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1. Introduction

This User Guide describes the usage of NOD32 for Novell Netware Server (or just NOD32 for Novell), namely:

- installation of the product,
- configuration of individual modules,
- updating of the product.

NOD32 for Novell consists of the following NLM modules:

- *AMON.NLM* – on-access scanner, which automatically scans files accessed from the network or locally, or files saved to the server.
- *NOD32.NLM* – on-demand scanner, which can be directed to scan certain groups of files on the disk (usually folders, volumes, or the whole hard disk). In this case, it is only a single action – after it is completed, the *NOD32.NLM* module is removed from memory.
- *NOD32UPD.NLM* – module providing a virus signature database update for the modules *AMON.NLM* and *NOD32.NLM*.

2. Installation

Create a directory named, for example *NOD32*, on volume *SYS:* and copy files from the installation packages for the *NOD32* for Novell into it. It is recommended to enable automatic startup of *AMON.NLM* and *NOD32.NLM* after each start of the server. We recommend enabling the startup using the system file *AUTOEXEC.NCF* with these commands:

```
LOAD SYS:/NOD32/AMON
```

```
LOAD SYS:/NOD32/NOD32UPD [parameters]
```

Individual parameters are described in the following chapters. In the case of the module *AMON*, it is recommended to provide accessibility of the file *AMON.CFG*, which will transfer configuration to *AMON* at startup.

Quick guide through the complete installation

Extract the installation package. eg: into volume *SYS:/NOD32*. Also, it is recommended to create file *AMON.CFG* and insert the following into it:

```
recipient=network_administrator_login
notify
clean
delete
log
```

Then load *AMON* - memory-resident monitor using the following command on the Novell system console:

```
LOAD SYS:/NOD32/AMON.NLM
```

With the above mentioned setting, *AMON* will send information about infiltrations to the user *network_administrator_login*, but also to a user, who manipulated with the infected file (parameter *notify*). At the same time, *AMON* will attempt to clean the infected file, and if it is not possible, the file will be deleted.

Next, it is required to provide updates for *NOD32* for Novell. This product does not download virus updates from Internet update servers, but it uses a mirror directory created for example by *NOD32* for Windows Professional Edition. The mirror directory must be located on the same hard disk as the installation of *NOD32* for Novell (let us assume it is located in *SYS:/PUBLIC/MIRROR*). To configure the mirror correctly, run this command on the console to set up and launch the *NOD32UPD.NLM* module:

```
LOAD SYS:/NOD32/NOD32UPD.NLM SYS:/PUBLIC/MIRROR/
-update-period=60
```

Now *NOD32* for Novell will be updated from the mirror directory *SYS:/PUBLIC/MIRROR* every hour (parameter *-period=60*).

It is recommended to enable automatic startup of *AMON.NLM* and *NOD32UPD.NLM* at each server startup using system file *AUTOEXEC.NCF*.

3. Modules

AMON.NLM

To load *AMON*, use the following command on the system console:

```
LOAD SYS:/NOD32/AMON
```

To unload *AMON* from memory, use the following command:

```
UNLOAD AMON
```

AMON.CFG

If there is present the file AMON.CFG in the directory with the module AMON.NLM, configuration from AMON.CFG will be transferred to AMON at its startup.

Syntax of the file AMON.CFG is as follows (each line may contain one of the following switches one switch per line):

onread+ (default setting)

Files will be tested in a moment when a command to open/read is detected.

The opposite switch is: *onread-*

onwrite+ (default setting)

Files are tested at the moment when a command to create/modify is detected.

The opposite switch is: *onwrite-*

onrename+ (default setting)

Files are tested at the moment when a command to rename is detected.

The opposite switch is: *onrename-*

all (default setting)

All files are tested. Otherwise, if the parameter *all* is used, only extensions defined by the Eset Company are tested.

notify

When an infiltration is detected, AMON sends a message to the user who attempted to access the infected file (using the *NetWare Message PopUp Service*).

recipient=user1, user2 ...

