

System messages that are issued during an Online Diagnostics session are collected by Online Diagnostics and are available for analytical purposes.

3 Test variants

ServerView Online Diagnostics allows you to choose between the following test variants:

- Standard test (predefined)
- Stress test (predefined)
- User-defined test

3.1 Standard test (predefined)

The standard test consists of a selection of tests with short runtimes (approx. 10 minutes) at moderate system load.

The following individual tests are performed:

- memory test
- CPU stress test
- hard disk test

Memory test

Online Diagnostics runs the standard variant of the memory test under the following conditions:

- The fastest subtests are used (“House Number”, “Pattern”, “Front-side-bus”).
- 20% of main memory capacity is used for this test.
- All available CPUs are used for the test with the exception of the first CPU (CPU0).

Given these conditions, the other applications can continue to run during the test.

For a more detailed explanation of the parameters used in the memory test, see [section “Details window for the memory test \(Memory Test\)” on page 30](#).

CPU stress test

Online Diagnostics runs the standard variant of the PU stress test under the following conditions:

- The load (Load/Idle Ratio) of the CPU is 10%.
- All available CPUs are used for the test with the exception of the first CPU (CPU0).

At a load/idle ratio of 10%, the other applications can continue to run during the test.

For a more detailed explanation of the parameters used in the CPU stress test, see [section “Details window for the CPU stress test \(CPU Stress Test\)” on page 34](#).

Hard disk test (HD test)

Online Diagnostics runs the standard variant of the hard disk test under the following conditions:

- Only the sequential read/write test is performed.
- The thread priority is set to NORMAL.
- All the logical hard disk drives are tested with the exception of the system drive.
- The parameter *Define Max Space* is set to the value 50% so that the test takes up no more than 50% of the free disk capacity.

Given these conditions, the other applications can continue to run during the test.

For a more detailed explanation of the parameters used in the hard disk test, see [section “Details window for the hard disk test \(HD test\)” on page 37](#).

3.2 Stress test (predefined)

The stress test consists of a selection of tests with long runtimes (approx. 2 hours) at high system load. The test parameters are chosen in such a way that RAM bottlenecks are induced and high-priority tasks are performed while also targeting high hard disk throughput.

The following individual tests are performed:

- memory test
- CPU stress test
- hard disk test
- Optical drive test

Memory test



The memory test should only be performed as a stress test if no other applications are running on the managed server.

Online Diagnostics runs the stress test variant of the memory test under the following conditions:

- All seven subtests are performed.
- The thread priority is set to NORMAL.
- 80% of main memory capacity is used for this test.
- All available CPUs are used for the test.

For a more detailed explanation of the parameters used in the memory test, see [section “Details window for the memory test \(Memory Test\)” on page 30](#).

CPU stress test



The CPU stress test should only be performed as a stress test if no other applications are running on the managed server.

Online Diagnostics runs the stress test variant of the CPU stress test under the following conditions:

- The load (Load/Idle Ratio) of the CPU is 50%.
- All available CPUs are used for the test.
- The thread priority is set to NORMAL.

For a more detailed explanation of the parameters used in the CPU stress test, see [section “Details window for the CPU stress test \(CPU Stress Test\)” on page 34](#).

Hard disk test (HD test)

Online Diagnostics runs the stress test variant of the hard disk test under the following conditions:

- Both the butterfly test and the sequential read/write test are performed.
- The thread priority is set to NORMAL.
- All the logical hard disk drives are tested with the exception of the system drive.
- The parameter *Define Max Test Space* is set to the value 50% so that the test takes up no more than 50% of the free disk capacity.

Given these conditions, the other applications can continue to run during the test.

For a more detailed explanation of the parameters used in the hard disk test, see [section “Details window for the hard disk test \(HD test\)” on page 37](#).

Optical drive test

The stress test for the optical drives is performed under the following conditions:

- Both subtests are performed.
- The thread priority is set to NORMAL.



The optical drive test for an optical drive is only performed if a CD-ROM/DVD-ROM with a capacity of at least 500 MB is inserted in the relevant drive.



The maximum period for the test is restricted to 15 minutes.

The other applications can continue to run while the optical drives are being tested.

For a more detailed explanation of the optical drive test parameters, see [section “Details window for the optical drive test \(Optical Drive Test\)” on page 41](#).

3.3 User-defined test

When performing a user -defined test, you can adjust the test parameters to match the particular needs of your PRIMERGY server. For a description of the settings which you are able to configure, see [section ““Custom Test” tab” on page 26](#).

4 Starting Online Diagnostics

You start the Online Diagnostics graphical user interface via the graphical user interface of the Operations Manager.

To do this, proceed as follows:

- ▶ Start the Operations Manager (refer to the manual “PRIMERGY ServerView Suite ServerView Operations Manager”).

The start page of the Operations Manager opens:

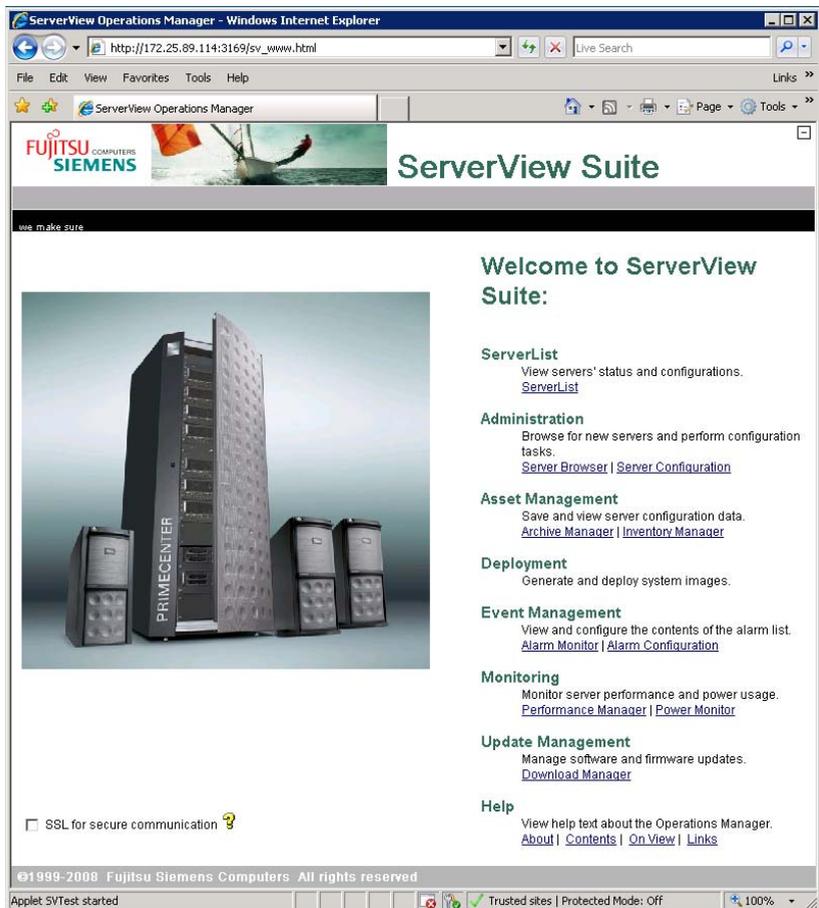


Figure 1: Operations Manager: Start page

Starting Online Diagnostics

- ▶ On the main page of the Operations Manager, click the link *ServerList* under the entry “ServerList”.

The *ServerList* window is displayed (see [figure 2](#)).

