Dr Solomon's Scheduler

Welcome to Dr Solomon's Scheduler.

This program is included as part of the award-winning Dr Solomon's Anti-Virus Toolkit.

Dr Solomon's Scheduler allows you to execute FindVirus on your computer, even while it is unattended. Using easy-to-follow dialogs, you simply choose which drives to scan, from a ready-made list box. You can even select your favorite FindVirus scan configuration simply by checking a list of options.

You can ask FindVirus to execute just once, or at regular intervals. Either way, all you need to do is to click on a calendar the date and time at which you want FindVirus to start. If you want FindVirus to run regularly, all you need to do is to specify the time interval, for example every week. If you choose, you can even specify an "End Time" for FindVirus. This means that FindVirus will execute at regular intervals, but only between the start and end times.

But that's not all! Not only can you use Dr Solomon's Scheduler to set up FindVirus, you can in fact schedule **any** program to run. It doesn't have to be one of the utilities shipped with Dr Solomon's Anti-Virus Toolkit, it can be any executable file, or batch file which you have access to. You can execute it remotely and at regular intervals.

Even better, under Windows NT you can use Dr Solomon's Scheduler to send messages to yourself, or to other people on your network. All you need to do is to type the message, and say who to send it to.

FindVirus is the award-winning Virus Detection program included in Dr Solomon's Anti-Virus Toolkit.

Contents

Events

See also :

Events are the basic building blocks of your schedule. Each time you want to run a specific program, for example a virus scan, you can create an event to enable your chosen program to be executed. If you intend executing the program at regular intervals, you can build this into the event too. This means, for example, that if you want to check for viruses every day at 6:30pm you only need add one event, and Dr Solomon's Scheduler will know that you want the event to occur each day.

You can even tell Dr Solomon's Scheduler to ignore weekends, if you want.

But events don't have to be repeated. You can, if you choose, schedule an event so that it occurs only once. Additionally you can enable and disable events on an individual basis. This means that you can "switch off" an event temporarily, without actually deleting it.

You can have as many events scheduled as you like. What's more, the event database is structured in a standard text format, just like a .INI file. So even though Dr Solomon's Scheduler lets you make changes quickly and easily, you can edit the file manually if you wish.

Adding and Changing Events

See also :

Event Overview

Copying Events

Removing Events

Disabling and Enabling Events

Saving Events

Event Data File Format

To add a new event, select "Add Event" from the "Edit" menu, or select the Toolbar item ().
To make changes to an existing event, either highlight the event in the event list, and select "Edit Event" from the "Edit" menu, or simply double-click on the event in the event list.
If you just want to change the name, or the start time, of the event, you can Cut ("Edit | Cut") and Paste ("Edit | Paste").
If you choose to Add or Change an event, an Event dialog is displayed. This dialog contains three main sections :

- Event Type
- Virus Scan Options
- Time Options

These sections provide a quick and easy way for you to build all the properties of your event. Once you are satisfied with your event settings, simply select "OK".

NOTE : Dr Solomon's Scheduler stores each event by its Event Name. This means that, just as you can't have two files with exactly the same name, you need to give each event a unique name. But don't worry - Dr Solomon's Scheduler automatically checks for this.

NOTE : Once you have set up a new event you must make sure that the Scheduler is running before the event can take place.

Event Type Dialog

The Event Type dialog stores the basic information about the event, including the event name and the event type. You can also store a full description of the event, and specify whether the event is to be enabled or not.

By default, Dr Solomon's Scheduler also writes to a "Log File" whenever an event is executed. The Log File records whether or not it was possible to start the event, and at what time the event was executed. For convenience, Dr Solomon's Scheduler allows you to suppress any writing to the Log File, or to ensure that the Log File is only written to following a failure.

In the current version of Dr Solomon's Scheduler, you may have any one of three types of events. The default event is to execute the FindVirus utility to check for viruses.