When an infiltration is detected, AMON sends a message to all users in the list. It is possible to list more users – in this case, use commas to delimit them – see the example above.

Other parameters:

pattern

log

logappend

logrewrite

clean

rename

delete

heur

heursafe

heurstd

heurdeep

These switches are identical to those used in module NOD32.NLM. They are described below (when entering parameters, always omit the hyphen).

NOD32.NLM

To run the NOD32 diagnostic scan or clean, enter the command as follows:

LOAD SYS:/NOD32/NOD32 [parameters] [path list]

If *[path list]* is not entered, NOD32 will automatically scan whole disk.

Parameters:

-? -h -help

Displays list of parameters with descriptions.

-subdir+ (default setting)

Enables testing of subdirectories.

The opposite switch is: *-subdir-*

-pack+

Enables testing of internally compressed files.

The opposite switch is: *-pack-* (default setting)

-arch+

Enables testing of archives (ZIP, RAR, ARJ...).

The opposite switch is: *-arch-* (default setting)

-pattern+ (default setting – recommended)

Enables testing using virus signatures.

The opposite switch is: *-pattern-*

-heur+ (default setting – recommended)

Enables detection using a heuristics method.

The opposite switch is: *-heur-*

There are three levels of heuristics analysis sensitivity:

-heursafe

-heurstd (default setting – recommended)

-heurdeep

Actions to take after an infiltration is found can be modified with the following parameters. The parameters can be suitably combined with each other. For example, parameters *-clean -delete* provide that an infected file, which cannot be cleaned, will be deleted. In case of

the module AMON.NLM, not using any of the three following parameters will result only in blocking access to infected files.

-clean

Automatically cleans infected files.

-rename

Renames infected files.

-delete

Deletes infected files.

-prompt (not available for AMON.NLM)

Displays a dialog window individually on every infected file.

-log+ (default setting)

Enables logging to file (file NOD32.LOG, or AMON.LOG).

The opposite switch is: *-log-*

Log maintenance:

-logappend (default setting)

New information is attached to the end of existing log file.

-logrewrite

Logfile will be deleted with each module's startup.

-log=<filename>

Use this parameter to create your own log file.

Other parameters:

-list+

Enables listing of all scanned objects.

The opposite switch is: *-list-* (default setting)

Configuration – a practical example:

LOAD SYS:/NOD32/NOD32 -pack+ -arch+ -clean -delete

(Control of the whole disk including internally compressed files and archives. In case an infiltration is found, a file will be cleaned or deleted.)

NOD32UPD.NLM

This product does not download virus updates directly from Internet update servers, but it uses a mirror directory created, for example, by NOD32 for Windows Professional Edition. The mirror directory must be located on the same hard disk as the installation of NOD32 for Novell.

The syntax is as follows:

LOAD SYS:/NOD32/NOD32UPD mirror_directory [folder_with_NLM_modules] [parameters]

Only *mirror_directory*, or a path to the mirror folder is required. This folder will provide update files for the modules NOD32.NLM and AMON.NLM.

[directory_with_NLM_modules] is optional in case the file NOD32UPD.NLM is located in the directory together with files NOD32.NLM and AMON.NLM.

Possible parameters:

-update

Provides NOD32 updates (otherwise, available updates will be displayed only).

-period=n

This parameter triggers update attempts every n minutes. We recommend updating every hour (*-period=60*).

-show_retvals

Use of this parameter returns all possible return values with brief comments.

-help

Will list all parameters with brief comments.

Special parameters:

-no_signature

This parameter can be used to avoid error No. 107. The error means that update files have an invalid digital signature.

Update - a practical example:

LOAD SYS:/NOD32/NOD32UPD.NLM SYS:/PUBLIC/MIRROR/

-update -period=60

(The modules AMON.NLM and NOD32.NLM will be updated every hour from the mirror directory: *SYS:/PUBLIC/MIRROR/*).