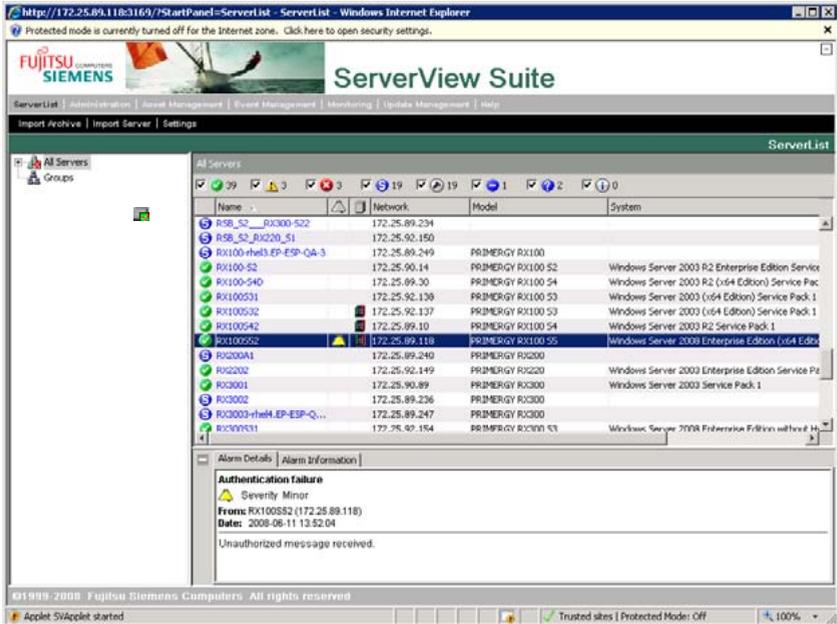


Figure 2: Operations Manager: “Server List” window

- ▶ In the *ServerList* window, click on the server that you want to test with Online Diagnostics.

This opens the following window (see [figure 3 on page 21](#)):

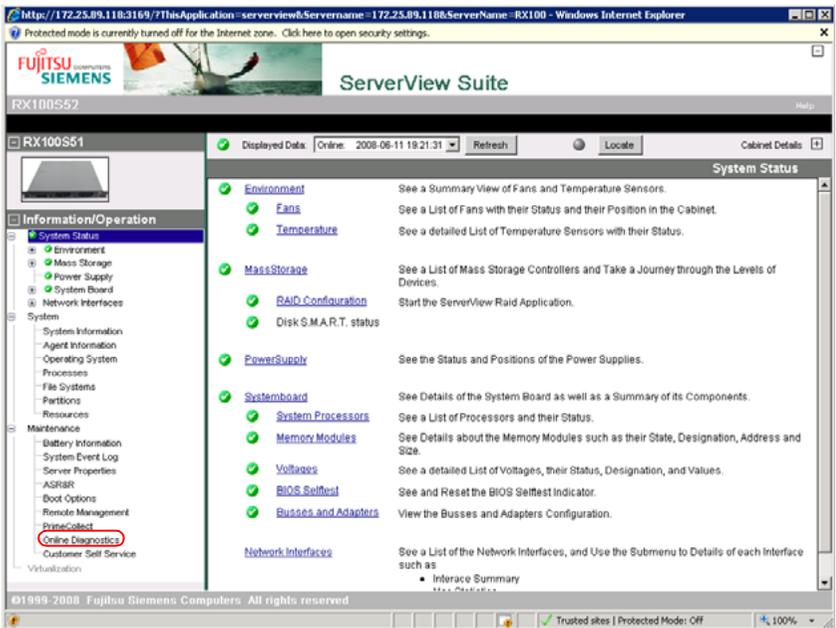


Figure 3: Operations Manager: Select the “Online Diagnostics” menu

- ▶ Under *Information/Operation*, click *Maintenance - Online Diagnostics* to start the Online Diagnostics graphical user interface.

The *Online Diagnostics* view is displayed (see [figure 4 on page 23](#)):

i The *Online Diagnostics* menu item is only displayed if ServerView agents as of Version 4.80 are running.

5 Using Online Diagnostics

When Online Diagnostics is called, the *Online Diagnostics* page opens and contains the following tabs:

- *Predefined Tests*: Runs predefined tests (see [page 25](#)).
- *Custom Tests*: Runs user-defined tests (see [page 26](#)).
- *Status and Control*: Test monitoring and control (see [page 44](#)).

When Online Diagnostics is called, the *Status and Control* tab is initially active.

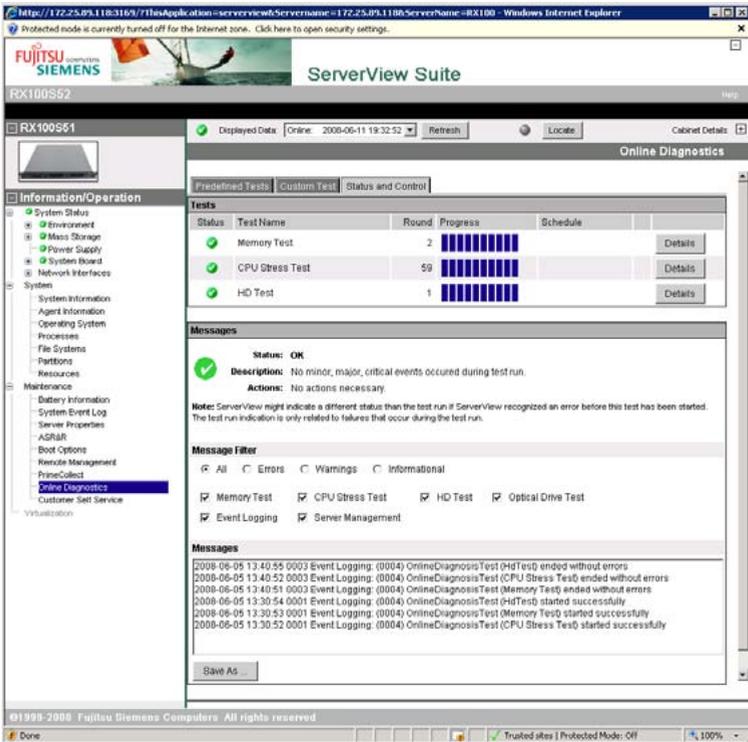


Figure 4: Operations Manager: “Online Diagnostics” view



The system performance and response times of the tested server may be temporarily restricted while the online diagnostic tests are being performed.

5.1 Notes on test execution

System performance and response times at the tested server

The system performance and response times of the tested server may be temporarily restricted while the online diagnostic tests are being performed.

Reboot procedure

When the system is booted, the test handler checks whether there are any active tests. If there are, then the test handler sets these to “Stop”. The status of these tests is then displayed as “stopped” and new tests can be started.

Test duration

The maximum test duration is limited to 72 hours. This permits worthwhile weekend testing. (In the case of the tests of the optical drives, the maximum test period is 15 minutes).

5.2 “Predefined Tests” tab

You use the *Predefined Tests* tab to start predefined test sequences.

