

The Sentry-go Monitoring System Performing Script-based Monitoring

Last Updated Wednesday, 04 November 2009

© 3Ds (UK) Limited
<http://www.Sentry-go.com>

Be Proactive, Not Reactive!

Table of Contents

Symbols	2
Background.....	2
How It Works	2
Quick Facts.....	3
Running External Monitoring Scripts	4
Configuring Script Monitoring	6
Defining a Script, File or Job to Run	7
Setting Script Options	9
Running the Script as Another User	12
Determining Success or Failure	13
Scheduling the Check.....	15
Temporarily Ignoring a Configured Job	16
Configuring an Automatic Response	16
Web Reporting with this Monitoring Component	17
The Script Status Report	17
More Information, Help & Support	18



Symbols

Thank you for choosing Sentry-go® as your monitoring solution for Windows. In this guide, the following symbols are used to denote specific items ...



Important information which should be noted – it may affect what you are trying to do.



Additional information relating to the operation being described is shown.

Background

The script monitoring component allows you to fully customise the checks made by Sentry-go and is aimed primarily at ...

- Advanced users who have programming or scripting knowledge
- Those that have a specific, or more unusual monitoring need
- Those who have little or no programming or scripting knowledge but wish to perform more specific or unusual monitoring using the [Sentry-go Scripting Wizard](#).

How It Works

This monitoring component works by managing one or more monitoring scripts, or jobs. These are periodically run automatically, based on the configured schedule and the output analysed by Sentry-go. The success or failure of the job is then determined, based on this output.

Although called the Script monitoring component, a job can in fact be defined as ...

- A command line program
- A batch file
- A script, such as VBScript or Jscript
- An executable program, or .NET command-based application.

During execution, Sentry-go monitors the job, waiting for it to finish. A job finishes either when ...

- It completes its last line of code
- It exits because of a defined condition
- It fails to start or because of an error (e.g. a compilation or runtime error)
- It times out (doesn't complete before the expected, configured period of time).

Once complete, the results are analysed, based on ...

- Either the numeric return code
- By analysing the output of the job
- By analysing the contents of a given file defined by the monitor and written to by the script.

Once the outcome is determined, the component can take action itself, repeat the check, or trigger an alert to one or more administrators.



Quick Facts

Here is a summary of the options available with this component. They are discussed in more detail in the pages that follow ...

Component :	Script Monitor
Aim/Description :	To enable external applications & scripts to be run, perform monitoring and return a result which can be analysed and acted upon.
Main Monitoring Features :	This component supports the following file types ... <ul style="list-style-type: none">• A Windows batch job (.BAT)• A Windows script (VBScript) (.VBS)• An executable program or file (.EXE) written in an appropriate language such as Visual Basic, C/C++, C#• Any .NET development tool etc.
Periodic Monitoring :	✓
Scheduled Monitoring :	✓
Local Monitoring :	✓
Dial-up Support :	✓
Alerting :	All alerting & auto-response options available
Web Reports :	Status report, script detail report
External software req's :	Optional command interpreter (depending on development language used for script etc.) Sentry-go Scripting Wizard.

Running External Monitoring Scripts

To perform script-based logic, simply select the Sentry-go monitor from the Client Console with the right mouse button and click “Configure”.

A window containing a number of tabs will be displayed. To monitor available disk space, select the “Scripting” tab. From here, you can configure the following ...

- Which scripts you wish to run.
- How & when they are to be run.
- How they return their result.
- What should happen if a failure is detected.
- Temporarily disable the running of one or more scripts.

The resulting list will show a list of scripts currently defined to Sentry-go. From here you can add, edit & delete scripts as required.

Sentry-go Configuration - Local Machine

Sentry-go - View & Edit Configuration Settings

Files Ports HTML FTP E-mail SQL Locks Scripts Alerts

Sentry-go is currently running & monitoring the following external scripts ...

Run External Monitoring Scripts

The following scripts are currently defined. You can modify these settings by clicking the appropriate button below ...

Name	Action	No. Errors	Alert Group
<input checked="" type="checkbox"/> Check access to domain controller	No Response - Alert Only	1	1
<input checked="" type="checkbox"/> Verify access to Active Directory	No Response - Alert Only	1	1
<input checked="" type="checkbox"/> Verify COM+ components	No Response - Alert Only	1	1
<input checked="" type="checkbox"/> Test SQL Server Access (live)	No Response - Alert Only	1	1

Scripting Wizard ... Test ... Delete Add ... Edit ...

Scripts should be run every 5 minutes

OK Cancel Help

From here, a number of options are displayed, allowing you to add, edit or remove monitoring scripts, enable/disable them, and even generate and test the running of a script ...

