

DSAlert

NetWare File server Console Reporting System.

Version 1.0

For NetWare Versions 4.x

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1. Introduction

DSAlert for NetWare is a diagnostic and system support tool which allows Novell's NDS error conditions to be monitored, logged and reported to any SNMP console(s). Any resultant response actions can be automated according to any criterion set by the user.

Features

- ◇ Allows networks of any size to centrally report on NDS errors.
- ◇ All NDS Errors can be reported.
- ◇ Any number of errors can be reported.
- ◇ Reporting duration can be varied to requirements.
- ◇ For each NDS error code, Duration and Occurrence thresholds can be determined.
- ◇ Actions to be implemented are configurable for each NDS error code.
- ◇ Prioritisation for each action can be established.
- ◇ Server based administration enhancement tool.
- ◇ Auditing of user actions, including successful and unsuccessful console login attempts by login name.
- ◇ A permanent log file of stats is recorded for use in profiling and trend analysis of system errors.
- ◇ Automated execution of console commands when specified NDS conditions are met.



2. Installation

2.1 Preparing to Install

Before physically installing DSAlert, please consider the following :-

- What NDS Errors are of critical importance.
- What NDS Errors are of minor importance.
- What action is to be taken when an NDS Error occurs.
- At what incidence rate do Errors warrant action.
- Where are the errors to be reported too.
- When are the Errors to be reported.

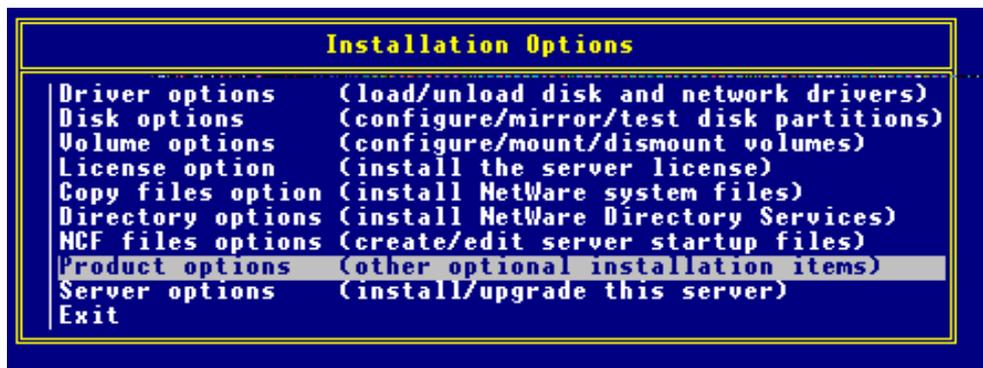
2.2 NetWare Version 4.x

Installation of DSAlert on NetWare v4.x is accomplished using the Novell product install facility provided by INSTALL.NLM or by using the manual process outlined for NetWare v3.x.

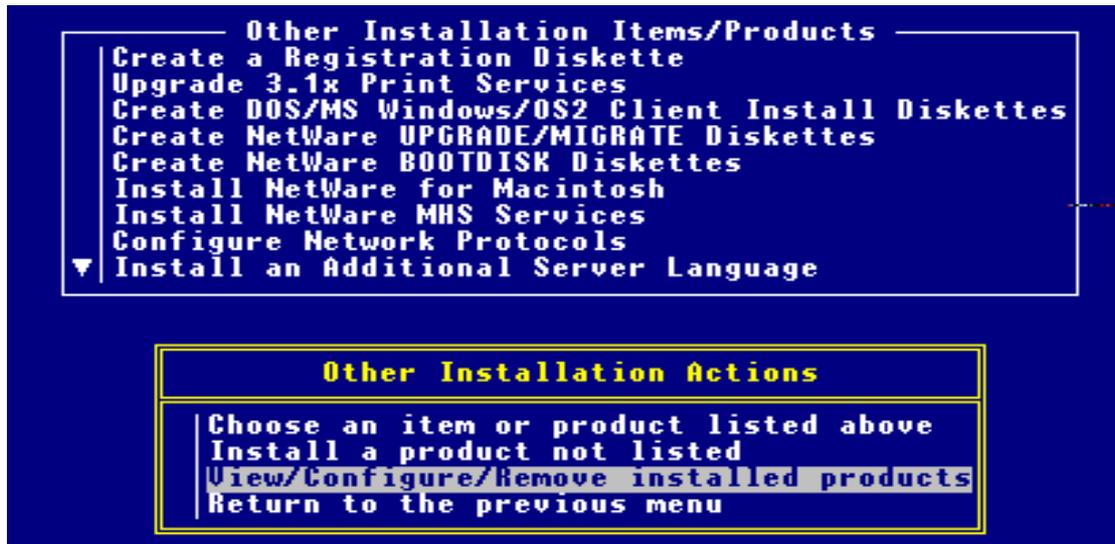
(A) At the system console type :-

```
PRO_41: LOAD INSTALL
```