However, you can schedule two other types of event :

Running any Executable File

If you choose to run a program, the dialog allows you to specify exactly which program you wish to execute. The program has four properties :

the Program Description, for example "Text Editor"
the Command Line, for example "C:\WINDOWS\NOTEPAD.EXE"
the Working Directory - if your program requires it.
the Window Type. The application can be "Normal", "Maximized" or "Minimized".

HINT : you can pre-define a list of commonly-used programs. See the section on Setting Default Values for new Events for details.

Sending Messages (Windows NT only)

The third type of event is a Message event. If you choose an event of this type, the dialog allows you to type in a message. Again, you can create a list of default messages from which to choose. Refer to Setting Default Values for new Events for details. If you choose to send a message, a list box also shows a list of recipients you have used in the past.

HINT : you can pre-define a list of commonly-sent messages. See the section on Setting Default Values for new Events for details.

Sending a message to yourself :

At the top of the "Recipients" list box is the "Screen" option. Instead of sending a message to someone across your network, this option causes the message to be displayed to your screen. This may be useful, perhaps, as a reminder. For example, if you had a meeting at 2:00pm each Tuesday, you could create an event which caused a warning message to pop up at 1:50pm.

Maximum length of Text Strings :

Any event names or descriptions may be up to 256 characters in length.

NOTE :

If you choose that the event is *not* a FindVirus execution, you will not be able to access the "Scan Options" tab.
Conversely, if the program beeps when you try to access this tab, you should check that the "Event Type" has been set to perform a Virus Scan.

Scan Options Dialog

For most users of Dr Solomon's Anti-Virus Toolkit, the Scan Options Dialog will be very familiar ! The dialog is a point-and-click representation of all of the most common options which are used with the [FindVirus](#) program.

From this dialog you can set :

- The drives to scan :
  A multi-select list box allows you simply to click on the drives you wish to scan. This is equivalent to the FindVirus "/D=......." command line parameter.

- Whether or not to scan Data Files :
  If you check this box, all files (not just executables) will be scanned. This is equivalent to the FindVirus "/DOALLFILES" option.

- Whether or not to scan inside ZIP and ARJ files :
  If you check this box, all compressed files in the formats PKZIP, ARJ and PKLite are scanned. This is equivalent to the FindVirus "/UNZIP" option.

- Whether or not to scan inside PKLite and LZExe files :
  If you leave this box *unchecked*, this is equivalent to the FindVirus "/NOPACK" option.

- Whether to scan Boot Sectors :
  If you leave this box unchecked, this is equivalent to the FindVirus "/NOBOOT" option.

- Whether to scan Partition Sectors :
  If you leave this box unchecked, this is equivalent to the "/NOPART" option.

In addition, you can set the following options :

- Generate a Network Alert if a Virus is discovered :
  If the PC you are using is on a network and FindVirus discovers a virus, a message may be sent to the Network Supervisor if this option is checked. If you wish to use this option, you may also wish to investigate the "[/MSG](#)" and "[/TELL](#)" options, placing them in the "Additional Command Line Options" text box.

- Heuristic scanning :
  Enables FindVirus to use Advanced Heuristic Analysis to detect new and unknown viruses. This is equivalent to the FindVirus "/ANALYZE" option.

- Beep upon each virus found :
  Generally, if a virus is detected, a beep is sounded at the end of the scan. However, checking this box causes a beep to be sounded with each occurrence of a virus. This is equivalent to the FindVirus "/BEEP" option.

- Automatically Repair Infected files :
  Although it is best to repair virus infections "hands-on", there may be circumstances when you wish a remote execution of FindVirus to attempt to repair any infected files. Use of this option is equivalent to the FindVirus "/REPAIR" parameter.

You can force FindVirus to generate a Report on the results of a scan. From the Scan Options Dialog you can set the name of the file to write the report to. If you are executing an event several times, you may wish to add the "/APPEND" option to the "Additional Command Line Options" box. This will ensure that each execution of FindVirus generates a fresh report, which is appended to your report file.