Scripting Wizard ...

Click this button to launch the Sentry-go Scripting Wizard. This in turn allows you to generate scripts using template files & without the need for you to write a line of code.



For more information, please see the [Sentry-go Scripting Wizard](#).

Test ...

Click this button to run the selected script & display the results in a web page.



The script will be run by the monitor, which must itself be running and accept web connections from the client.

The script will be run but no alerts will be triggered even if the script fails or the result indicates an error.

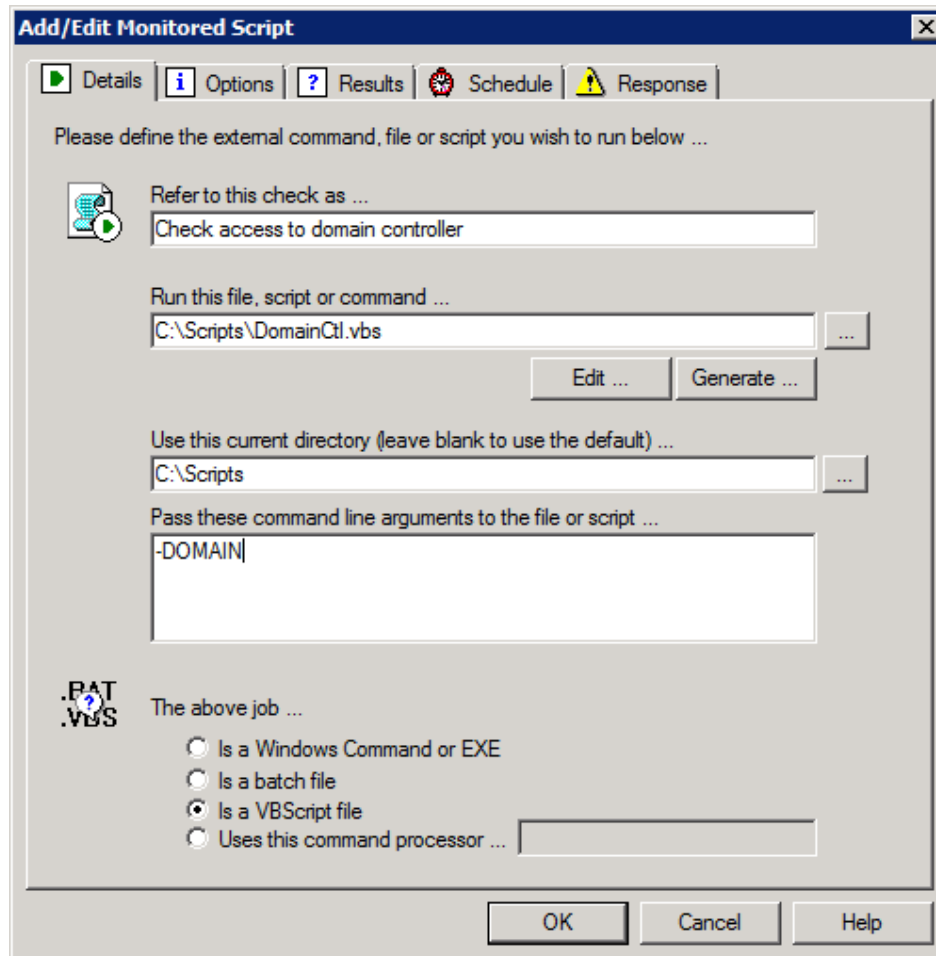
Scripts should be run every (minutes)

This value specifies how often, in minutes, Sentry-go, by default will run each script. To disable all default checks, set this value to 0.

This interval is only used when the interval is set to "Default". You can also configure the monitor to run a particular script at a given time or interval – e.g. hourly, daily etc. To do this, edit the particular script job from the list or configure the interval when the script is defined/added to the list.

Configuring Script Monitoring

To define a new monitoring script or edit an existing one, select the Add or Edit option from the main window.



A series of tabs will be presented, similar to the window shown above, allowing you to define all aspects of the job, how it should be run and how Sentry-go will determine its success or failure.

Defining a Script, File or Job to Run

The first tab allows you to define the script itself & controls how it should be run by the monitor.

Refer to this check as

This field allows you to define a user friendly name for the check. This name is used within alerts as well as on web-based reporting.

Run this file, script or command

Enter the full path and name of the file or script you wish to run. Bear in mind paths should be relative to the local server running Sentry-go.

For remote paths (not recommended), use a full UNC name (e.g. \\ServerName\ShareName\ScriptName) etc.

