

NFS (BS2000/OSD) Version 3.0

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Distributed file system for BS2000 (Network File System) based on TCP/IP

The NFS software product (Network File System) provides a distributed file system in a heterogeneous computer network. As the server of a local computer network, the distributed file system NFS (BS2000/OSD) provides one (or more) file system(s) in one (or more) BS2000/OSD file(s). This system can be accessed by authorized NFS (BS2000/OSD) users and by authorized NFS clients in other systems. In this way, the disk storage on the BS2000/OSD system becomes the central filestore for other (smaller) DP systems, and the BS2000/OSD system becomes a central data server.

In addition to the server functions, NFS (BS2000/OSD) also provides the client function for BS2000 users. They can use the client function to access other NFS server systems.

BS2000 users work with NFS files via the program and command interfaces of the POSIX file system. The user can access files in the same way as for local (POSIX) file access, even when these files are physically stored on a remote system.

NFS (BS2000/OSD) as server

With the POSIX file system, BS2000/OSD is enhanced with a hierarchically structured file system which is organized as a UNIX file system (VFS/UFS). The file system comprises directories and files. Branches to other directories or files are possible from directories. Containers for individual file systems are implemented as BS2000 PAM files on public volume sets.

With the aid of NFS (BS2000/OSD), a computer user can now work on a TCP/IP computer network with POSIX file systems, directories and files which were created in the BS2000/OSD computer, as though they were available locally on his computer. In this role NFS (BS2000/OSD) operates as a server.

NFS (BS2000/OSD) as client

It is also possible for users connected to the BS2000/OSD computer to work with file systems, directories and files which are stored on other computers. In this role NFS (BS2000/OSD) operates as a client. These remote file systems, directories and files are referred to below as NFS file systems. BS2000 users work with NFS file systems via the program and command interfaces of the POSIX file system. The commands for processing the POSIX file system form part of the basic shell which is included in BS2000/OSD-BC.

NFS (BS2000/OSD) commands

NFS (BS2000/OSD) also provides commands for managing NFS and POSIX file systems in the client/server environment: These include commands to mount/demount NFS file systems and release/lock file systems for remote access, together with associated information commands.

Data protection

In a local network, all partner computers with NFS (client function) can access POSIX file systems in BS2000/OSD systems. As the data resources can be shared, special precautions must be taken to prevent unauthorized access. To provide data protection, several protection mechanisms can be used:

- File access rights
- Authorization service
- Protection against access by other system administrators on the network
- Port monitoring

Protocol version 3

NFS protocol versions 2 and 3 can be used simultaneously in product version NFS V3.0. During the connection setup between client and server, the computers negotiate which NFS protocol version can be used.

Better performance is achieved with NFS protocol version 3 compared with protocol version 2, mainly because of the saving on calls to determine file attributes. On the part of the protocol NFS V3.0 supports the access to large files. This means that remote file systems containing files larger than 2 GB can also be mounted.

BS2000/OSD-BC V4.0 with POSIX V4.0A33 supports large local file systems and files: > 2 GB, max. 32 GB.

BS2000/OSD-BC V5.0 with POSIX V5.0A33 supports large local file systems and files: > 2 GB, max. 1 Terabyte.

Technical Data

Hardware

BS2000/OSD Business Server

Software

BS2000/OSD-BC V3.0A and higher with POSIX-BC as of V3.0A31

openNet Server (BS2000/OSD) V1.0 and higher

Optionally: C/C++ (BS2000) as of V3.0C and CRTE (BS2000) as of V2.3C for the access to large files

Implementation language

C

User interface

English

Installation

By the user, on the basis of the Release Notice resp. the installation guide in the POSIX basics user manual

Documentation

NFS V3.0 / NFS V1.2C (BS2000/OSD) Network file system User guide

Conditions

This software product can be purchased by the customer against a single payment or leased in accordance with our conditions for the use of software products.

Warranty

Class: A
 Delivery format: Machine language

Ordering and delivery

This software product may be obtained from your local Fujitsu Siemens Computers regional office.