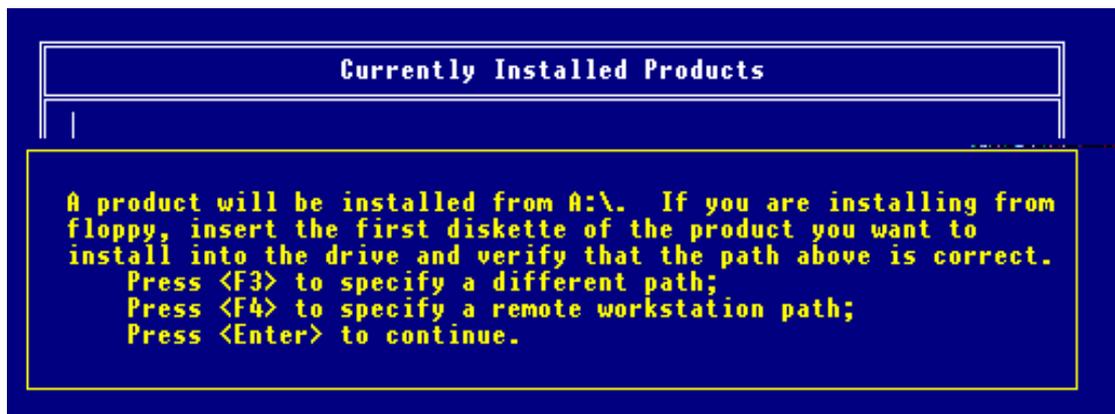
(B) Select the "Product options" menu.



(C) Select View/Configure/Remove installed products.



(D) Press insert and select the path where the DSAlert Installation files can be found. This may be a DOS drive or a valid NetWare path.



(E) Select the "DSAlert For NetWare" check box with the space bar or the enter key. If you are upgrading from a previous release of DSAlert please be aware that this process will overwrite your DSAlert.cfg with the defaults for the new version. If you wish to retain your old configuration files, please make a backup of them and restore them after the installation.



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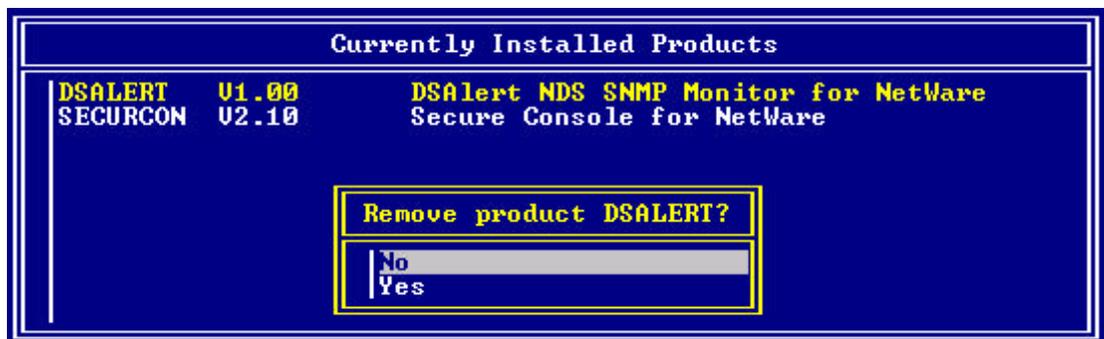


When ready to install the program files, select the F10 key.

The DSAalert files will be copied to the file server directory SYS:SYSTEM\ DSAalert. A search mapping and LOAD command will be added to your AUTOEXEC.NCF file so that DSAalert is started automatically when the fileserver is restarted.

2.3 NetWare v4.x - Uninstalling DSAalert

Select the DSAalert product option from the products screen, press the Delete key and answer "yes" when prompted.



2.4 Manual Installation

- A. Create the directory SYS:\SYSTEM\ DSAalert
- B. Copy all files from the root directory of the installation diskette to this new directory.
- C. Add the console search map :- SEARCH ADD SYS:SYSTEM\ DSAalert



2.5 Loading DSAAlert

If DSAAlert is not already loaded, use the following command at the console prompt to activate it :

```
PRO_DEV: LOAD DSALERT
```

If the operation fails, check that DSAAlert has been properly installed, and that the search path includes the SYS:\SYSTEM\DSAlert directory.