Click the “...” to select your script from the file system

Generate ...

Click this button to launch the Sentry-go Scripting Wizard, which allows a number of predefined scripts to be selected & customised to your individual needs without the need for coding.



For more information, please see the [Sentry-go Scripting Wizard](#).

Edit ...

Once a filename has been entered above, click “Edit” to launch Notepad in order to view the script’s logic or edit it further. Only text-based files can be loaded into Notepad.

Use this current directory ...

When the external command, file or script runs, it may make assumptions about the current directory. To force the current directory to be a specific location, enter the path here or click the “...” to chose a folder from Windows.

If no value is entered, the monitor’s own current directory will be used when launching & executing the script.

Pass these command line arguments to the file or script

If your file or script accepts or requires one or more command-line parameters, enter them here. These will be passed, as command-line arguments to the script at runtime.



Typically each parameter will be separated with a comma & strings or long filenames should be enclosed in double quotes.

The above job (script type)

These options allows you to select the type of file or script you will be running which in turn determines how it will be launched by the monitor. You can select one of the following ...

- **Batch file (.bat).**

Batch files are run through the Windows command-line interpreter (CMD), as though they were run on the command line. No additional command interpreter is required.

- **VBScript (.vbs).**

These scripts are run using the Windows Scripting Host (CScript).

- **Executable or Command (.exe).**

Like batch files, these programs are run directly from the command line (CMD) as an executable. Standard command-line commands such as "PING" are also, in effect, executables. No additional command interpreter is required.

- **Other.**

For other types of file, or where you wish to use an alternative command processor, select this option & enter the appropriate command in the field provided. The command entered will be run, and the script passed to it, along with any command-line arguments..



Regardless of the type selected, the script monitor will generated & run the command line using a Windows Command Shell (CMD). If a command processor (or CScript) is used, this will be called from the command shell itself, thus allowing the monitor to access output information more readily.

The above selection will, however, be used to determine how the command line is generated and in particular, which command is initiated first.

Command Processor

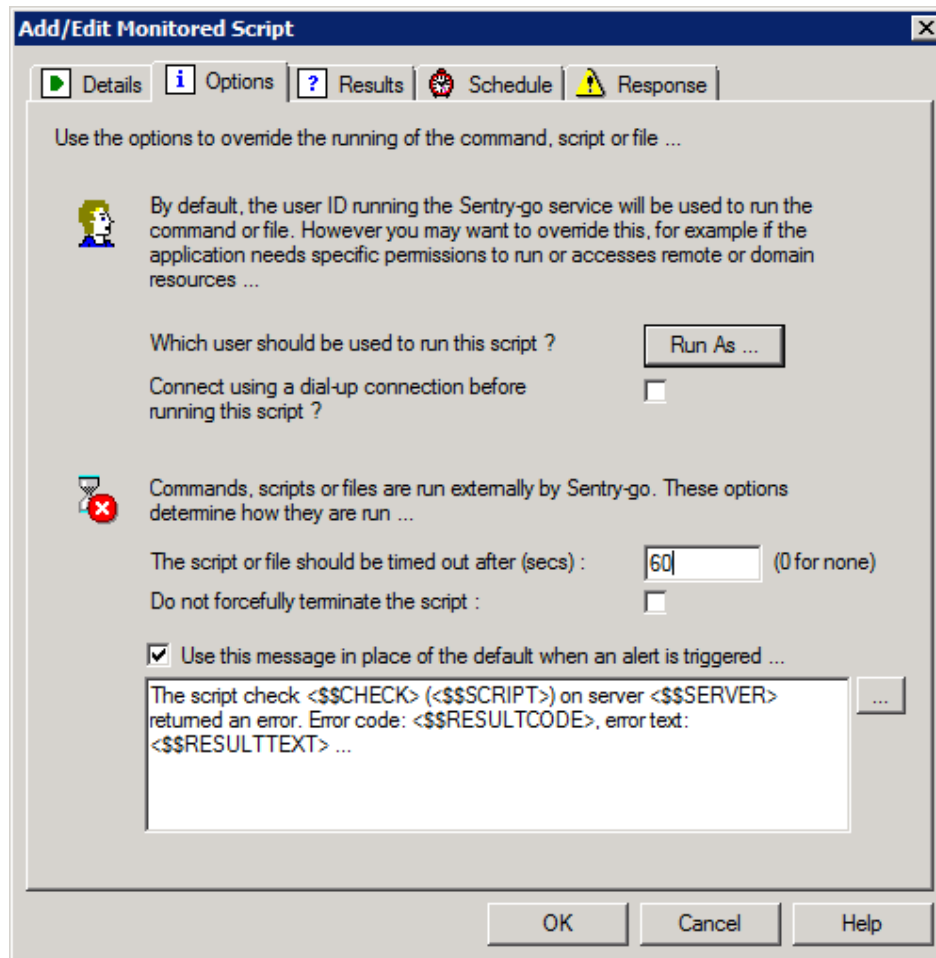
If you selected "other" above, this is the name of the command processor (if any) you wish to use.