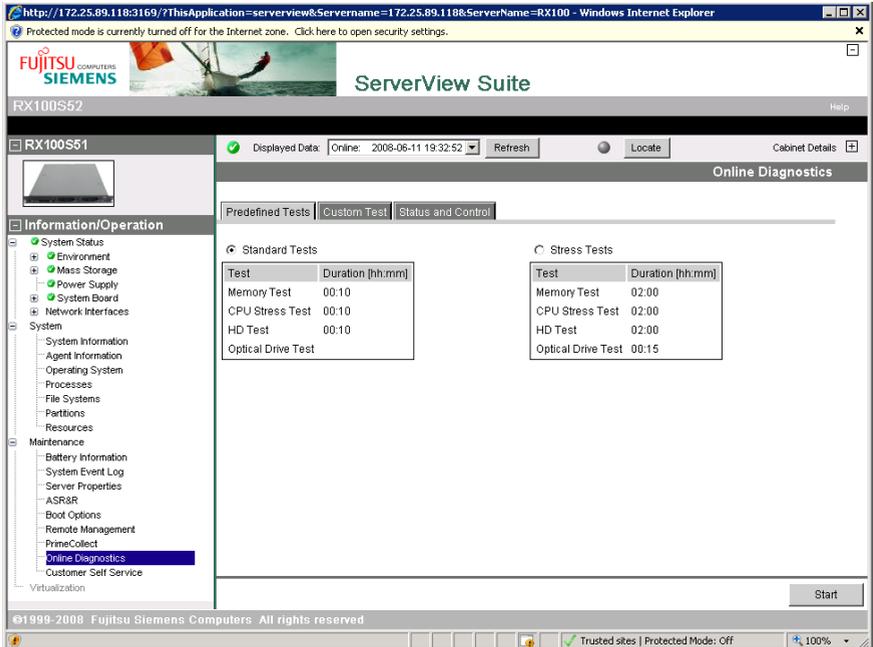


Figure 5: Online Diagnostics: “Predefined Tests” tab

Standard Tests

You choose this option if you want to run the predefined standard tests (see [page 13](#)).

Stress Tests

You choose this option if you want to run the predefined stress tests (see [page 15](#)).

- ▶ Click on *Start* to start the selected test variant.

The *Status and Control* tab is displayed (see [page 44](#)).

5.3 “Custom Test” tab

The *Custom Test* tab allows you to configure all the available test parameters individually. You can also define a schedule for the conduct of the individual tests.

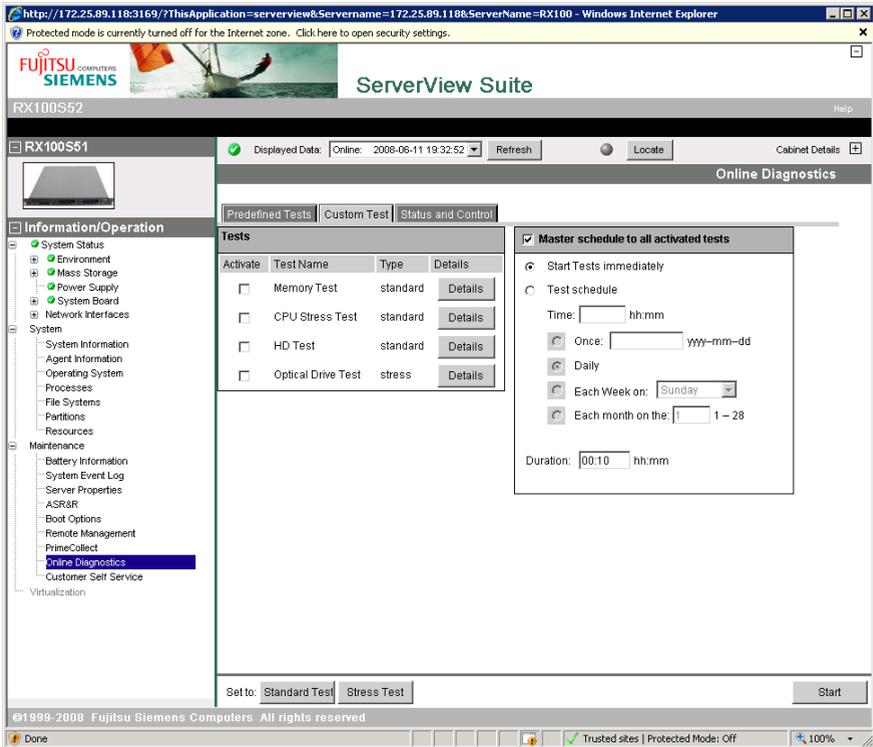


Figure 6: Online Diagnostics: “Custom Test” tab

Tests

The table of available tests is displayed under *Tests*. Each row in the table corresponds to a test. The columns have the following meanings:

Activate

If you check this box then the corresponding test is executed.

Test Name

Online Diagnostics displays the name of the test here.

Type

Here, Online Diagnostics displays the mode in which a test activated with *Activate* is executed:

- standard
The test is run as a standard test with the predefined parameters.
- stress
The test is run as a stress test with the predefined parameters.
- custom
The test is run with user-defined parameters. This value is displayed if you have modified one or more test parameters in the associated detail window which you open by clicking on *Details*.

Details

You can click one of the buttons listed under *Details* to open a detail window for the corresponding test:

- Details window for the memory test: See [page 30](#).
- Details window for the CPU stress test: see [page 34](#).
- Details window for the hard disk test: See [page 37](#).
- Details window for the optical drive test: See [page 41](#).

Master Schedule to all activated tests

Under *Master Schedule to all activated tests* you can define whether all the tests are to be started simultaneously.

Master Schedule to all activated tests

You choose this option if you want to start all the tests at the same time – either immediately or at a scheduled time. If you do not activate this option then the individual tests are started at the times which you define under *Test Time* in the corresponding detail window.

 If you activate the option *Master Schedule to ...* then no scheduler (*Test Time*) is displayed in the corresponding detail windows.

Start Tests Immediately

The tests are started immediately.

Test Schedule

The tests are started together at the times defined below.

Time

The tests are started at the specified time.

 The specified time refers to the time zone of the server to be tested. If the server to be tested is located in New York, for example, and is to be tested at 8 AM then you should enter the value 8:00 in this field irrespectively of the location of the management station or the Web browser.

 If the time zone changes then the managed server must be rebooted.

Once

The tests are started on the date specified in the adjacent box at the time specified under *Time*.

Daily

The tests are started every day at the *Time* specified under time.

Each Week on

The tests are started on the selected day every week at the *Time* specified under time.

Each Month on the

The tests are started on the specified day every month at the *Time* specified under time.

Duration

Duration of the test.



An optical drive test may take no longer than 15 minutes.

If the test duration specified under *Duration* is greater than 15 minutes and the optical drive test is active then Online Diagnostics automatically sets a test duration of 15 minutes for the optical drive test.

Set to:*Standard Test*

Sets the test selection and test parameters to the values of the predefined standard tests (see [page 13](#)).

Stress Test

Sets the test selection and test parameters to the values of the predefined stress tests (see [page 15](#)).

Starting user-defined tests

- ▶ Click on *Start* to start the user-defined tests.



This button is only available if at least one test is activated and one test type has been selected.

The *Status and Control* tab is displayed (see [page 44](#)).

5.3.1 Details window for the memory test (Memory Test)

This window allows you to configure the parameters for the memory test individually.

