

# How to move the NetWorker Server for Windows off the system volume

If you read my documents and comments carefully, you will always see my reminder to follow one of the most important rules for a NetWorker/Windows server installation:



Never ever install an application on the system drive! - and this is especially true for your NetWorker server software.

There are at least two good reasons:

- If the operating system goes crazy or the system volume will be filled, you will most likely not even have the chance to repair it. And of course this will also affect your application.
- If the application fills the space with either their growing databases or extensive logfiles - this of course will result in the same effect. And I remember NetWorker versions which just extensively let the logfiles grow.

Unfortunately, even after decades, this general potential problem has not made its way into the managers' minds. This is the only way to explain why almost all Windows software will have `C:\Program Files` as default destination directory. And in ignorance of circumstances, or due to sheer force of habit, an administrator might just accept these default specifications. This is a fundamental problem.

You simply may solve it by installing the application into another but the system volume. But what about later? - you might of course install the software again but you barely want to lose your current configuration and databases. This is usually only possible, if you have separated the program files from your configuration and database files. Unfortunately, with NetWorker, all is stored under the `.. \nsr` directory - wherever this resides.

In this document I describe how to move your NetWorker/Windows server installation to another volume.

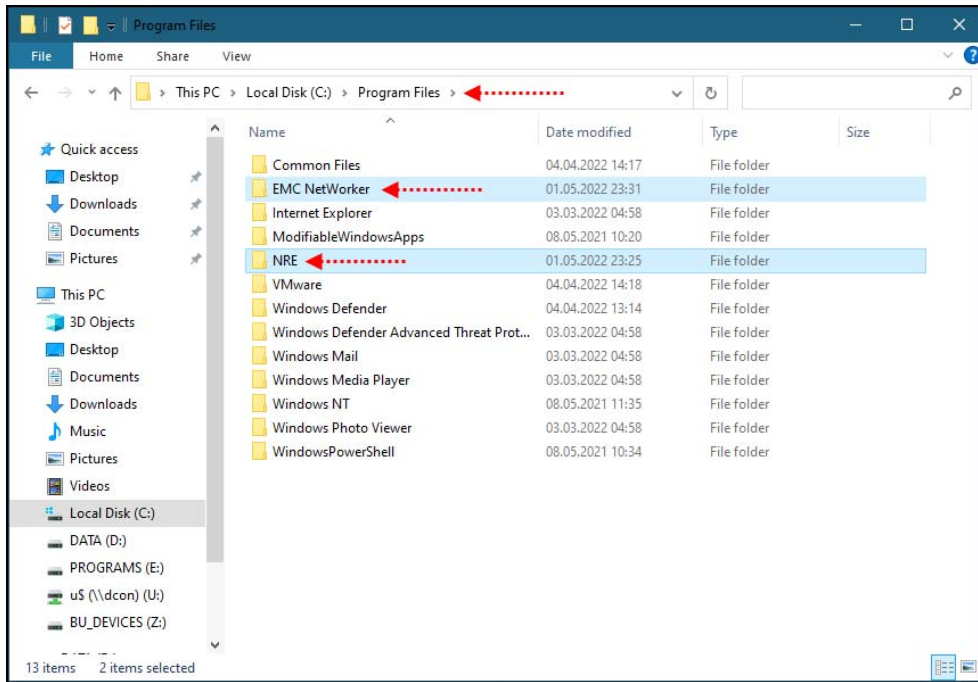
As you will see, this is not a general issue - but you must adjust the configuration for the third-party software - in this case *RabbitMQ*, the open source message broker software.

For this example I use Windows server 2022 with NetWorker server 19.6.1.0.

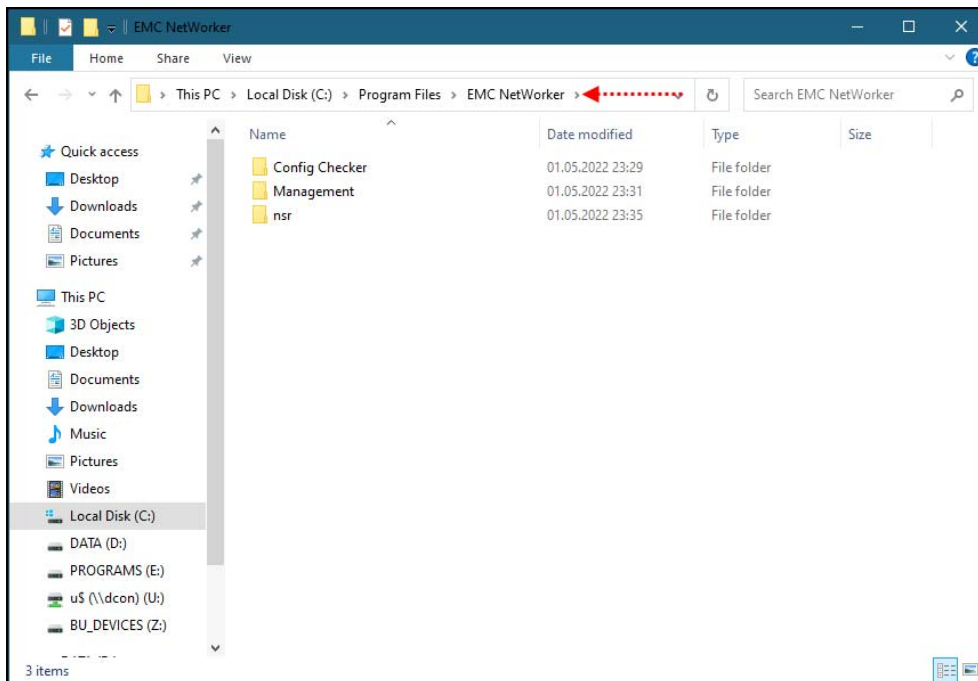
Please note:

- In this example, I just use the 'fundamental' NetWorker software,
  - *NetWorker Runtime Environment* (NRE)
  - *NetWorker Server*, incl. the *NetWorker Management* software (NMC)
- The *License Manager* software must not necessarily be installed. But even then it is independent of NetWorker - he just uses it. Its installation into another location is absolute unproblematic.
- The *NetWorker User GUI* (NWUI) is just optional and still has limited functionality. She is not required to run NetWorker at all. Yes of course, you might also skip the NMC software ;-)
- The existing NMC database information is not required to re-run NetWorker. It provides historical and statistical information but you may also start all over.

Starting point is the installation of the NRE and the NetWorker software in their respective standard directories:

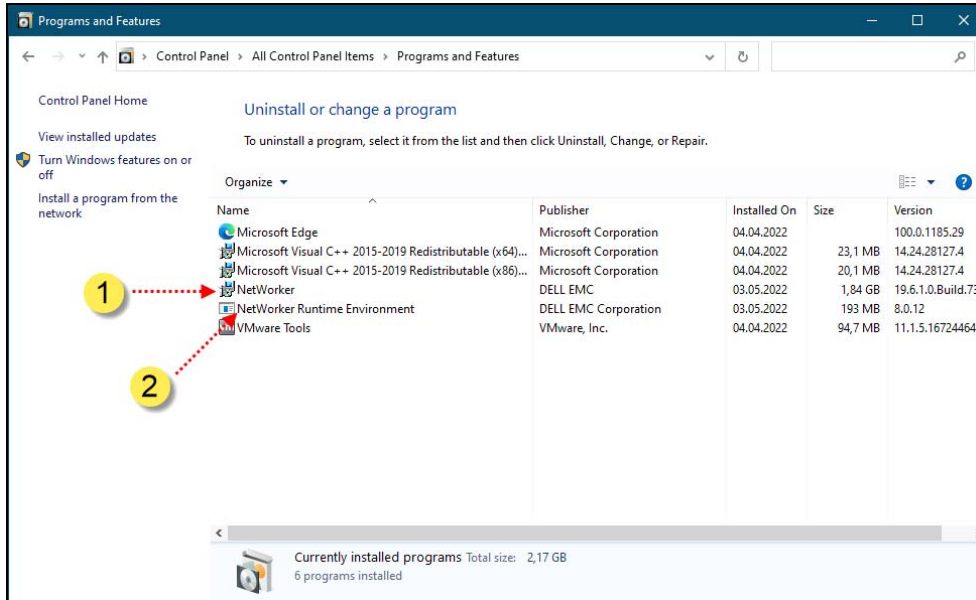


This is the content of the NetWorker directory:

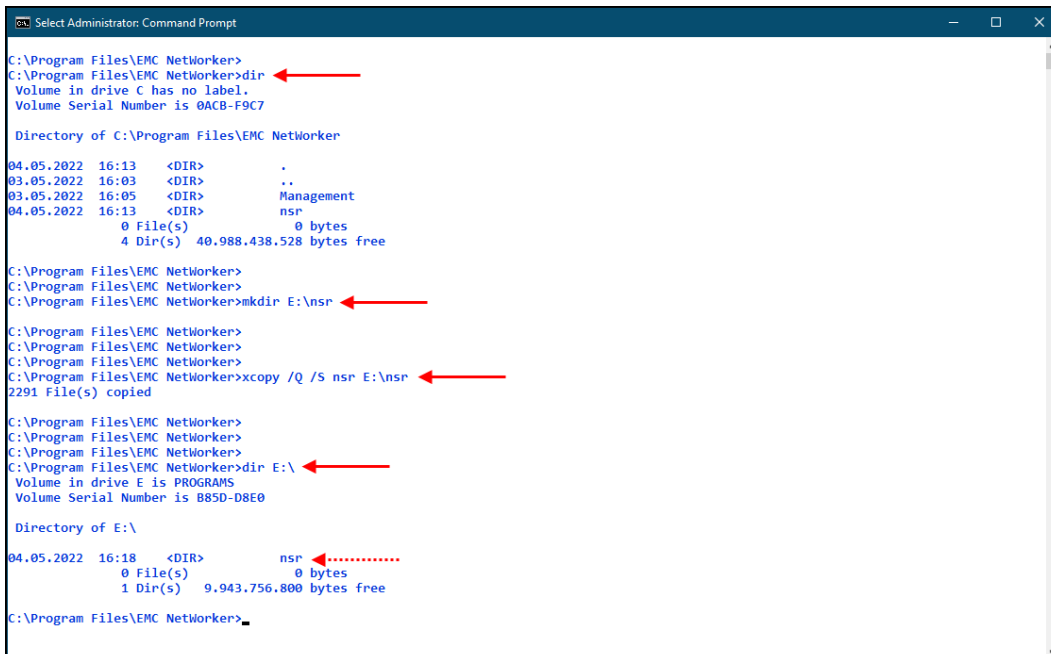


Please proceed as follows:

- Stop the NetWorker services with the command `net stop nsrexecd` and wait until they all have stopped.
- De-install the NetWorker software first, followed by the NRE software:



- Next copy the `.. \nsr` directory to the new empty volume, in this case `E:\`



You must now adjust the pathnames in these configuration files:

```
E:\nsr\rabbitmq-server-#.#.#\bin      &
E:\nsr\rabbitmq-server-#.#.#\etc
```

```
Administrator Command Prompt
E:\nsr>
E:\nsr>dir
Volume in drive E is PROGRAMS
Volume Serial Number is B85D-D8E0

Directory of E:\nsr

04.05.2022 16:18 <DIR>      .
04.05.2022 16:18 <DIR>      authc-server
03.05.2022 16:04          1.865 authc-server-app.json
04.05.2022 16:18 <DIR>      index
04.05.2022 16:18 <DIR>      lockbox
04.05.2022 16:18 <DIR>      logs
04.05.2022 16:18 <DIR>      mm
04.05.2022 16:18 <DIR>      nsrmq
04.05.2022 16:18 <DIR>      rabbitmq-server-3.8.18
04.05.2022 16:18 <DIR>      res
04.05.2022 16:18 <DIR>      sec
04.05.2022 16:18 <DIR>      tmp
04.05.2022 16:18 <DIR>      vproxy
          1 File(s)          1.865 bytes
          12 Dir(s)      9.943.756.800 bytes free

E:\nsr>
E:\nsr>
E:\nsr>
E:\nsr>dir rabbitmq-server-3.8.18
Volume in drive E is PROGRAMS
Volume Serial Number is B85D-D8E0

Directory of E:\nsr\rabbitmq-server-3.8.18

04.05.2022 16:18 <DIR>      .
04.05.2022 16:18 <DIR>      ..
04.05.2022 16:18 <DIR>      bin
04.05.2022 16:18 <DIR>      erts-11.2.2
04.05.2022 16:18 <DIR>      etc
          0 File(s)          0 bytes
          5 Dir(s)      9.943.756.800 bytes free

E:\nsr>
```

- Use an editor and change the pathnames twice in the file

```
E:\nsr\rabbitmq-server-#.#.#\bin\erl.ini
```

pointing to the new installation directory:

```
Administrator Command Prompt
E:\nsr>
E:\nsr>cd rabbitmq-server-3.8.18\bin
E:\nsr\rabbitmq-server-3.8.18\bin>
E:\nsr\rabbitmq-server-3.8.18\bin>
E:\nsr\rabbitmq-server-3.8.18\bin>dir
Volume in drive E is PROGRAMS
Volume Serial Number is B85D-D8E0

Directory of E:\nsr\rabbitmq-server-3.8.18\bin

04.05.2022 16:18 <DIR>      .
04.05.2022 16:18 <DIR>      ..
03.05.2022 16:06          187 erl.ini
          1 File(s)          187 bytes
          2 Dir(s)      9.943.756.800 bytes free

E:\nsr\rabbitmq-server-3.8.18\bin>
E:\nsr\rabbitmq-server-3.8.18\bin>
E:\nsr\rabbitmq-server-3.8.18\bin>
E:\nsr\rabbitmq-server-3.8.18\bin>more erl.ini
[erlang]
Bindir=C:\Program Files\EMC NetWorker\nsr\rabbitmq-server-3.8.18\erts-11.2.2\bin
Progamme=erl
Rootdir=C:\Program Files\EMC NetWorker\nsr\rabbitmq-server-3.8.18

E:\nsr\rabbitmq-server-3.8.18\bin>
E:\nsr\rabbitmq-server-3.8.18\bin>
E:\nsr\rabbitmq-server-3.8.18\bin>
E:\nsr\rabbitmq-server-3.8.18\bin>more erl.ini
[erlang]
Bindir=E:\nsr\rabbitmq-server-3.8.18\erts-11.2.2\bin
Progamme=erl
Rootdir=E:\nsr\rabbitmq-server-3.8.18

E:\nsr\rabbitmq-server-3.8.18\bin>
```