The command processor entered must be available on the server being configured. If it isn't, the job may fail with unpredictable results.

Setting Script Options

The second tab allows you to control how the script will be run and how Sentry-go will monitor it whilst it is running.



Run As ...

By default the file or script will be run using the same user account that is running the monitor service. However, if the job requires specific permissions, or access to resources only available to a given domain user for example, you can specify the user here. For more information, see "Running the script as another user" below.

Connect using dial-up ...

Tick this option if your server isn't permanently connected to the network & you want Sentry-go to use dial-up to connect prior to running the script. You may wish to do this if the script accesses remote resources for example, that are only available once a dial-up connection has been established.


For more information, please see ["Sentry-go - Configuring Dialup Networking"](#).

The script or job should time out after ...

This option allows you to control how long the monitor should wait before a script that is yet to complete is forcefully timed out. If set to 0, no timeout will occur and the monitor will wait indefinitely. If set to a value, the value here determines the maximum wait time. If the job is timed out, it is considered to have failed (and will fail with a timeout error).

Do not forcefully terminate the script (not recommended) ...

Tick this option to instruct the monitor not to forcefully attempt to terminate the script even if it is timed out. In this case, the script will simply fail with a timeout error and be forgotten, even though it remains running.

 **Use this option with care.** This is useful if you want to ensure the script doesn't leave any data or resources in an indeterminate state, however it should be used with caution as a timeout may also indicate a failure within the called script or logic. The script will continue to be called and so repeated failures could cause server resources to be depleted.

Even if the called job is terminated, the underlying command processor (e.g. the CScript job) may not. Timeout errors should always be investigated at the earliest opportunity & rectified as soon as possible.

Use this error message ...

By default, when un-ticked, a default error message will be used when a script either fails, or returns a failure. By ticking this option, you can override this default text for the file or script being defined and use your own message instead. The message text is entered in the field below.

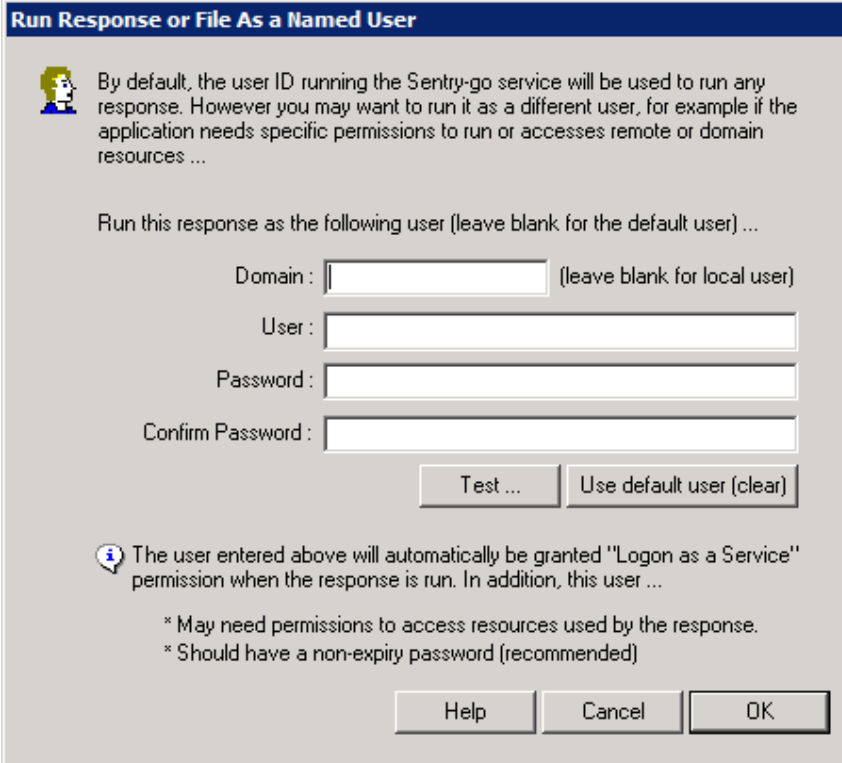
For help in defining this message text, click the appropriate “...” button to launch the message builder. See [“Sentry-go – Place-markers”](#) for more information.