2.6 Unloading DSAAlert

Once loaded, DSAAlert can be unloaded from the system console using unload DSAAlert at the console prompt.

```
PRO_DEV: UNLOAD DSALERT
```

To prevent DSAAlert from loading automatically at fileserver reboot, remove the LOAD DSAAlert line from the AUTOEXEC.NCF file. DSAAlert can be manually invoked using the LOAD DSAAlert command when ready to initiate SNMP monitoring.



3. Configuration

Once the DSAlert files are installed, DSAlert must be configured so that it knows which NDS errors to report on, when to report them and to who it reports to. This is achieved through a configuration file (DSAlert.cfg) and MIB file (DSAlert.mib). For configuration of DSAlert.mib and trap monitoring see section 5. Configuring SNMP.

3.1 DSAlert.cfg

Configuration is performed using the DSAlert.cfg file for the individual NDS errors. This file has two principal sections. The first is the environmental setup of DSAlert itself then the definitions for each error condition can be defined to your own specifications and needs.

Once changes have been made in this file, they do not take effect until the system is restarted.

Each line in the file can contain one parameter. Each of these has the format:

```
variable_name = value
```

The following are the default recommendations.

3.1.1 Environmental

The following variables are defined.

NDSSCREEN =	Default: True
--------------------	----------------------

Which screen is being monitored. To monitor for NDS errors this must be set to true.

SCREENDISPLAY=	Default: True
-----------------------	----------------------

Does DSAlert need to display its results. This is a visual presentation of the errors that are being logged by DSAlert.

WRITESNMPSTATS =	Default: True
-------------------------	----------------------

This turns reporting on or off.

SENDDAILYSTATS =	Default: True
-------------------------	----------------------

Is a daily summary of errors to be totaled.

EUROPEANTIME =	Default: True
-----------------------	----------------------

Is this the preferred date and time format(dd/mm/yy). If set to false the date format is mm/dd/yy.



DEBUG =	Default: True
----------------	----------------------

Display console messages indicating what errors have been found.

CLIENTERROR=	Default: True
---------------------	----------------------

Do you wish to have the Client errors included in the reporting process as well as the other NDS Errors.

ALLPROCESSED =	Default: 10
-----------------------	--------------------

Number of NO Processed errors before action is taken.

ALLPROCESSEDTAP =	Default: 1
--------------------------	-------------------

The SNMP trap number to send the message out on.
The message always includes the partition name.

ALLPROCESSEDCOMMAND =	Default: Load DSREPAIR -U
------------------------------	----------------------------------

The console command to execute when number of errors found. Action to take when Allprocessed errors threshold has been exceeded.

3.1.2 Error Definitions

The next entry defines the default error trap format for all errors not specifically targeted by yourself within the file;

DEFAULTERROR =	Default: True
-----------------------	----------------------

Indicates that this is the default setting for DSAalert reporting. Only used for the default definition.

SNMPTRAP =	Default: 3
-------------------	-------------------

All errors not specifically defined are to be sent as SNMP number 3 so that no errors are missed or overlooked (unless you want it that way).

CONSOLECOMMAND=	Default: (nil)
------------------------	-----------------------

What Console commands are to be executed when the error condition is true. Any Console command can be executed.

CAPTURETEXT =	Default: True
----------------------	----------------------

Capture the text on the screen that appears with the error number and send it with the error number.

SENDONERRORCOUNT =	Default: 1
---------------------------	-------------------

After now many occurrences of any NDS Error number do you report the error. Used with the time period below.

TimePeriod =	Default: 60
---------------------	--------------------



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After how many minutes time is the error to be reported. Used with the send on error count (previous page). So that the combination works as; 1 occurrence in 60 minutes, 5 in 15mins or 3 in 30 etc.

This format applies to all error traps determined by your own criteria, for example;

NDSERROR = 625	Transport Failure
SNMPTRAP = 1	Information only
;CONSOLECOMMAND=	(nil)
CAPTURETEXT = true	Write text as part of message sent
SENDONERRORCOUNT = 3	Number of occurrences
TimePeriod = 5	Within how many minutes

Ultimately all 730 NDS Errors could be individually defined depending on the reporting requirements. Though this is not generally required, with the use of the default, only specifically targeted errors need to be defined.