- Repeat the procedure for three pathnames within the file

E:\nsr\rabbitmq-server-#.##.\etc\rabbitmq.config

Change from ...

```

Administrator: Command Prompt - more_rabbitmq.config
E:\nsr\rabbitmq-server-3.8.18>cd etc
E:\nsr\rabbitmq-server-3.8.18\etc>
E:\nsr\rabbitmq-server-3.8.18\etc>
E:\nsr\rabbitmq-server-3.8.18\etc>dir
Volume in drive E is PROGRAMS
Volume Serial Number is B85D-D8E0

Directory of E:\nsr\rabbitmq-server-3.8.18\etc

04.05.2022 16:18 <DIR>      .
04.05.2022 16:18 <DIR>      ..
03.05.2022 16:06             2,955 rabbitmq.config
1 File(s)                  2,955 bytes
2 Dir(s)                   9,943,756,800 bytes free

E:\nsr\rabbitmq-server-3.8.18\etc>
E:\nsr\rabbitmq-server-3.8.18\etc>
E:\nsr\rabbitmq-server-3.8.18\etc>more rabbitmq.config
[
  {rabbit,
    [{tcp_listeners, []},
     {ssl_listeners, [5671]},
     {loopback_users, []},
     {ssl_options, [{cacertfile, "C:\\Program Files\\EMC NetWorker\\nsr\\rabbitmq-server-3.8.18\\etc\\cacert.pem"},
                    {certfile, "C:\\Program Files\\EMC NetWorker\\nsr\\rabbitmq-server-3.8.18\\etc\\cert.pem"},
                    {keyfile, "C:\\Program Files\\EMC NetWorker\\nsr\\rabbitmq-server-3.8.18\\etc\\key.pem"},
                    {verify, verify_none}],
    % disable TLS 1.0, remove tlsv1.1 if it is not needed
    {versions, ['tlsv1.2', 'tlsv1.1']},
    {honor_cipher_order, true},
    {honor_ecc_order, true},
    % default list of ciphers - remove the ones that are not considered secure
    {ciphers, [
      "ECDHE-ECDSA-AES256-GCM-SHA384",
      "ECDHE-RSA-AES256-GCM-SHA384",
      "ECDHE-ECDSA-AES256-SHA384",
      "ECDHE-RSA-AES256-SHA384",
      "ECDH-ECDSA-AES256-GCM-SHA384",
      "ECDH-RSA-AES256-GCM-SHA384",
      "DHE-RSA-AES256-GCM-SHA384",
      "DHE-DSS-AES256-GCM-SHA384",
      "DHE-RSA-AES256-SHA256",
      "DHE-DSS-AES256-SHA256",
      "ECDHE-ECDSA-AES128-GCM-SHA256",
      "ECDHE-RSA-AES128-GCM-SHA256",
      "ECDHE-ECDSA-AES128-SHA256",
      "ECDHE-RSA-AES128-SHA256",
      "ECDH-ECDSA-AES128-GCM-SHA256",
      "ECDH-RSA-AES128-GCM-SHA256",
      "ECDH-ECDSA-AES128-SHA256",
      "ECDH-RSA-AES128-SHA256",
      "DHE-RSA-AES128-GCM-SHA256",
      "DHE-DSS-AES128-GCM-SHA256",
      "DHE-RSA-AES128-SHA256",
    ]}
  ]}

```

... to:

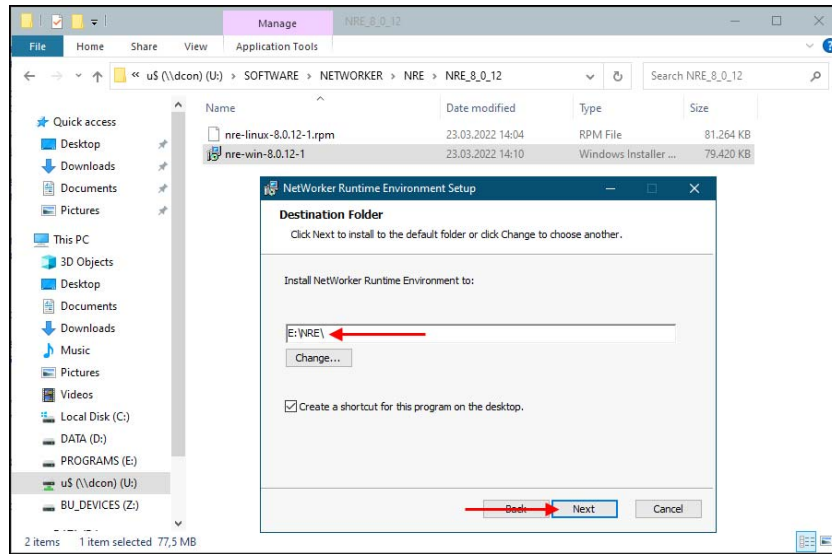
```

Administrator: Command Prompt - more_rabbitmq.config
E:\nsr\rabbitmq-server-3.8.18\etc>
E:\nsr\rabbitmq-server-3.8.18\etc>more rabbitmq.config
[
  {rabbit,
    [{tcp_listeners, []},
     {ssl_listeners, [5671]},
     {loopback_users, []},
     {ssl_options, [{cacertfile, "E:\\nsr\\rabbitmq-server-3.8.18\\etc\\cacert.pem"},
                    {certfile, "E:\\nsr\\rabbitmq-server-3.8.18\\etc\\cert.pem"},
                    {keyfile, "E:\\nsr\\rabbitmq-server-3.8.18\\etc\\key.pem"},
                    {verify, verify_none}],
    % disable TLS 1.0, remove tlsv1.1 if it is not needed
    {versions, ['tlsv1.2', 'tlsv1.1']},
    {honor_cipher_order, true},
    {honor_ecc_order, true},
    % default list of ciphers - remove the ones that are not considered secure
    {ciphers, [
      "ECDHE-ECDSA-AES256-GCM-SHA384",
      "ECDHE-RSA-AES256-GCM-SHA384",
      "ECDHE-ECDSA-AES256-SHA384",
      "ECDHE-RSA-AES256-SHA384",
      "ECDH-ECDSA-AES256-GCM-SHA384",
      "ECDH-RSA-AES256-GCM-SHA384",
      "DHE-RSA-AES256-GCM-SHA384",
      "DHE-DSS-AES256-GCM-SHA384",
      "DHE-RSA-AES256-SHA256",
      "DHE-DSS-AES256-SHA256",
      "ECDHE-ECDSA-AES128-GCM-SHA256",
      "ECDHE-RSA-AES128-GCM-SHA256",
      "ECDHE-ECDSA-AES128-SHA256",
      "ECDHE-RSA-AES128-SHA256",
      "ECDH-ECDSA-AES128-GCM-SHA256",
      "ECDH-RSA-AES128-GCM-SHA256",
      "ECDH-ECDSA-AES128-SHA256",
      "ECDH-RSA-AES128-SHA256",
      "DHE-RSA-AES128-GCM-SHA256",
      "DHE-DSS-AES128-GCM-SHA256",
      "DHE-RSA-AES128-SHA256",
    ]}
  ]}

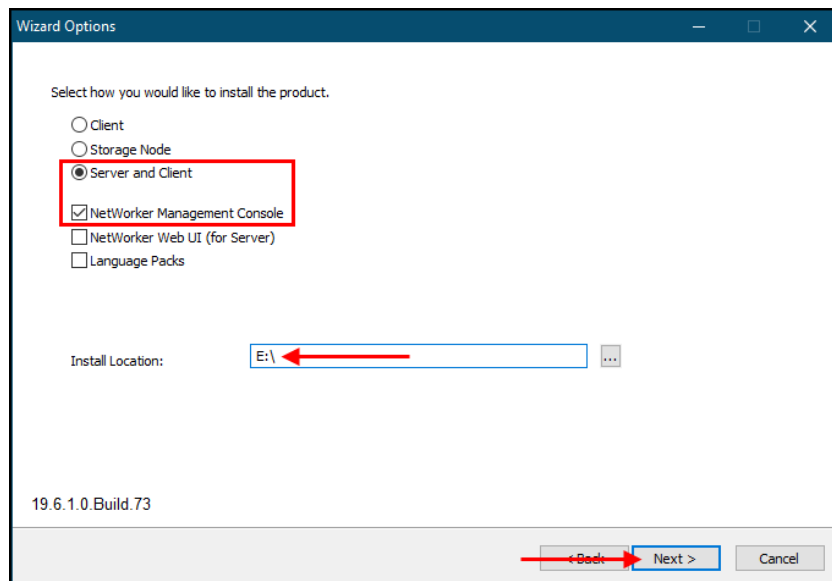
```

Now the software is ready to be installed into the new location. In general, it is the same procedure as any other NetWorker software update.

- Start with the installation of the NRE software into the new directory **E:\NRE ...**