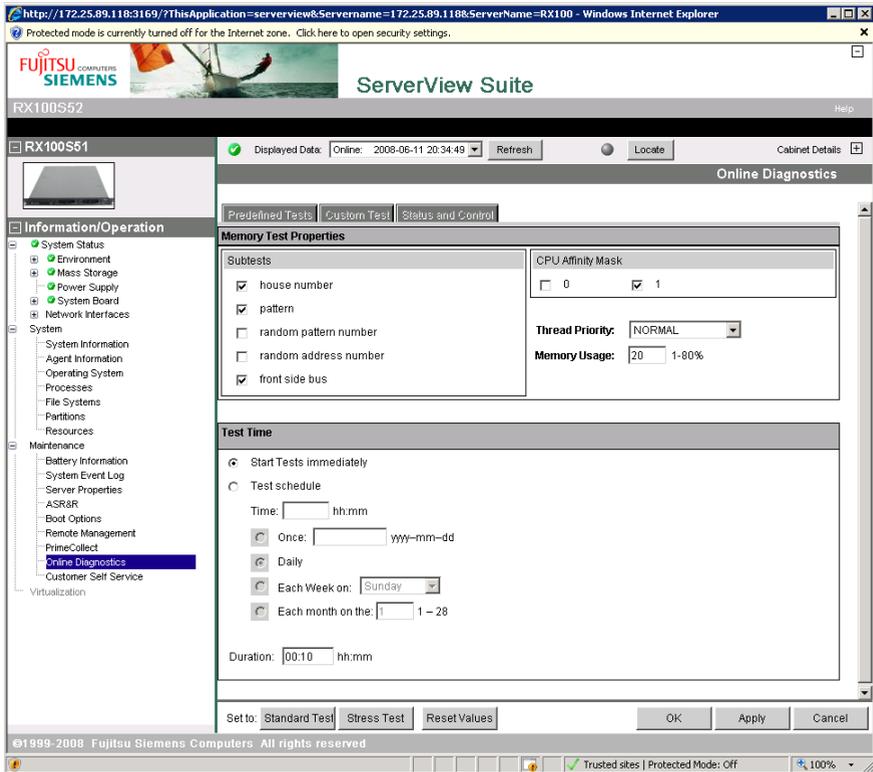


Figure 7: Online Diagnostics: “Custom Test” tab - Details window (memory test)

Memory Test Properties

Under *Memory Test Properties* you specify:

- the subtests to be performed
- the CPU affinity mask
- the thread priority
- the memory load.

Subtests

The subtests that are to be performed as part of the memory test.

The following subtests are available:

- *house number*
The house number test is the fastest of the available subtests. The “house numbers” are written to memory on a linear basis and are then read from memory and checked.
- *pattern*
The pattern test uses 23 different patterns which are not present in the other subtests. The patterns are written to memory on a linear basis and are then read from memory and checked.
- *random pattern number*
The random pattern test differs from the house number test and the (normal) pattern test in that it does not use any fixed patterns. Instead, the patterns are generated on a random basis.
- *random address number*
The random address number test accesses the individual memory addresses on a random basis and thus performs an access sequence in which no address is used twice. This means that as much of the address space as possible is included in the test.
- *front side bus*
This very fast test uses 64-bit patterns to test the managed server's front side bus.

CPU Affinity Mask

CPUs that are to be used for the memory test. You can choose whether the memory test is to be performed at all the available CPUs or just at a subset of these CPUs. All combinations of the individual CPUs are possible.

Thread Priority

Thread priority for the memory test. The priorities are listed in descending order below:

- NORMAL: Normal or standard priority
- BELOW_NORMAL: One point below normal priority
- LOWEST: Lowest priority
- IDLE:

The test is only run if the CPU is in idle mode.



By setting the thread priority to BELOW_NORMAL or LOWEST, you ensure that you can interrupt the test if necessary.

Memory Usage

Proportion (in %) of the **free** memory made available for the execution of the subtests.

Test Time



This area is only displayed if *Master Schedule to all activated tests* has been **deactivated** in the *Custom Test* tab (see [page 28](#)).

You can schedule the conduct of the memory test under *Test Time*. For an explanation of the possible specifications, see [“Master Schedule to all activated tests” on page 28](#).

Set to:

Standard Test

Sets the test selection and test parameters to the values of the predefined standard tests (see [page 13](#)).

Stress Test

Sets the test selection and test parameters to the values of the predefined stress tests (see [page 15](#)).

Reset Values

Sets the test parameters to the values last saved with *Apply* (if such values exist) or to the predefined standard values.

OK, Cancel, Apply

The *OK*, *Cancel* and *Apply* buttons have the following functions:

OK

Saves the changed values and closes the window. The *Custom Test* tab is displayed.

Cancel

Discards the changes after asking you for confirmation and closes the window. The *Custom Test* tab is displayed.

Apply

Saves the changed values.

- ▶ Click the corresponding button to perform the required action.

5.3.2 Details window for the CPU stress test (CPU Stress Test)

This window allows you to configure the individual parameters for the CPU stress test.

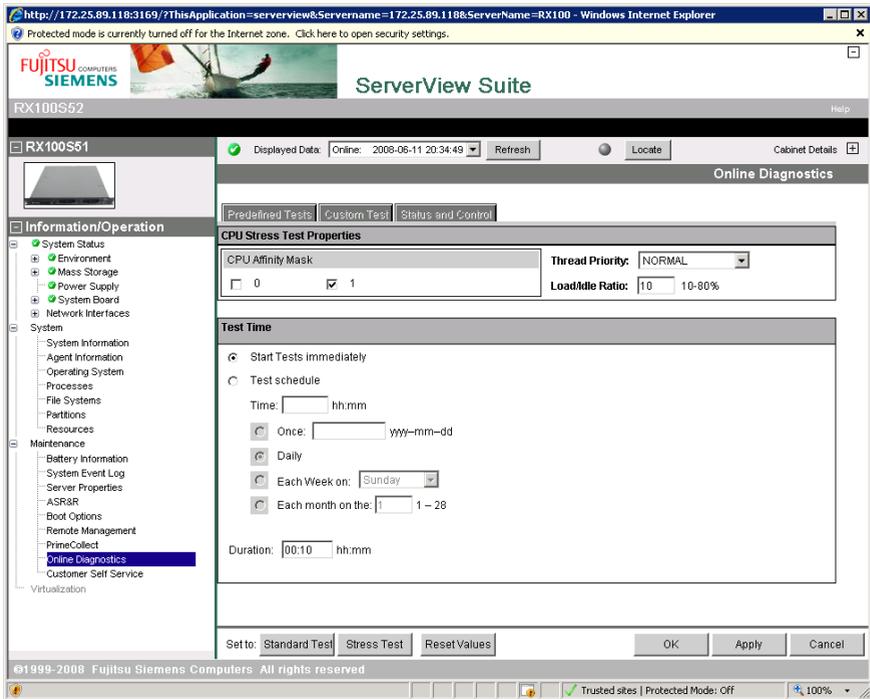


Figure 8: Online Diagnostics: “Custom Test” tab - Details window (CPU stress test)

CPU Stress Test Properties

Under *CPU Stress Test Properties* you specify:

- the thread priority
- the CPU load (load/idle ratio)
- CPU Affinity Mask

Thread Priority

Thread priority for the CPU stress test. The priorities are listed in descending order below:

- NORMAL: Normal or standard priority
- BELOW_NORMAL: One point below normal priority
- LOWEST: Lowest priority
- Idle:

The test is only run if the CPU is in idle mode.



By setting the thread priority to BELOW_NORMAL or LOWEST, you ensure that you can interrupt the test if necessary.

Load/Idle Ratio

Load/idle ratio for the CPU (definable in the range 10% - 80%).

The CPU stress test is a load cycle test which is performed in cycles of 10 seconds each. The load/idle ratio defines the ratio of the load to idle times of the CPU within a cycle. Thus, for example, at a load/idle ratio of 50%, the CPU is subject to load for five seconds and then spends 5 seconds in idle state. At a load/idle ratio of 80%, the CPU is subject to load for 8 seconds and then spends 2 seconds in idle state.

On termination of each 10-second cycle, new cycles are started until the configured test time has expired.

CPU Affinity Mask

CPUs that are to be used for the CPU stress test. You can choose whether the CPU test is to be performed at all the available CPUs or just at a subset of these CPUs. All combinations of the individual CPUs are possible.

Test Time



This area is only displayed if *Master Schedule to all activated tests* has been **deactivated** in the *Custom Test* window (see [page 28](#)).