NOTE : In addition to the checkbox options described above, it is possible to enter any of the valid FindVirus command line parameters into the Additional Command Line Options field on the Scan Options dialog.

See Section 6, Advanced Virus Detection, in the Dr Solomon's Anti-Virus Toolkit User Manual.

Time Options Dialog

A vital feature of any scheduler is that the user can schedule events to run at any time of the day. In Dr Solomon's Scheduler, this is achieved by use of the Time Options Dialog.

Two types of event are currently supported. Firstly, you can specify an event to happen on one occasion only, and you can specify the date and time of that occurrence.

Secondly, and more commonly, you can specify a "Start Time" for the event. This is the time at which you want the first occurrence to take place. Dr Solomon's Scheduler then allows you to qualify this by letting you specify that not only will the event be executed the first time, but it will also be executed at regular intervals after that, for example, every 3 days, every week, every 2 months, etc.

If you adopt this approach, Dr Solomon's Scheduler also allows you to specify an end date for the task (though, of course, you don't have to). Thus if you wanted to execute an event at 6pm each evening, say, but only between 1 January 1997 and 1 February 1999, then this would be possible.

Time and Date Formats

Dr Solomon's Scheduler displays the date and time of an event in whatever format you have chosen. (You can change this format from the Windows Control Panel, "International" section.)

Please note, however, that the Event Data File stores the times and dates in a fixed format. Refer to the section Event Data File Format for further details.

Time and Date Limits

The times you choose must be between 12:00am, 1 January 1970 and 11:59pm, 31 December 2038.

Any events where the start date is in the past will be assumed to start "now" (unless you have specified an end date which is also in the past).

Weekend Events

You may wish that your event occurs on weekdays only. If this is the case, you should check the "Disable at Weekends" option.

Performing an Event once per month, at the end of the month

If you wish to perform an event at the end of each month, simply select the last day of the month in which you want the event to start. When you save the event, Dr Solomon's Scheduler automatically detects that you have chosen the last day of the month, asks you to choose between executing the event on the last day of each month, or on the specific day you have chosen.

Copying Events

See also :

You can copy the entire contents of one event into another using the "Copy" & "Paste" combination. Note, however, that since Dr Solomon's Scheduler requires that all event names are different, you will be asked to rename the event before you perform the copy. At this point you can also change the start time of the event.

Removing Events

See also :

There are two ways in which to remove events from your schedule.

To remove an event from your schedule, but store it in the Clipboard for later use, you can use the "Cut" command in the "Edit" menu. You can then re-introduce the event into your schedule using the "Paste" command.

To remove an event altogether, select "Delete Event" from the "Edit" menu. This makes immediate changes to your schedule. This command can also be achieved via the Toolbar ( ).

Note that you can only store one event at a time in the clipboard. On the other hand, you can "Delete" as many events as you want in a single operation.

Disabling and Enabling Events

See also :

When you add a new event, by default it is enabled. You can change this status as you add the event, or by editing the event at a later time.

However, you can toggle between enabling and disabling events simply by choosing the events and selecting the appropriate option from the "Edit" menu.

HINT : If you wish, you can use the Toolbar instead to enable (▶) or disable (
▣) items .

Saving Events

See also :

Dr Solomon's Scheduler allows you to choose between two ways of saving the changes you make to your schedule.

Save Changes Immediately

This option means that you are effectively editing your schedule in "real time". Any changes you make will be invoked immediately by Dr Solomon's Scheduler. For example, if you set the event to trigger in 1 minute's time, it would trigger regardless of whether you'd finished editing the schedule or not.

Save Changes at the End of the Session

This option means that the changes you have made have been registered, but will not yet be written to the Event Database.

If there are any unsaved events at the end of the session, you will be prompted to save these events. Alternatively, to save the changes manually, select the "Save Schedule To Disk" option from the "File" menu. If you wish to discard recent changes, you can select the "Reload Schedule From Disk" option, again in the "File" menu.