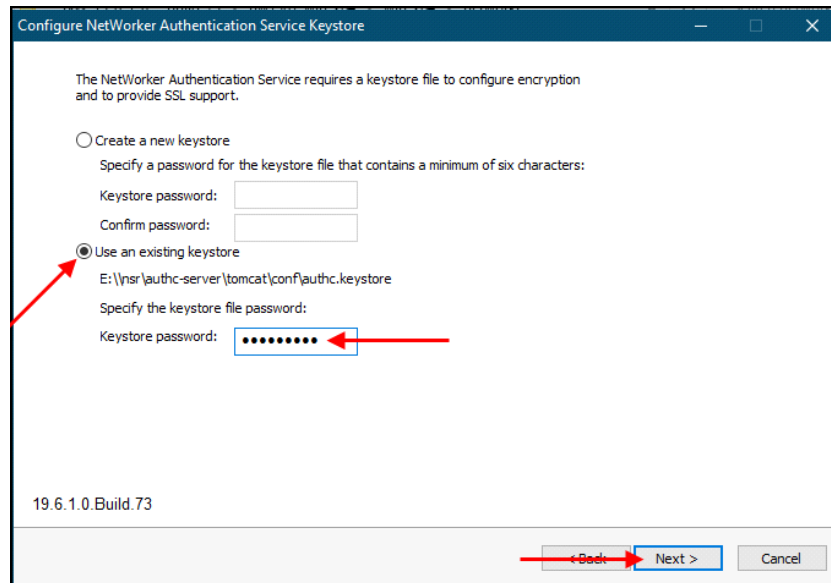


- ... followed by the NetWorker server software into **E:\**



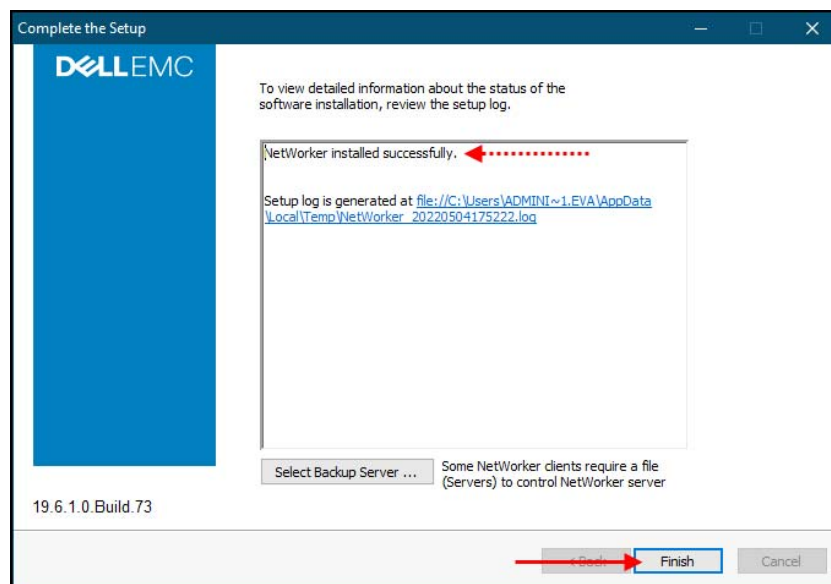


Be careful to use the existing keystore - I hope you remember the password!

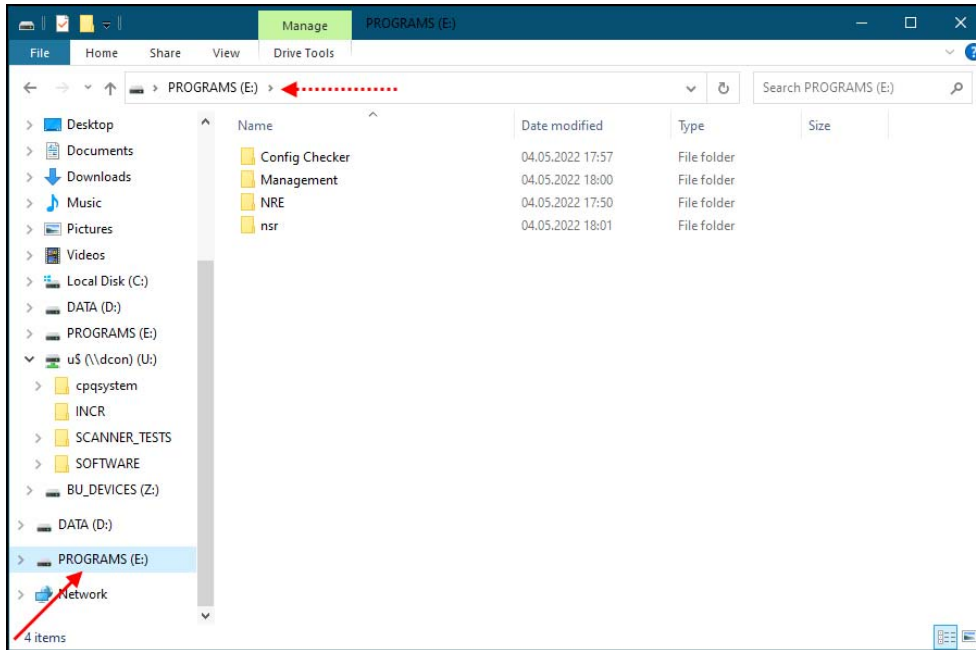


- Just acknowledge the other default settings.