You can schedule the conduct of the CPU stress test under *Test Time*. For an explanation of the possible specifications, see “[Master Schedule to all activated tests](#)” on [page 28](#).

Set to:

Standard Test

Sets the test selection and test parameters to the values of the predefined standard tests (see [page 13](#)).

Stress Test

Sets the test selection and test parameters to the values of the predefined stress tests (see [page 15](#)).

Reset Values

Sets the test parameters to the values last saved with *Apply* (if such values exist) or to the predefined standard values.

OK, Cancel, Apply

The *OK*, *Cancel* and *Apply* buttons have the following functions:

OK

Saves the changed values and closes the window. The *Custom Test* tab is displayed.

Cancel

Discards the changes after asking you for confirmation and closes the window. The *Custom Test* tab is displayed.

Apply

Saves the changed values.

- ▶ Click the corresponding button to perform the required action.

5.3.3 Details window for the hard disk test (HD test)

This window allows you to configure the individual parameters for the hard disk test.

The hard disk test creates a folder named *temp* for the storage of the temporary test files on each tested logical hard disk drive on the managed server. These temporary files are continuously generated during the test and are each 30 MB in size.



For the hard disk test to be possible, each hard disk to be tested must have at least 100 MB of free disk space.

You can ignore any messages relating to storage bottlenecks on the hard disks which are output during the hard disk test.

The screenshot shows the 'Online Diagnostics' window for server RX100S51. The 'Custom Test' tab is active, displaying the 'HD Test Properties' and 'Test Time' sections.

HD Test Properties

Logical Drives	Volume	Size
<input type="checkbox"/>	C:	29.3 GB
<input checked="" type="checkbox"/>	D: w2k3	14.8 GB
<input checked="" type="checkbox"/>	E: x64	24.4 GB

Subtests

- Butterfly read/write
- Sequential read/write

Thread Priority: NORMAL

Define Test Space: 50 1-100%

Test Time

Start Tests immediately

Test schedule

Time: hh:mm

Once: yy-mm-dd

Daily

Each Week on: Sunday

Each month on the: 1 - 28

Duration: 00:10 hh:mm

Buttons: Set to: Standard Test | Stress Test | Reset Values | OK | Apply | Cancel

Figure 9: Online Diagnostics: “Custom Test” tab - Details window (hard disk test)

HD Test Properties

Under *HD Test Properties* you specify:

- the logical hard disk drives to be tested
- the subtests to be performed
- the thread priority
- the size of the hard disk storage space.

Logical Drives

All the local logical hard disk drives on the managed server are listed here. If you check the box next to a displayed drive designation then this drive is included in the hard disk test.

Subtests

Specifies the subtests that are to be performed as part of the hard disk test. Each subtest creates temporary files in the *temp* directory on the tested hard disk (size: 30 MB). These are written in blocks of 3 MB in size. The two subtests differ in the way the blocks are written to the files:

- *Butterfly read/write*
This test writes the blocks as a butterfly pattern to files with the name *BFT*.tmp*.

When the butterfly read/write test has been successfully terminated, the *temp\BFT*.tmp* files are deleted from the logical drive.

- *Sequential read/write*
This test writes the blocks sequentially to files with the name *SRW*.tmp*.



When the sequential read/write test has been successfully terminated, the *temp\SRW*.tmp* files are deleted from the logical drive.

If the test terminates abnormally or if the system crashes during the test then the temporary files remain on the logical drives and must be deleted “manually” on the next reboot.

When a file has been fully written with these blocks, the subtest checks the blocks using a read/compare operation. This process is constantly repeated for further temporary files until

- either no more free storage space is left on the hard disk,
or
- the maximum storage space made available for the hard disk test has been used (see the description of the *Define Test Space* field below).

Thread Priority

Thread priority for the hard disk test. The priorities are listed in descending order below:

- NORMAL: Normal or standard priority
- BELOW_NORMAL: One point below normal priority
- LOWEST: Lowest priority
- Idle:
The test is only run if the CPU is in idle mode.



By setting the thread priority to BELOW_NORMAL or LOWEST, you ensure that you can interrupt the test if necessary.

Define Test Space

Proportion (in %) of the free disk memory made available for the execution of the hard disk tests.



To prevent the output of Windows messages concerning hard disk bottlenecks, you should set *Define Test Space* to a value in the range 1% - 50%.

Test Time



This area is only displayed if *Master Schedule to all activated tests* has been **deactivated** in the *Custom Test* tab (see [page 28](#)).

You can schedule the conduct of the hard disk test under *Test Time*. For an explanation of the possible specifications, see “[Master Schedule to all activated tests](#)” on [page 28](#).

Set to:

Standard Test

Sets the test selection and test parameters to the values of the predefined standard tests (see [page 13](#)).

Stress Test

Sets the test selection and test parameters to the values of the predefined stress tests (see [page 15](#)).

Reset Values

Sets the test parameters to the values last saved with *Apply* (if such values exist) or to the predefined standard values.

OK, Cancel, Apply

The *OK*, *Cancel* and *Apply* buttons have the following functions:

OK

Saves the changed values and closes the window. The *Custom Test* tab is displayed.

Cancel

Discards the changes after asking you for confirmation and closes the window. The *Custom Test* tab is displayed.

Apply

Saves the changed values.

- ▶ Click the corresponding button to perform the required action.

5.3.4 Details window for the optical drive test (Optical Drive Test)

This window allows you to configure the individual parameters for the optical drive test.

i The optical drive test for an optical drive is only performed if a CD-ROM/DVD-ROM with a capacity of at least 500 MB is inserted in the relevant drive.

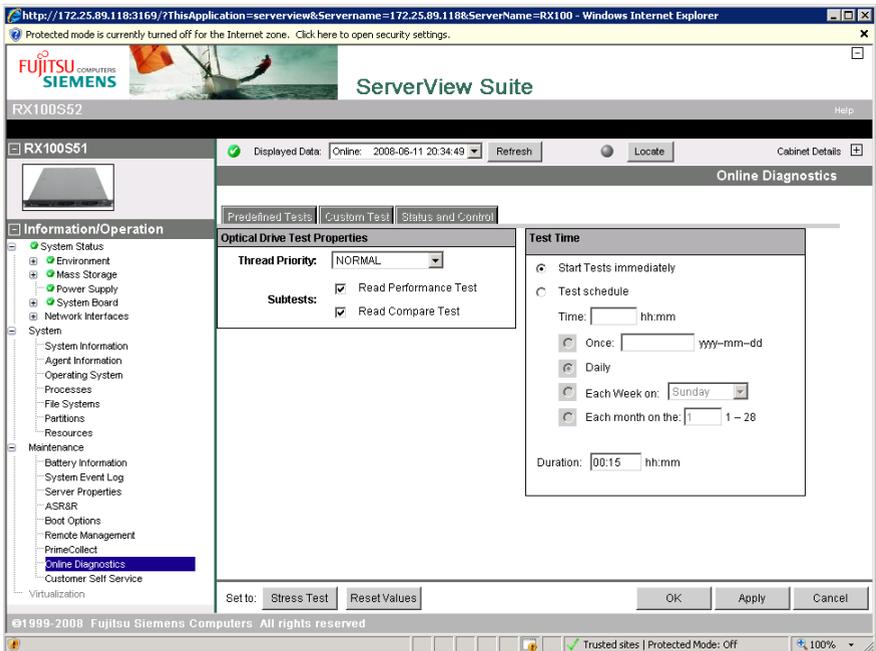


Figure 10: Online Diagnostics: “Custom Test” tab - Details window (optical drive test)

Optical Drive Test Properties

Under *Optical Drive Test Properties* you specify:

- the thread priority
- the subtests to be performed.