Changing your Save Option

By default, Dr Solomon's Scheduler will prompt you each time you modify your schedule. However, if in general you intend only to use one of the options, you can check the "Save this setting for future use" option, and this will save your choice and apply it to all further choices.

An alternative way to achieve this, and the way to change a previous setting, is to select the "[Defaults](#)" command from the "Options" menu. Select the section "Options" and you are then able to change the way in which to save your data.

Event Data File Format

See also :

The Schedule Data File is written in a standard Windows INI file format, though the actual file has the extension .SDF. The reason for saving the file in normal text format is so that users are not restricted to using the Scheduler in order to edit their Event Data file.
In general, the format of the file is as follows :

    [SchedulerSetup]

    LogFile=

    FileStatus=

    [Event:*Title of first event*]

    ...

    [Event:*Title of next event*]

    ...

The section [SchedulerSetup] contains some general settings. The "LogFile" entry specifies the name of the Scheduler Log File. This is given a default value by Dr Solomon's Scheduler, but, if you want, you can subsequently change this file.
The "FileStatus" entry is an entry which is internal to Dr Solomon's Scheduler. If you edit this value, there is no effect on the Scheduler.
The events are actually stored in the [Event:*Title of first event*] sections. There can be an unlimited number of Event Sections. The format of each of these sections is as follows :

[Event:Event Title]

Description=

StartTime=

EndTime=

Enabled=

WeekendDisabled=

PeriodUnits=

PeriodValue=

SundayPattern=

MondayPattern=

TuesdayPattern

WednesdayPattern=

ThursdayPattern=

FridayPattern=

SaturdayPattern=

Dependency=

EventType=

StartDirectory=

CmdLine=

CmdParams=

WindowType=

TargetMachine=

TargetUser=

ResponseHandler=

ResponseTable=

UserToNotify=

LogAction=

Example

The title of the section contains the text "Event:", followed by the name of the event. The Event Name can contain spaces and be up to 250 characters in length.
You can have as many events as you like, but all Event Names must be unique.

You can use the description field to add a more verbose description of the event. This may be up to 256 characters in length.

The start and end times of the event must be in the format "dd-mm-yyyy hh:mm" ([Example](#)).

Although you must add a start time, the "End Time" entry is optional. If this field is left blank, the event will always repeat at your chosen interval.

The "End Time" field is only read when the event is defined to be cyclic (rather than a one-off occurrence).

Times should be stated in 24-hour format.

10:15am, March 27th, 1995 is denoted by 27-03-1995 10:15.

Enabled may be set to TRUE or FALSE.

If you set Enabled=FALSE, the event will be ignored. This is designed so that events can be ignored temporarily.

You can set this value to TRUE or FALSE. If set to TRUE, the event will not execute on Saturdays or Sundays.

This setting, in conjunction with "PeriodValue", defines the repeat period of the event.
The following unit values are acceptable : MINUTE, HOUR, DAY, WEEK, MONTH, END_OF_MONTH.
END_OF_MONTH will run the event at the given time, on the last day of each month. If you use this option, "PeriodValue" is ignored.
To execute an event just once, the value of "PeriodUnits" must be ONCE. Again, in this case, "PeriodValue" is ignored.

PeriodValue is the number of "PeriodUnits" between events. The value must be between 1 and 100.
PeriodValue is ignored if you choose PeriodUnits = ONCE or PeriodUnits = END_OF_MONTH.

The "...Pattern" entries are not supported in this version of Dr Solomon's Scheduler. Any entries will be ignored.

This version of Dr Solomon's Scheduler does not support anything other than a trigger at a specified time. The contents of this field are ignored in this version.

The Event Type may be one of three values. These are :

      FINDVIRUS - to execute FindVirus

      SPAWN - to execute any other program

      MESSAGE - to send a message to somebody (Windows NT only).