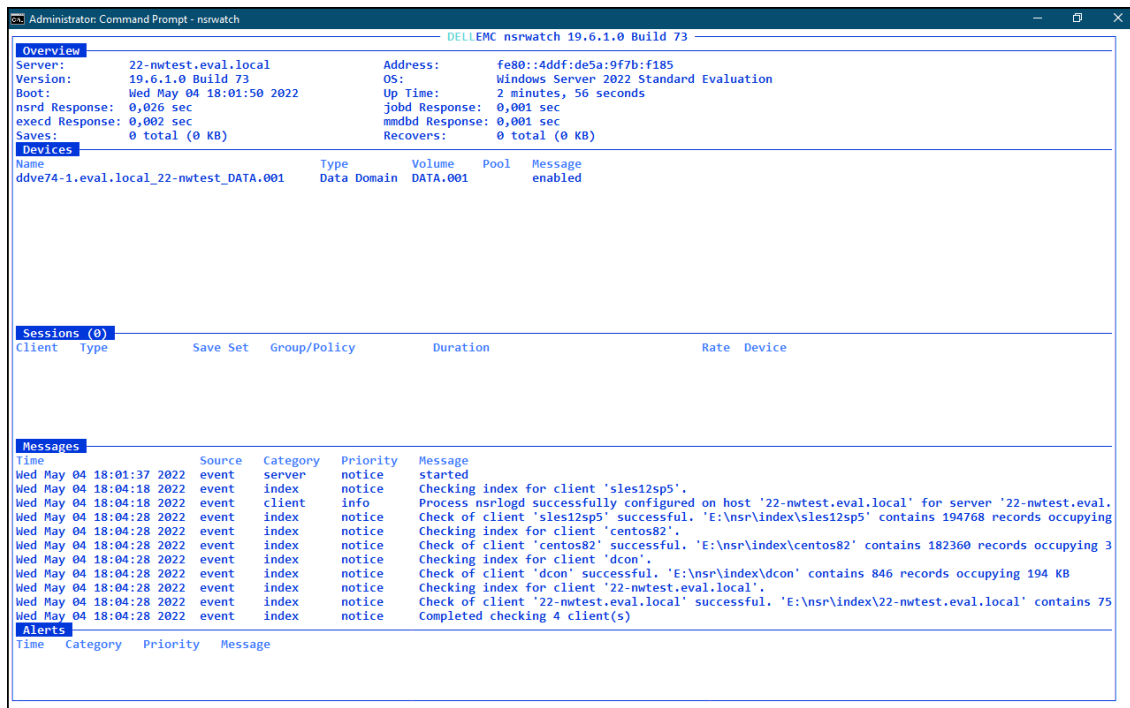
After some minutes you should see the message about the successful installation:



On the new volume you should now see these directories:

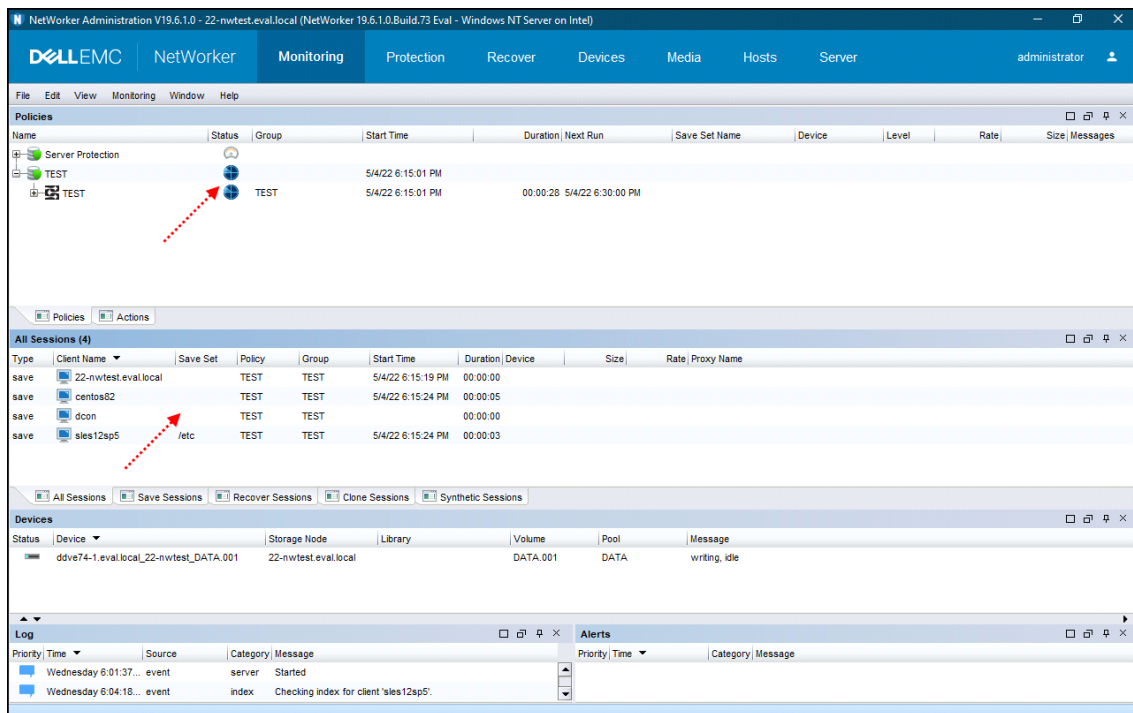


And some minutes later - of course this will depend on the size of your data zone - you should be able to successfully connect to your NetWorker server using the `nsrwatch` command:





- Now open the *NetWorker Management Console* and the *Administration GUI* - they should appear without any problem:

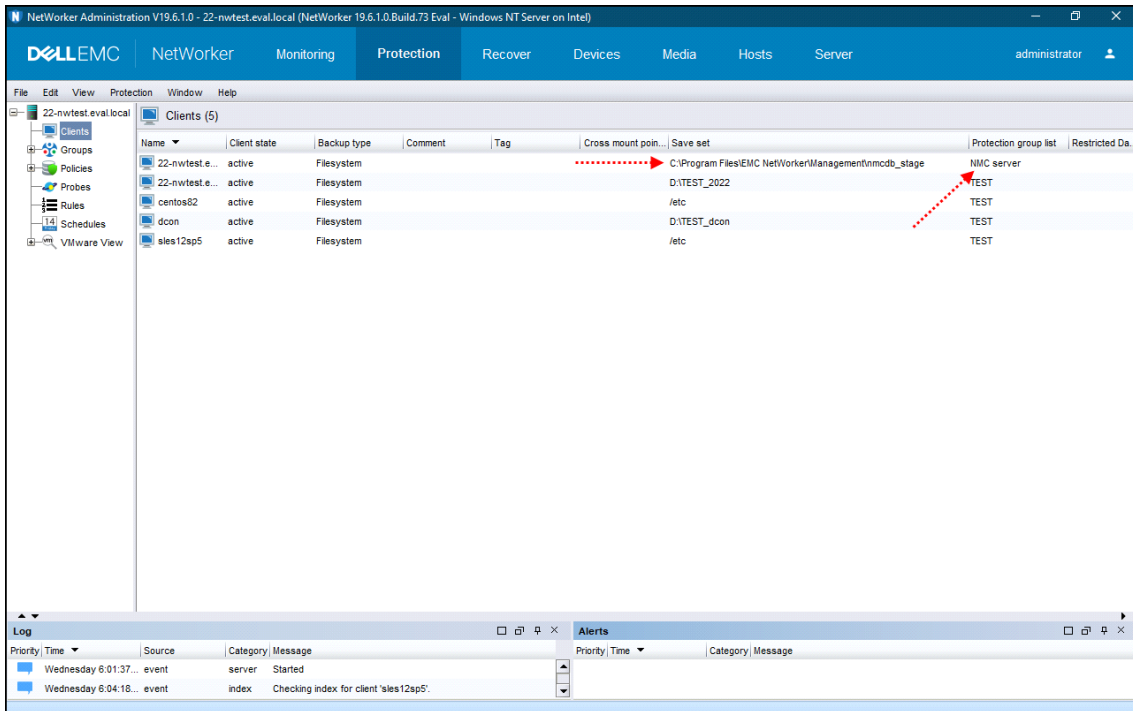


- As usual you should intensively monitor your NetWorker server - of course there could be other issues.

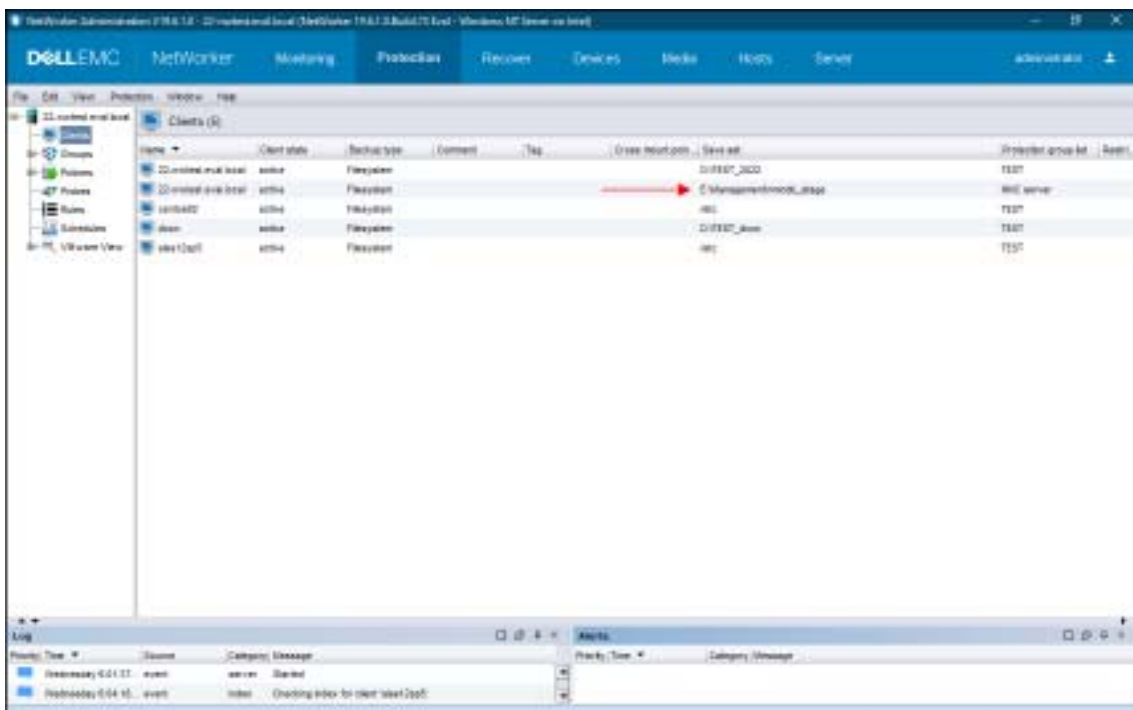


And last not least - do not forget one final adjustment!

- The Save set of the NMC server's client still points to the old directory:



- For a successful backup you must of course adjust it:



This is the end of the move procedure. As you can see, there are no major problems.

Maybe it would also work if you copy the old Management directory as well. But as I mentioned before, I was not really interested. If you test this, I would appreciate your feedback.