Thread Priority

Thread priority for the CPU stress test. The priorities are listed in descending order below:

- NORMAL: Normal or standard priority
- BELOW_NORMAL: One point below normal priority
- LOWEST: Lowest priority
- Idle:

The test is only run if the CPU is in idle mode.



By setting the thread priority to BELOW_NORMAL or LOWEST, you ensure that you can interrupt the test if necessary.

Read Performance Test

The read performance test is performed. This test reads data sequentially from an optical disk on the managed server and verifies the performance of the optical drive.

Read Compare Test

The read compare test is performed. This test reads data from the managed server's optical drive using the butterfly pattern and compares this data with data obtained during a second read operation.

Test Time



This area is only displayed if *Master Schedule to all activated tests* has been **deactivated** in the *Custom Test* window (see [page 28](#)).



Online Diagnostics limits the maximum period for an optical drive test to 15 minutes.

You can schedule the conduct of the optical drive test under *Test Time*. For an explanation of the possible specifications, see “[Master Schedule to all activated tests](#)” on [page 28](#).

Set to:*Stress Test*

Sets the test selection and test parameters to the values of the predefined stress tests (see [page 15](#)).

Reset Values

Sets the test parameters to the values last saved with *Apply* (if such values exist) or to the predefined standard values.

Saving/discarding changes and closing the details window

The following buttons are available:

OK

Saves the changed values and closes the window. The *Custom Test* tab is displayed.

Cancel

Discards the changes after asking you for confirmation and closes the window. The *Custom Test* tab is displayed.

Apply

Saves the changed values.

- ▶ Click the corresponding button to perform the required action.

5.4 “Status and Control” tab

You use the *Status and Control* tab to obtain information on the status of the tests and control test execution. In addition, any messages or alerts logged during the tests are listed here.

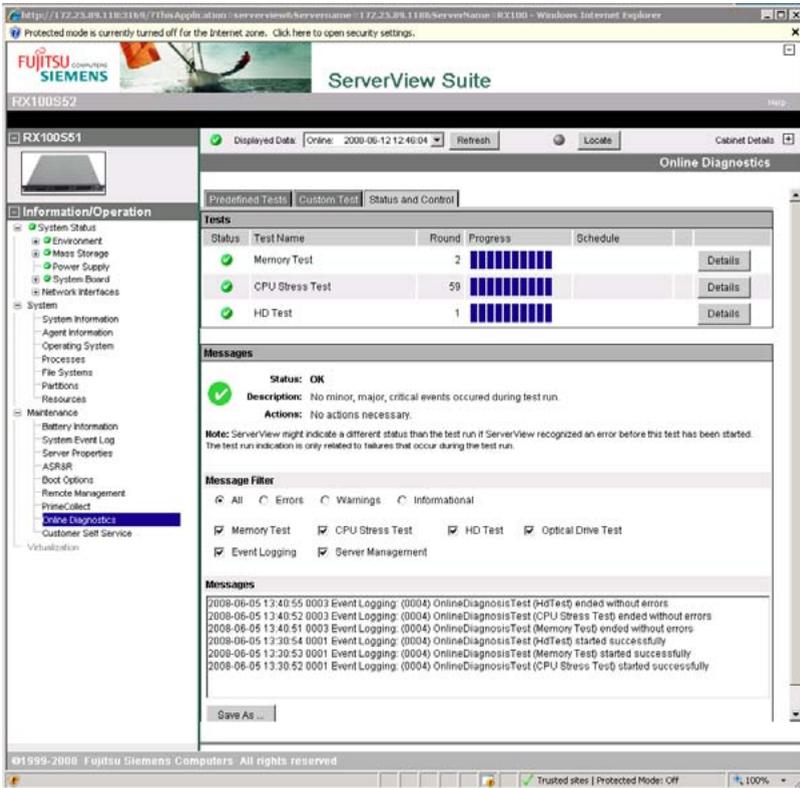


Figure 11: Online Diagnostics: “Status and Control” tab

i When Online Diagnostics starts testing, there may be a delay in displaying the *Status and Control* tab and consequently the current test status. Depending on the refresh rate set as default for the Operations Manager, delays of up to one minute may occur. To display the current values immediately, click *Refresh*.

Tests

Under *Tests*, you see a table of the tests which have been started in the current Online Diagnostics session. Each row in the table corresponds to a scheduled, current or terminated test.

The columns have the following meanings:

Status

The current test statuses are displayed here.

The following statuses are possible:

	The test is scheduled and awaiting its first or next execution.
	The test is currently being executed or has been terminated correctly. So far, no errors have occurred.
	<p>The associated test run could not be executed as scheduled. Possible reasons for this are, for example:</p> <p>A proportion of the hard disk test was skipped since there was not enough free storage space on a logical drive.</p> <p>There was no CD/DVD in the drive when the optical drive test was started.</p> <p>For information on the causes, see the details listed under <i>Messages</i>.</p>
	The test or a part of the test was aborted with an error. For information on the causes, see the details listed under <i>Messages</i> .

Test Name

The name of the test is displayed here.

Round

The current test cycle is displayed here. A started test commences at round 1.

Progress

The progress of the test is displayed here.

Schedule

For scheduled tests, this column shows the time of the first / next execution e.g. *2008-6-11 2:10 once*).

[]

None, one or more of the following buttons may be displayed in the column to the right of *Schedule* depending on the status of the test in question:

	Cancel test. (Displayed if the test is being run or if it is scheduled and awaiting execution.)
	Pause test (Displayed if the test is being run.)
	Continue test. (Displayed if test execution has been interrupted.)

Details

You can click a *Details* button to open a window with detailed information on the corresponding test:

- Detailed information on the memory test: See [page 49](#).
- Detailed information on the CPU stress test: see [page 50](#).
- Detailed information on the hard disk test: See [page 51](#).
- Detailed information on the optical drive test: See [page 52](#).

Stop, Pause and Resume buttons

The *Stop, Pause* and *Resume* buttons are displayed below the status display depending on the status of the tests:

- All tests are completed: No buttons are displayed.
- All tests are being run: *Stop, Pause* buttons
- All tests are scheduled and pending: *Stop* button
- One or more tests have been paused: *Stop, Resume* buttons

Stop

All tests are cancelled.

Pause

All tests are paused.

Resume

All paused tests are resumed.

Messages

All the messages which occur during test execution are listed under *Messages*.



Not all the listed messages refer to the Online Diagnostics tests.

The *Messages* section is divided into the following areas:

- Status display for test execution:
- *Message Filter* area for setting the message filter options

Status display for test execution:

This area documents the overall status of all the tests listed in the *Tests* section.



It is possible that the Operations Manager may display an error status different to that indicated by Online Diagnostics. This occurs if the Operations Manager has already identified a hardware error before the Online Diagnostics test for the component in question is started. The Online Diagnostics display refers only to errors which occur during a test run.

The following statuses are possible:

OK

No minor, serious or critical errors have so far occurred during the test run.

Required action: None

WARNING

Only minor errors have so far occurred during the test run.

Required action: Examine the SEL (System Event Log) for logged hardware errors.

ERROR

Serious and/or critical errors have already occurred during the test run.

Required action: Please contact your Fujitsu-Siemens Computers support service and provide the necessary information.



The error status of the highest priority error that has so far occurred is always displayed as the overall status of all the conducted tests. The sequence of priorities for error statuses is defined as follows: *ERROR* > *WARNING* > *OK*

Message Filter

Here you specify the criteria for filtering message output.

You use the options *All*, *Errors*, *Warnings* and *Informational* to specify the severity level of the messages that are to be output.