In addition to normal text, the following place-markers can also be included within the message. These are resolved at runtime and allow you to include your own error-specific information ...


This place-marker ...	Resolves to ...
<code><\$\$SERVER></code>	The server on which the script is running and the alert was triggered from.
<code><\$\$SCRIPT></code>	The full path & name of the script being run.
<code><\$\$RESULTCODE></code>	The numeric result returned from the script, or 0 if no result was returned.
<code><\$\$RESULTTEXT></code>	All result text output by the script (merged into a single string), or blank if no text or output was returned.
<code><\$\$RESULTERROR></code>	Where possible, the line that contained the error text, or if not, the complete text output, or blank if no text or output was returned ... <ul style="list-style-type: none">• If only one keyword indicates an error, the line containing the first keyword found will be returned.• If all keywords on the same line indicate an error, the first line containing all keywords will be returned.• Otherwise, the complete text output (merged into a single string) will be returned.
<code><\$\$CHECK></code> or <code><\$\$TEST></code>	Both these markers resolve to the name of the test being performed – the name as defined to Sentry-go.

Running the Script as Another User

By default, the file or script will be run as the user running the Sentry-go monitoring service. Typically this will be the local system account which has administrative privileges to the local machine only. If you wish to run the file under a specific account – e.g. a domain account with specific permissions or an account which has access to network resources etc, you can specify a named user ...



Run Response or File As a Named User

 By default, the user ID running the Sentry-go service will be used to run any response. However you may want to run it as a different user, for example if the application needs specific permissions to run or accesses remote or domain resources ...


Run this response as the following user (leave blank for the default user) ...

Domain : (leave blank for local user)


User :


Password :

Confirm Password :

 The user entered above will automatically be granted "Logon as a Service" permission when the response is run. In addition, this user ...


- * May need permissions to access resources used by the response.
- * Should have a non-expiry password (recommended)

 To run the script under the same account as the user running the Sentry-go monitoring service (the default behaviour), simply ensure no entries are made – click the “Use default user (clear)” button.

 In order to ensure the script is run correctly, the entered user must ...

- Have “logon as a service” permission.
- Permissions to access any required resources.
- Have a non-expiry password (recommended).

To check that the user/password combination is valid from the monitoring server click the “Test” button. When selected, the Client Console connects to the target monitoring server (the server being configured) in order to verify the logon details & attempts to load their profile. The results are also displayed in the resulting web page.

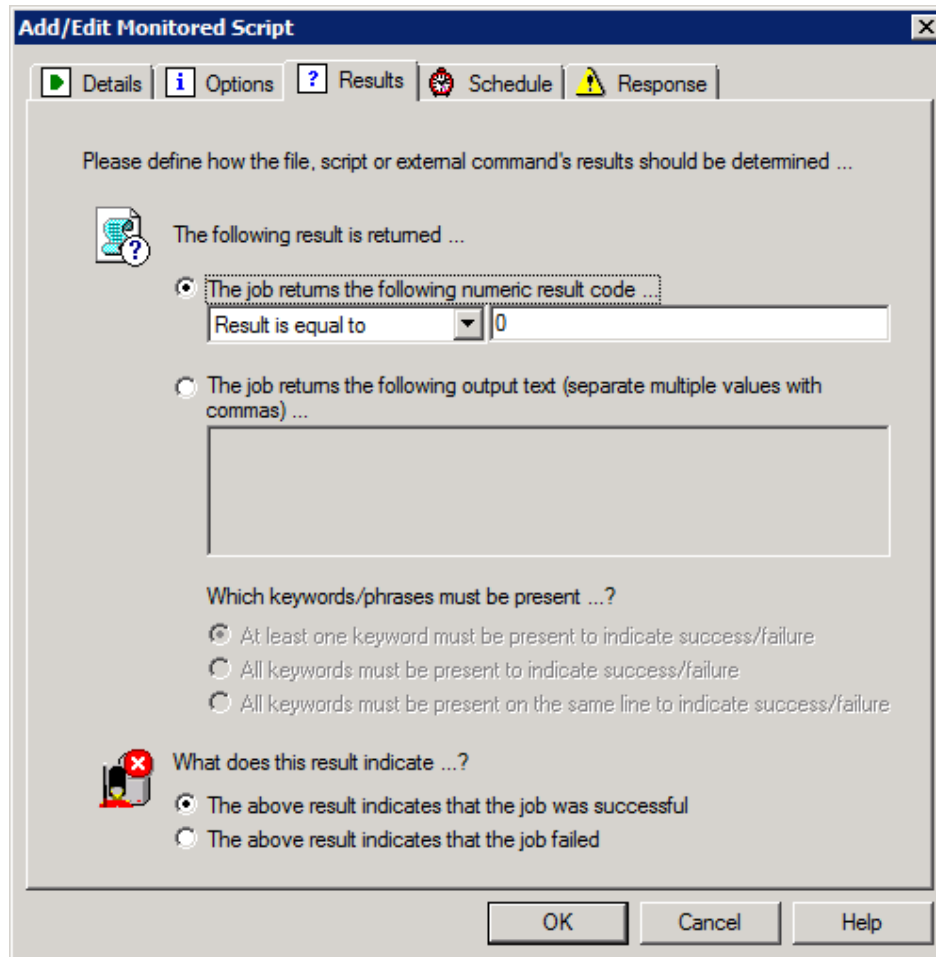
 In order to check the configuration, the target Sentry-go monitor must be running with web reports enabled.