The value of EventType must match one of these values exactly.

If you have set EventType to "SPAWN", this entry holds the working directory in which your program will be executed. Otherwise, this entry is ignored.

If you have set EventType to "SPAWN", this entry holds the command line of the program you wish to execute. If you have set EventType to "FINDVIRUS", this entry points to the FindVirus executable.
Otherwise, this entry is ignored.

If you have set EventType to "FINDVIRUS", this entry contains all of   the command line parameters which you want to use to execute FindVirus. If you have set EventType to "MESSAGE", this entry holds the text of the message you wish to send.

If you have set EventType to "SPAWN", WindowType specifies the type of   window you want your application to have. Values may be "NORMAL", "MIN" or "MAX". Setting WindowType=MIN is equivalent to checking the "Run minimized" option under Windows.

TargetUser and TargetMachine are not supported in this version of Dr Solomon's Scheduler. Any values will be ignored.

ResponseHandler and ResponseTable are not supported in this version of Dr Solomon's Scheduler. Any values will be ignored.

If you have set EventType to MESSAGE, this entry holds the user(s) to whom you want to send the message. If you use the keywords "SCREEN", the message will be sent to your own screen rather than across the network.

This parameter tells Dr Solomon's Scheduler how much detail you wish to go into when logging the outcome (i.e. the successful launch) of events. Possible values are : NEVER (never write to the log file), FAIL_ONLY (only write to the log file if the event cannot be launched) and ALWAYS (write to the log file regardless of the result).

Example

```
[SchedulerSetup]
LogFile=c:\winnt\avtk_sch.log
FileStatus=CHANGES_SEEN

[Event:Test Event #1]
Description=A test event that runs every 1 hour.
StartTime=04-04-1995 06:30
EndTime=
Enabled=TRUE
WeekendDisabled=FALSE   ; You can add comments if you want
PeriodUnits=HOUR        ;
PeriodValue=1           ; execute every hour
Dependency=
EventType=FINDVIRUS
StartDirectory=c:\winnt
CmdLine=c:\toolkit\ntfindvi
CmdParams=/this /that /theother
WindowType=NORMAL
TargetMachine=LOCAL
TargetUser=
ResponseHandler=
ResponseTable=
UserToNotify=
LogAction=ALWAYS

[Event:Test event number 2]
Description= A test event that runs every week until the end of April.
StartTime=07-04-1995 18:30
EndTime=30-04-1995 23:59
Enabled=TRUE
WeekendDisabled=FALSE
PeriodUnits=WEEK
PeriodValue=1
Dependency=
EventType=FINDVIRUS
StartDirectory=c:\winnt
CmdLine=c:\toolkit\ntviverif
CmdParams=/switch1 /switch2
WindowType=MIN
TargetMachine=
TargetUser=
```

```
ResponseHandler=
ResponseTable=
UserToNotify=SIMON
LogAction=NEVER
```

Checking the format of your Data File

See also :

Because the Schedule Data File is actually a text file, it is possible to write to the file using any text editor.

This may sometimes cause problems, if Dr Solomon's Scheduler cannot understand the text which has been written to the file. If an event cannot be understood, you will be informed when you try to open Dr Solomon's Scheduler editor. However, in order to allow you to edit the file yourself, all Dr Solomon's Scheduler does is to ignore the event completely. The event is still in the Data File, but just ignored.

If you wish Dr Solomon's Scheduler to remove any events which cannot be understood, select the "Validate Schedule" option from the "File" menu. This option cycles through each event, checking its syntax. If Dr Solomon's Scheduler encounters an event which it cannot interpret properly, you will be given the option to remove that particular event completely.

Viewing the Outcome of Scheduled Events

By default, Dr Solomon's Scheduler creates a Log File of the results of events. This records whether an event could be launched successfully.

The Log File is a standard text file, and can be viewed using Windows Notepad.