You can use a combination of the following options to further restrict message output:

Memory Test, CPU Stress Test, HD Test, Optical Drive Test

Specifies the tests for which messages are to be output.

Event Logging

Application logging messages are displayed.

Server Management

The SEL messages are displayed.



To output all error messages and alerts, you must activate both *Server Management* and *Event Logging*. This may result in some SEL entries being displayed twice.

Save As ...

When you click the *Save As ...* button, a new window opens. This displays all the messages that are listed in the *Status and Control* message window. You can save these messages in an XML file.

5.4.1 Detailed information on the memory test

The screenshot displays the ServerView Suite Online Diagnostics interface for server RX100S52. The 'Status and Control' tab is active, showing the following details:

- Memory Test Status:**
 - Status: ✔
 - Start Time: 2008-06-12 14:23:40
 - Current Round: 1
 - Duration: 0h 10m
 - Progress: 18 %
- Memory Test Messages:**
 - Message Filter: All Errors Warnings Informational
 - Messages: No Entry!
- Memory Test Properties:**
 - Thread Priority: NORMAL
 - Memory Usage: 20 %
 - CPU Affinity Mask: 1
 - Subtests: house number, pattern, front side bus

At the bottom right of the main content area, there is a 'Back' button. The interface also shows a navigation tree on the left with 'Online Diagnostics' selected, and a status bar at the bottom indicating '©1999-2008 Fujitsu Siemens Computers. All rights reserved'.

Figure 12: “Status and Control” tab - Detailed information on the memory test

- ▶ Click on the *Back* button to return to the *Status and Control* tab.

5.4.2 Detailed information on the CPU stress test

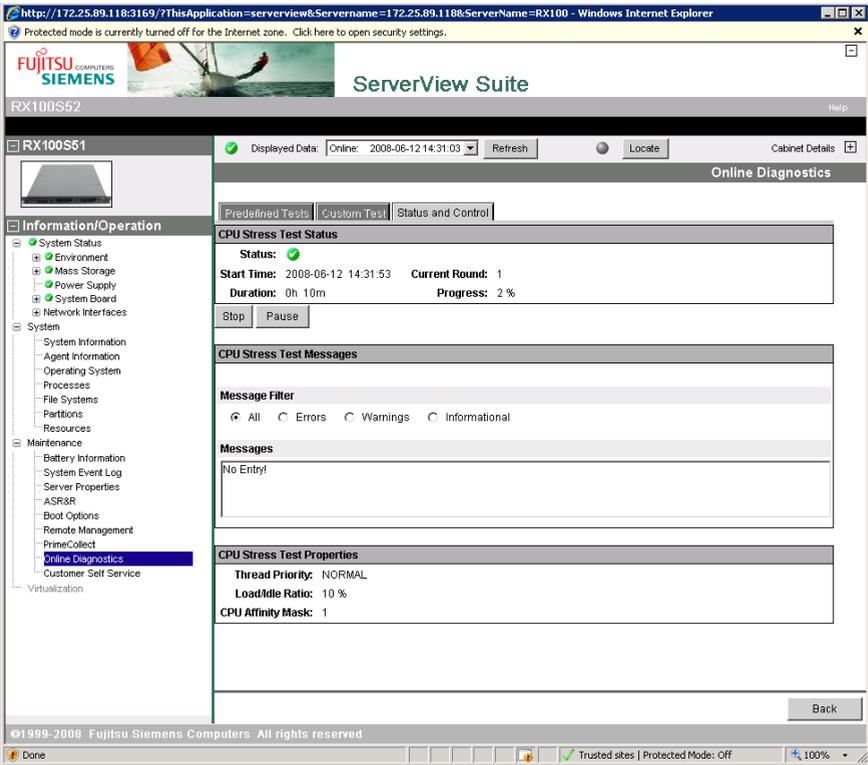


Figure 13: “Status and Control” tab - Detailed information on the CPU stress test

- ▶ Click the *Back* button to return to the *Status and Control* tab.

5.4.3 Detailed information on the hard disk test

The screenshot displays the ServerView Suite Online Diagnostics interface. The browser address bar shows the URL: `http://172.25.89.118:3169/?ThisApplication=serverview&Servername=172.25.89.118&ServerName=RX100`. The page title is "ServerView Suite" and the server name is "RX100S52".

The interface is divided into several sections:

- Information/Operation:** A tree view on the left side containing categories like System Status, Environment, Miss Storage, Power Supply, System Board, Network Interfaces, System, System Information, Agent Information, Operating System, Processes, File Systems, Partitions, Resources, Maintenance, Battery Information, System Event Log, Server Properties, ASR&R, Boot Options, Remote Management, PrimeCollect, Online Diagnostics (highlighted), Customer Self Service, and Virtualization.
- Online Diagnostics:** The main content area, currently showing the "Status and Control" tab. It includes:
 - HD Test Status:** Shows a green checkmark for "Status", "Start Time: 2008-06-12 14:43:16", "Current Round: 1", "Duration: 0h 10m", and "Progress: 2 %". There are "Stop" and "Pause" buttons.
 - HD Test Messages:** Includes a "Message Filter" with radio buttons for "All", "Errors", "Warnings", and "Informational". The "Messages" section below it is empty, showing "No Entry!".
 - HD Test Properties:** Lists "Thread Priority: NORMAL", "Define Test Space: 50 %", "Subtests: Sequential read/write", and "Logical Drives: w2k3 (D:), x64 (E:)".
- Footer:** Copyright notice: "©1999-2008 Fujitsu Siemens Computers. All rights reserved".

Figure 14: "Status and Control" tab - Detailed information on the hard disk test

- ▶ Click on the *Cancel* button to return to the *Status and Control* tab.

5.4.4 Detailed information on the optical drive test

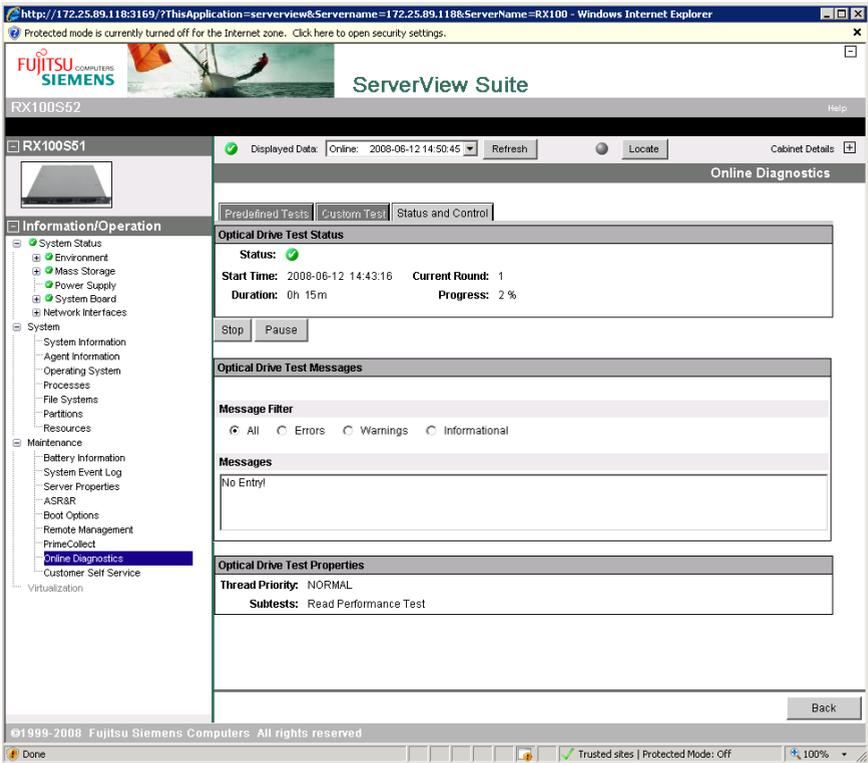


Figure 15: "Status and Control" tab - Detailed information on the optical drive test

- ▶ Click the *Back* button to return to the *Status and Control* tab.