The script itself is not run, only logon details are verified at this stage.

For more information on the Sentry-go log file, see [Sentry-go - Configuring Logging Options](#).

Determining Success or Failure

The third tab allows you to configure how the monitor should interpret the results from the script. In particular, you define how the script will return a result and the meaning of these results.



The following result is returned

The job or script can return a result either as a numeric return code, or via its output ...

- **The job returns the following return code**

If the script returns a numeric value, select this option. You can then use the associated fields to indicate how the results should be interpreted. In most cases, a return code of 0 indicates success whereas any other code indicates failure.

- **The job returns the following output text**

In some cases, you may wish to use the output from the script instead of the numeric return code. This is also true for command-line tools which cannot or do not pass back a return code. In this case, you can automatically analyse the results that ordinarily would have been displayed as output.

During execution, output is directed to a temporary file. If this option has been specified, the monitor will compare the keywords/phrases entered here against those found in this output file. This will then be used to determine whether the job was successful or not. Enter one or more text strings, separated by commas.

With this option, the following options are used to indicate how the keywords must be present to indicate the given result (success or failure – see below) ...

- **At least one keyword must be present**

Select this option if finding any of the keywords or phrases present is enough to indicate success or failure of the script.

- **All keywords must be present**

Select this option if all keywords must have been output to indicate success or failure of the script. If multiple output lines are returned, the keywords can appear on any of them, but they must all be present.

- **All keywords must be present on the same line**

Select this option if all keywords must have been output on the same line to indicate success or failure of the script. If multiple output lines are returned, the keywords must all appear together on the same line.

These results indicate success/failure

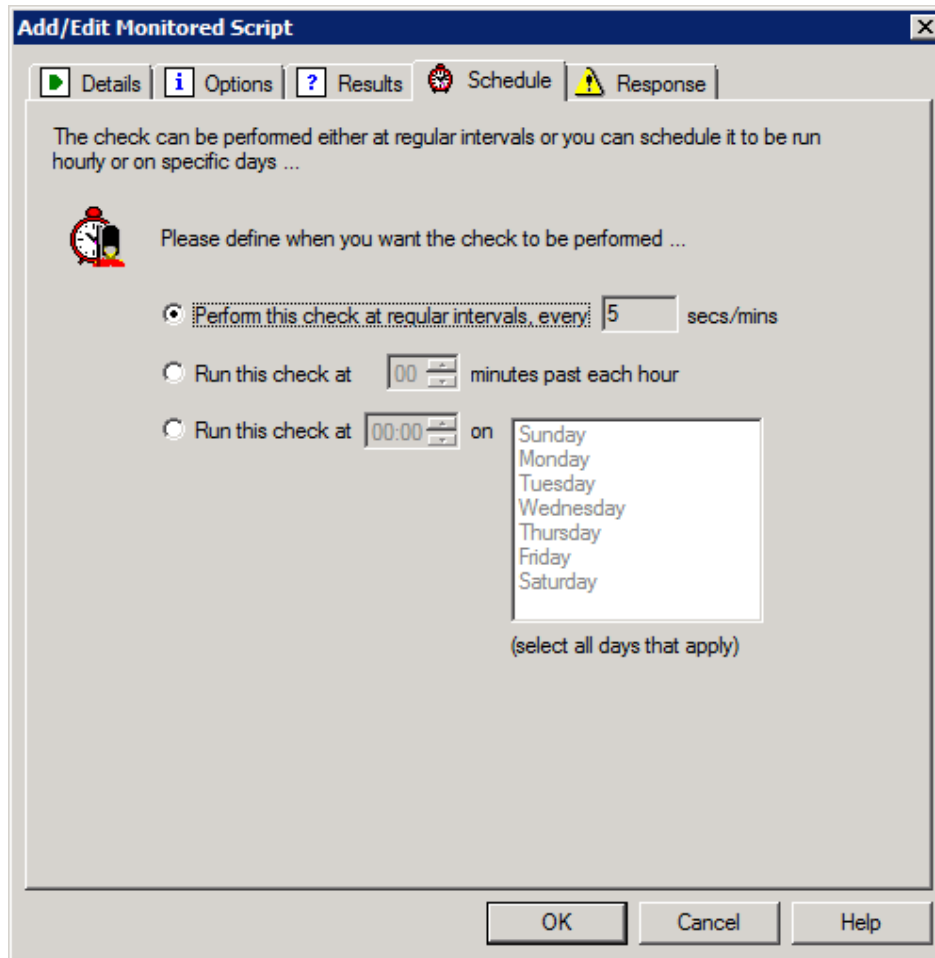
The above options allow the monitor to search for results after the script or job has completed. Use this option to determine whether the values entered above indicate that the script worked successfully, or whether it indicates a failure.

