

# DNC NETWORKING

Using standard Ethernet connections with FTP or NFS

Modern CNC Machine Tools are often equipped with a standard Ethernet connection. The speed, flexibility, and inherent transmission error correction of an Ethernet connection make it the transmission solution of choice for many companies, especially when combined with dedicated FTP or NFS Server Software.

## NC Programs

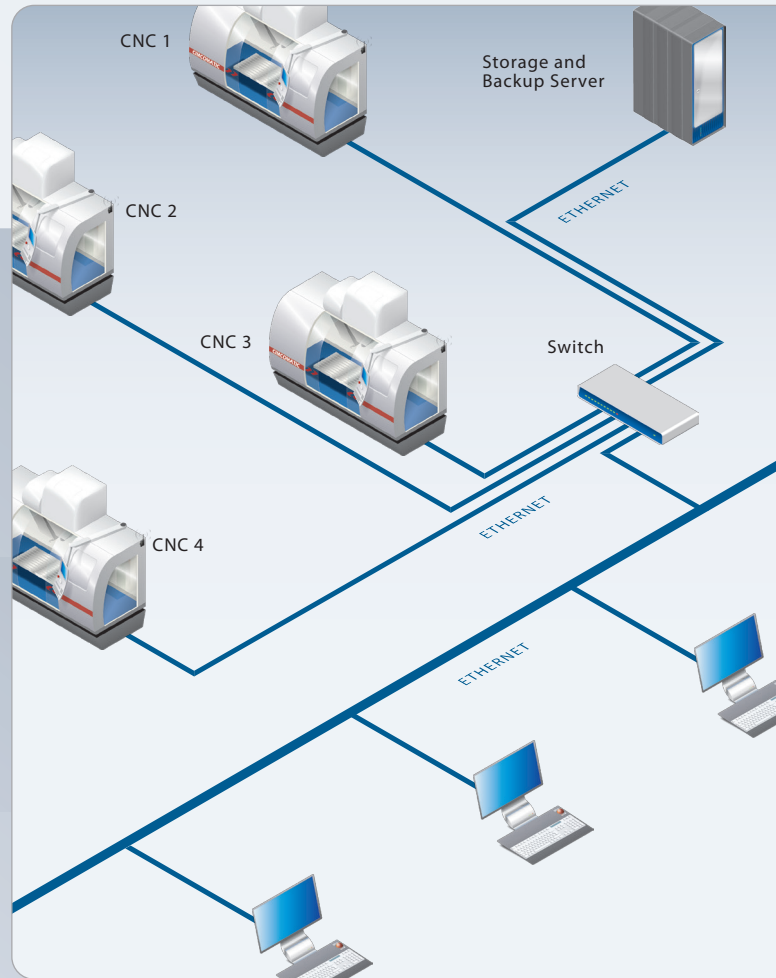
Most implementations are configured so that all NC programs for a specific CNC Machine Tool are located in a certain folder on the PC. On the CNC control, when requesting a program from the PC, all the NC programs are listed and can be selected by the operator. An NC program is transferred from the PC to the CNC control in seconds rather than minutes.

## CIMCO NFS Server / CIMCO FTP Server:

- Transfer large NC programs in seconds rather than minutes.
- More reliable transfer of NC programs.
- Standard networking technology, software and hardware.
- Further distances, and less electrical noise disturbances.

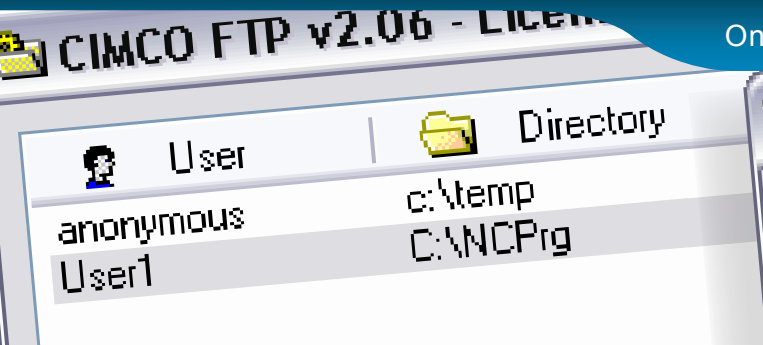
## CNC controls using FTP or NFS

Deckel Dialog 112, Millplus, Heidenhain, and other CNC controls use either FTP or NFS for standard Ethernet networking connection.