4. DSAlert.mib

The Dsalert.mib is where the appropriate action for any trap number can be specified. The format for these entries (twelve in total) is as follows;

```
dsalertMinor TRAP-TYPE
```

The first line is a unique name within the file for this trap.

```
ENTERPRISE dsalert
```

```
DESCRIPTION "DSAlert"
```

The DESCRIPTION is a

```
--#TYPE "DSAlert"
```

```
--#SUMMARY "%S."
```

```
--#ARGUMENTS {0}
```

```
--#SEVERITY NONCRITICAL
```

```
--#TIMEINDEX 1
```

```
--#HELP ""
```

```
--#HELPTAG 0
```

```
--#STATE OPERATIONAL
```

```
::= 2
```

The last line is the trap number that corrolates with the DSAlert.cfg SNMP TRAP number.

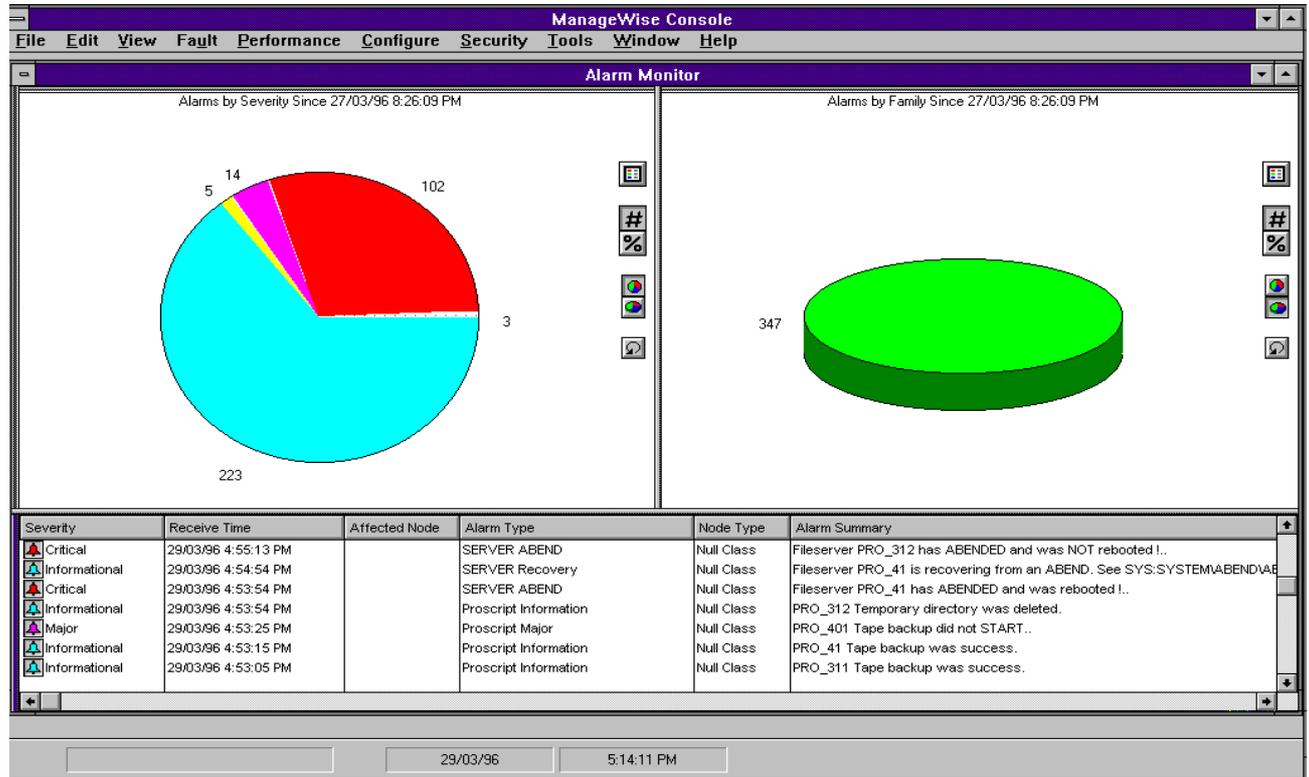


An example of a typical entry, setup by a administrator could be;

```
dsalertMinor TRAP-TYPE
  ENTERPRISE dsalert
  DESCRIPTION
    "DSAlert Minor Event."
  --#TYPE "DSAlert"
  --#SUMMARY "%S."
  --#ARGUMENTS {0}
  --#SEVERITY NONCRITICAL
  --#TIMEINDEX 1
  --#HELP ""
  --#HELPTAG 0
  --#STATE OPERATIONAL
  ::= 4
```



5. Configuring SNMP



5.1 Fileserver SNMP configuration

To configure your fileserver to send the DSAlert (and SNMP alerts from other applications) the text file SYS:ETC\TRAPTARG.CFG file must include the destination address of the SNMP management station that is to receive the alerts.