- If set to success, the above value(s) indicate that script worked and no alert will be triggered. Any values not listed will indicate failure and cause an alert to be triggered.
- If set to failure, the above value(s) indicate that script failed and an alert will be triggered. Any values not listed will indicate that the script was successful.

Scheduling the Check

By default, each job is run periodically at regular intervals throughout the day. The frequency of these checks is determined by the value specified at the bottom of the main list.

However, there may be times when you wish to run it at a different time, maybe at a set time each day, or on certain days etc. To do this, select the “Schedule” tab.



From here you can define exactly when the check is to be performed.

Perform this check at regular intervals, every (mins)

Select this option to use the default interval specified at the bottom of the on the main list window. In this case the check will be performed every X minutes.

Run this check at HH:MM and every hour thereafter

Select this option to run the check at the specified time past each hour. In this case, only the minutes (MM) are used to determine when the check is to be performed.

Run this check at HH:MM On [Days]

Select this option to run the check at the specified time on the given days. In this case, the check will be performed at the given time if the associated day has been selected. Select all days that apply.

Temporarily Ignoring a Configured Job

In some cases, you may wish to exclude a job from monitoring without removing it permanently. To do this, simply remove the “tick” or check against the entry you wish to ignore in the main list.

Configuring an Automatic Response

In the event the job cannot be run, or it returns indicating that an error has been detected, an alert will be triggered. In this case, Sentry-go can be configured to either respond automatically (i.e. take action itself), alert one or more Administrators, or both.

To configure what the monitor should do in the event an error is detected, select the entry from the list and click Edit. On the resulting window, select the Response tab.



For more information on the options available as well as details on how to configure alerts & responses, see [Sentry-go - Configuring Alert & Automatic Response Options](#).