To View the Log File :

Select the "Scheduler Log File" option from the "File" menu. A popup menu is then displayed. Select "View" from this menu.

Dr Solomon's Scheduler then executes Windows Notepad, loading the Scheduler Log File at the same time. You can also use Notepad to edit the file, for example, if you want to get rid of old messages contained in the file.

You can change the name of the Log File.

To Change the Name of the Log File :

Rather than deleting information from the Scheduler Log File, you may wish to create periodically a completely new file. In this way, you could create archives of messages from Dr Solomon's Scheduler.

From the "Scheduler Log File" popup menu select the "Change Name" option. A dialog is then displayed which allows you to change the name of the Scheduler Log File.

Example

Example

10-May-1995 09:10:01 Event 'FindVirus Scan' launched successfully.

10-May-1995 09:10:00 Event 'ViVerify Scan' launched successfully.

10-May-1995 10:10:02 Event 'FindVirus Scan' launched successfully.

10-May-1995 11:10:00 Event 'FindVirus Scan' launched successfully.

10-May-1995 12:10:00 Event 'ViVerify Scan' launched successfully.

10-May-1995 12:10:03 Event 'FindVirus Scan' launched successfully.

10-May-1995 13:10:01 Event 'FindVirus Scan' launched successfully.

Customizing Dr Solomon's Scheduler

See also :

Setting the Default Values for new Events

Changing the way you view Events

Dr Solomon's Scheduler allows you to set default values for new events. You can use these defaults so that when you come to add new events to your schedule, it is quick and easy to do.

As well as a default set of FindVirus options, you can also build up a list of commonly-used programs and, under Windows NT, messages. When you add an event, these options are placed into a pull-down list box, so that you don't need to retype them.

You can also customize the way in which Dr Solomon's Scheduler appears on your screen. Depending on your screen resolution, you can change the font name and size to one which best suits your taste.

Options to change the way in which the Status Bar and the Toolbar are shown are also included.

Setting Default Values for new Events

See also :

Customizing Dr Solomon's Scheduler

If you select the "Defaults..." option from the "Options" menu, a dialog is shown which allows you to customize many of the default properties of future events.

Select the "Find Viruses" section of the dialog in order to set up a set of default options for virus scans. This section is identical in nature to the Scan Options Dialog, except that instead of specifying an actual report file, you just specify a default directory for the report file.

You can also customize some of the frequency settings, from the "Time" section. This allows you to specify whether the event is to be repeated cyclically and if so, the frequency. You can also set a default "Disable the event at weekends" flag from this section.

The "Programs" section allows you to build a list of commonly-used programs and, under Windows NT, messages. These are displayed in a list box when you come to add a new event. In this way you don't need to type all the details of the program into the event - simply click on the description and the fields are filled for you.

The "Options" section also allows you to specify the default way in which the Scheduler Log File is written to. You can choose to :

- Write to the file come what may, whether the event could be launched or not,
- Just write to the file if an event couldn't be launched, or
- Don't ever write to the file.

Similarly you can alter the way in which events are saved. See Saving Events for more details.

Of course, each of these defaults can be overridden on a per-event basis.

Changing the way you view Events

[Changing the font in your Event List](#)
[The Toolbar](#)
[The Status Bar](#)
[Tool Tips](#)

Changing the font in your Event List

You can change the font used in the Event List, by selecting the "Font" command from the "Options" menu.

You may use any currently-loaded font, regardless of the precise type of font. You can install fonts into Windows from the Control Panel.

The Toolbar

You can toggle whether or not the Toolbar is displayed from the Options menu.

The Status Bar

You can toggle whether or not the Status Bar is displayed from the Options menu.

Tool Tips

Tool tips are a neat way of making the Toolbar more intuitive. If you leave your mouse cursor over a button for one second, the Tool tip pops up to give you more information about the command.

However, if you dont like Tool tips, you can toggle whether or not they're displayed from the Options menu.