NetWare supports the transmission of SNMP alerts via IPX or TCP/IP and is controlled by indicating appropriate addresses or host names in the TRAPTARG.CFG file.

More information on advanced aspects of configuring Novell's SNMP can be found in the administration guides, however these are not normally required to activate DSAlert's SNMP features.

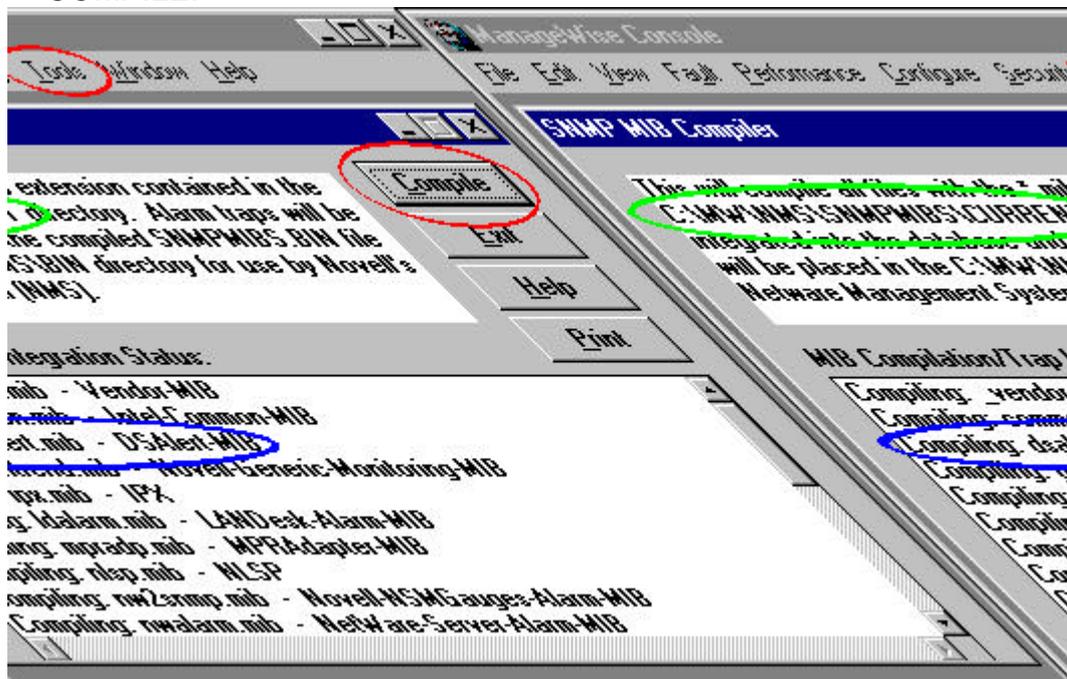
The SNMP.NLM must be unloaded and reloaded for changes made to the TRAPTARG.CFG file to take effect.

5.2 Configuring Novell ManageWise



ManageWise is Novell's management console used to control and monitor most aspects of an organisations network. DSAlert communicates with this console using the industry SNMP protocol. In order for ManageWise to interpret the console alert messages (known as SNMP traps) the DSAlert management information base (MIB) definition file must be compiled using ManageWise. This is achieved by using the following process:-

1. Copy the DSAlert.MIB text file to the <drive:>\MW\NMS\SNMPMIBS\CURRENT directory where <drive:> is the location of ManageWise.
1. From the ManageWise console, select TOOLS, COMPILE MIBS and COMPILE.



If no errors occurred during the compilation ManageWise is ready to accept console alerts from DSAlert.

When ManageWise receives alerts from DSAlert, ManageWise displays the alerts in the alarm monitor :-



Examples of Error Messages;

5.3 Generic SNMP console

Follow the directions provided with your console for compiling an external MIB file.



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6. Log File

6.1 Error Log File

A summary report of system errors and console operations is recorded in the DSAalert directory as a text file, DSAalert.log. This file can be viewed with any text file display utility (i.e. load Edit, Notepad or similar). This log file has a maximum number of entries (max size of 5mb). When the size of the records has reached the maximum file size allowed the old entries are rolled.

6.2 Interpreting the Output

The format for the entries in the log file is as follows;

The date in the selected format (dd/mm/yy hh:mm)

The error number and description

The textual description of the error.



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7. Commonly Asked Questions

1. Q. What performance overhead does the product put on the server?
A.

2. Q. Can the NDS Errors be sent to mutiple consoles?
A.

3. Q. Can we set the sofware to page our support people when fatal NDS errors occur?
A.



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