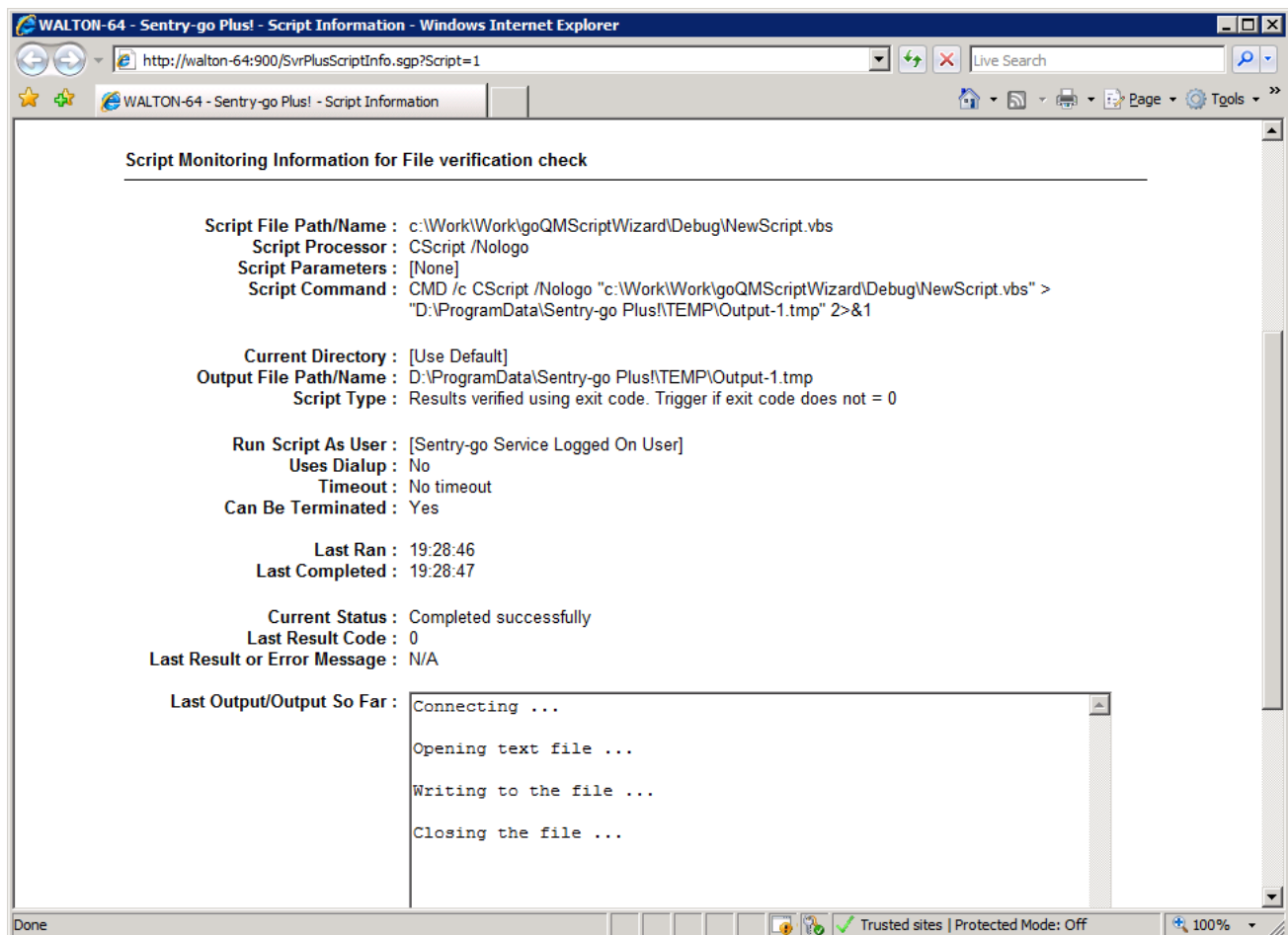
Web Reporting with this Monitoring Component

In addition to the [standard Sentry-go web reports](#), this component provides the following additional reports for this component. These can be accessed via the monitor's status report or the Client Console "Test" option.

The Script Status Report

This report gives full details of the select script, the last time it ran and the results it generated. It is accessed by clicking the appropriate "Full Details" link within the Script-monitoring section of the Current Status report.

URL, accessed from : `http://<Server Name>:<Port>/SgoMntrStatus.sgp`



The screenshot shows a Windows Internet Explorer browser window displaying the 'Script Monitoring Information for File verification check'. The browser's address bar shows the URL `http://walton-64:900/SvrPlusScriptInfo.sgp?Script=1`. The page content includes the following details:

- Script File Path/Name :** `c:\Work\Work\goQMScriptWizard\Debug\NewScript.vbs`
- Script Processor :** `CScript /Nologo`
- Script Parameters :** `[None]`
- Script Command :** `CMD /c CScript /Nologo "c:\Work\Work\goQMScriptWizard\Debug\NewScript.vbs" > "D:\ProgramData\Sentry-go Plus\TEMP\Output-1.tmp" 2>&1`
- Current Directory :** `[Use Default]`
- Output File Path/Name :** `D:\ProgramData\Sentry-go Plus\TEMP\Output-1.tmp`
- Script Type :** `Results verified using exit code. Trigger if exit code does not = 0`
- Run Script As User :** `[Sentry-go Service Logged On User]`
- Uses Dialup :** `No`
- Timeout :** `No timeout`
- Can Be Terminated :** `Yes`
- Last Ran :** `19:28:46`
- Last Completed :** `19:28:47`
- Current Status :** `Completed successfully`
- Last Result Code :** `0`
- Last Result or Error Message :** `N/A`
- Last Output/Output So Far :**

```
Connecting ...
Opening text file ...
Writing to the file ...
Closing the file ...
```

The browser's status bar at the bottom shows 'Done', 'Trusted sites | Protected Mode: Off', and '100%' zoom level.

More Information, Help & Support

More information can be found in the guides that accompany the Sentry-go software. You can also access the following resources ...

- For the very latest information & product updates, please visit <http://www.Sentry-go.com>
- For sales advice, please e-mail Sales@Sentry-go.com
- For technical support, please e-mail Support@Sentry-go.com



3Ds (UK) Limited
Design, Develop, Deliver Solutions!

69, Esher Road,
East Molesey,
Surrey.
KT8 0AQ

<http://www.3Ds.co.uk>