Related Publications

The documentation for the PRIMERGY manuals can be found on the PRIMERGY ServerView Suite DVD 2 supplied with each server system.

The documentation can also be downloaded free of charge from the Internet. You will find the online documentation on the Internet at <http://manuals.ts.fujitsu.com> under the link *Industry standard servers*.

- [1] **ServerView Suite
Basic Concepts**
- [2] **PRIMERGY Glossary**
- [3] **PRIMERGY Abbreviations**
- [4] **Secure PRIMERGY Server Management
Enterprise Security**
PRIMERGY server management for secure,
highly available platforms
White Paper
- [5] **PRIMERGY ServerView Suite
ServerStart**
User Guide
- [6] **PRIMERGY ServerView Suite
Installation Manager**
User Guide
- [7] **PRIMERGY ServerView Suite
Deployment Manager**
User Guide
- [8] **PRIMERGY ServerView Suite
ServerView Operations Manager**
Installation under Windows
Installation Guide

Related publications

- [9] **PRIMERGY ServerView Suite
ServerView Operations Manager**
Installation under Windows
Quick Installation Guide

- [10] **PRIMERGY ServerView Suite
ServerView Operations Manager**
Installation under Linux
Installation Guide

- [11] **PRIMERGY ServerView Suite
ServerView Operations Manager**
Installation under Linux
Quick Installation Guide

- [12] **PRIMERGY ServerView Suite
ServerView S2**
ServerView Agents (Linux, VMware)
Quick Installation Guide

- [13] **PRIMERGY ServerView Suite
ServerView Operations Manager**
Server Management
User Guide

- [14] **PRIMERGY ServerView Suite
ServerView Inventory Manager**
User Guide

- [15] **PRIMERGY ServerView Suite
Archive Manager**
ServerView
User Guide

- [16] **PRIMERGY ServerView Suite
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Command Line Interface
User Guide

- [17] **PRIMERGY ServerView Suite
ServerView RAID Manager**
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- [18] **PRIMERGY ServerView Suite
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- [19] **PRIMERGY ServerView Suite
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- [21] **PRIMERGY ServerView Suite
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- [22] **PRIMERGY ServerView Suite
PrimeUp**
User Guide

- [23] **PRIMERGY ServerView Suite
Bootable Update CD**
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- [24] **PRIMERGY ServerView Suite
ServerView Online Diagnostics**
User Guide

- [25] **PRIMERGY ServerView Suite
Local View**
User Guide

- [26] **PRIMERGY ServerView Suite
Customer Self Service (CSS)**
User Guide

- [27] **PRIMERGY ServerView Suite
PrimeCollect**
User Guide

Related publications

- [28] **PRIMERGY ServerView Suite
ServerView Virtual-IO Manager**
User Guide
- [29] **PRIMERGY ServerView Suite
ServerView Virtual-IO Manager CLI**
Command Line Interface
- [30] **PRIMERGY ServerView Suite
ServerView Integration**
Overview
- [31] **PRIMERGY ServerView Suite
ServerView Integration in Microsoft SMS**
User Guide
- [32] **PRIMERGY ServerView Suite
ServerView Integration in MOM**
User Guide
- [33] **PRIMERGY ServerView Suite
ServerView Integration in SCOM**
User Guide
- [34] **PRIMERGY ServerView Suite
ServerView Integration in Novell Remote Manager**
User Guide
- [35] **PRIMERGY ServerView Suite
ServerView Integration in HP OpenView NNM**
User Guide
- [36] **PRIMERGY ServerView Suite
ServerView Integration in HP OpenView Operations**
User Guide
- [37] **PRIMERGY ServerView Suite
ServerView Integration in Tivoli NetView**
User Guide
- [38] **PRIMERGY ServerView Suite
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User Guide

- [39] **PRIMERGY ServerView Suite
ServerView Integration in DeskView**
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- [40] **PRIMERGY ServerView Suite
RemoteView**
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- [41] **PRIMERGY ServerView Suite
ServerView Remote Management Frontend**
User guide

- [42] **PRIMERGY ServerView Suite
iRMC - integrated Remote Management Controller**
User Guide

- [43] **PRIMERGY ServerView Suite
iRMC S2 - integrated Remote Management Controller**
User Guide

- [44] **Baseboard Management Controller (BMC)
Configuration for PRIMERGY Systems**
User Guide

- [45] **RemoteView Service Board**
Installation Guide

- [46] **RemoteView Service Board S2**
User Guide

- [47] **PRIMERGY BX300 Blade Server Systems**
Operating Manual

- [48] **PRIMERGY BX600 Blade Server Systems**
Operating Manual

- [49] **PRIMERGY Blade Server Systems
RemoteView Management Blade**
User Interface Description
User Guide

Related publications

- [50] **PRIMERGY Blade Server System
LAN Switch Blade**
User Interface Description
User Guide

- [51] **BIOS-Setup**
Description

- [52] **PRIMEPOWER ServerView Suite**
System Administration within a Domain
User Guide

- [53] **FibreCAT CX
Monitoring FibreCAT SX systems with ServerView Operations
Manager**
Welcome Guide

- [54] **FibreCAT SX
Monitoring FibreCAT SX systems with ServerView Operations
Manager**
Welcome Guide

- [55] **StorMan**
Provisioning and managing virtualized storage resources
Administrator and User Guide

- [56] **APC network management card**
User's Guide

- [57] **VMware
VMware ESX Server**
Installation Guide

- [58] **VMware
VMware ESX Server**
Administration Guide

Index

C

CPU stress test [10, 14, 16, 34, 50](#)
Custom Tests [26](#)

D

detailed information
 CPU stress test [50](#)
 hard disk test [51](#)
 memory test [49](#)
 optical drive test [52](#)
Details window
 CPU stress test [34](#)
 hard disk test [37](#)
 optical drive test [41](#)
details window
 memory test [30](#)

H

hard disk test [10, 14, 16, 37, 51](#)

I

installation variants [9](#)

M

memory test [10, 13, 15, 30, 49](#)

N

notational conventions [7](#)
notes
 test execution [24](#)

O

Online Diagnostics [5](#)
 starting [19](#)
 using [23](#)
optical drive test [10, 17, 41, 52](#)

P

predefined test [13, 15, 25](#)
 see also standard test, stress test
Predefined Tests (tab) [25](#)
prerequisites [5](#)

S

ServerView Online Diagnostics
 see Online Diagnostics
standard test [13](#)
 CPU stress test [14](#)
 hard disk test [14](#)
 memory test [13](#)
start
 Online Diagnostics [19](#)
status
 test [44](#)
Status and Control (tab) [44](#)
stress test [15](#)
 CPU stress test [16](#)
 hard disk test [16](#)
 memory test [15](#)
 optical drive test [17](#)

T

tab
 Custom Tests [26](#)
 Predefined Tests [25](#)
 Status and Control [44](#)
test
 predefined [13, 15, 25](#)
 standard [13](#)
 stress [15](#)
 user-defined [17, 26](#)
test execution
 notes [24](#)
test scenarios [11](#)
test status [44](#)
test variants [13](#)

U

use
 Online Diagnostics [23](#)
 user-defined test [17, 26](#)