Modern CNC Machine Tools come with standard Ethernet connection

Once set up, CIMCO FTP and NFS run in the background

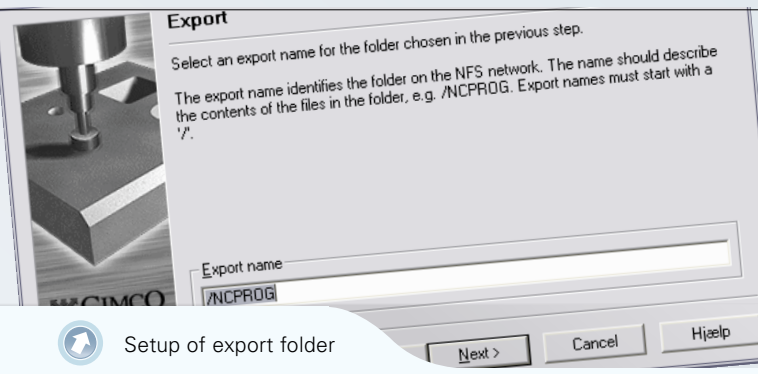


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## Networking with NFS and CNC Machines

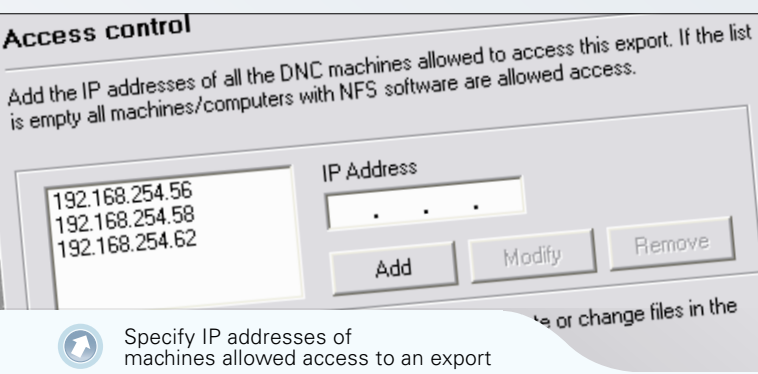
The CIMCO NFS Server enables CNC Machines to access the files in a shared folder - called an export - on a server, using a standard network.

When a CNC Machine connects to the NFS Server, it must specify which export to use. If allowed in the user configurable setup, the CNC Machine then accesses the export and reads and/or writes (if allowed - also configurable) files in the exported folder.



Setup of export folder

The NFS Server handles multiple exports, making it possible to export more than one folder on the same computer. It is even possible to export the same folder with different export names and access rights, creating a setup where some machines are restricted to 'read access' to the exported folder while other machines can have both 'read' and 'write access'.



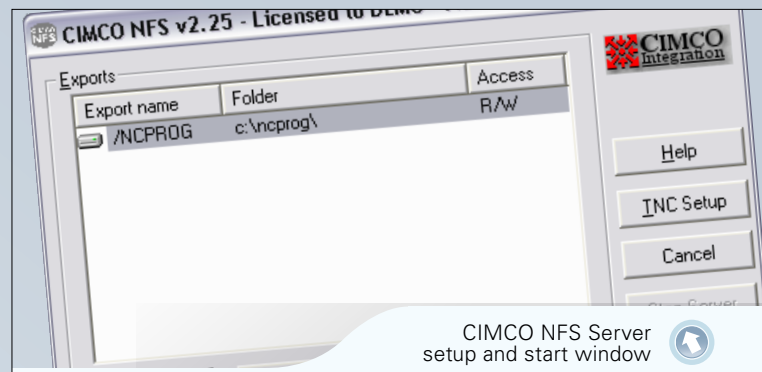
Specify IP addresses of machines allowed access to an export

## Security

When running the NFS Server on an internet connected computer network, in order to keep internet intruders from gaining access to the exported files CIMCO NFS Server provides a user configurable Access Control List.

## Access control

Only machines whose IP addresses are specified in the Access Control List of an export are allowed access to that export. If no IP addresses are specified, all machines are allowed access. By simply checking a box, an export folder can be rendered 'read-only', making it impossible for the machines accessing that folder to modify or delete files.



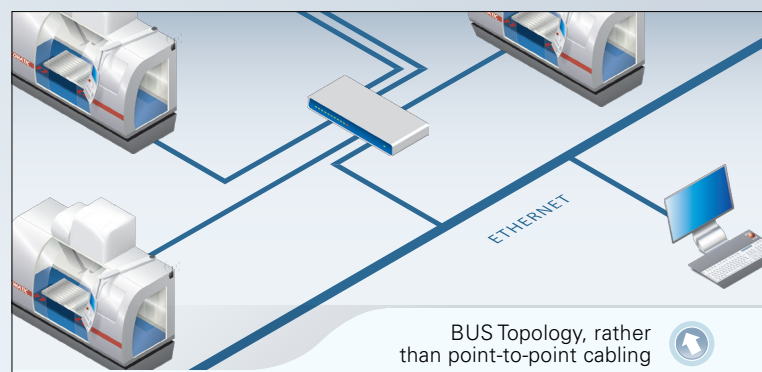
CIMCO NFS Server setup and start window

## Configuring the NFS Server

Configuring and starting the CIMCO NFS Server is facilitated with the help of the CIMCO NFS Configuration Wizard. On Windows NT/2000/XP computers, the server runs as a service, and the NFS Server can be set to start each time the computer does. Retaining compatibility through consecutive releases, CIMCO NFS Server even works with legacy Windows 95/98 OS where it runs in the background as a normal program.

## Proven solution

The speed and reliability of CIMCO NFS has been proven in thousands of shops. Under the name 'Heidenhain NFS', CIMCO NFS has since 1999 been offered as an option with all network enabled controls sold worldwide by Heidenhain.



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