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NFSRODS v1.0.0

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- Mapped traditional Unix permissions

- No group support

- Used world permissions

NFSRODS - What's changed since v0.8.0?

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- Permissions are now managed via NFSv4 ACLs

- Groups are fully supported

- Added SSL support

- Added support for LDAP and AD via sssd

- Made it possible to retrieve the Git SHA of your deployment

- NFSRODS properly closes iRODS connections

- NFSRODS correctly handles listing of large collections

- Testing via BATS

NFSRODS v1.0.0 - Authorization Model

- Maps iRODS permissions to/from NFSv4.1 ACLs.

- Traditional UNIX permissions are only set for the owner.

- Permissions managed via nfs4_getfacl and nfs4_setfacl.

- Collections are always executable, while data objects are never executable.

NFSRODS - Enabling SSL/TLS
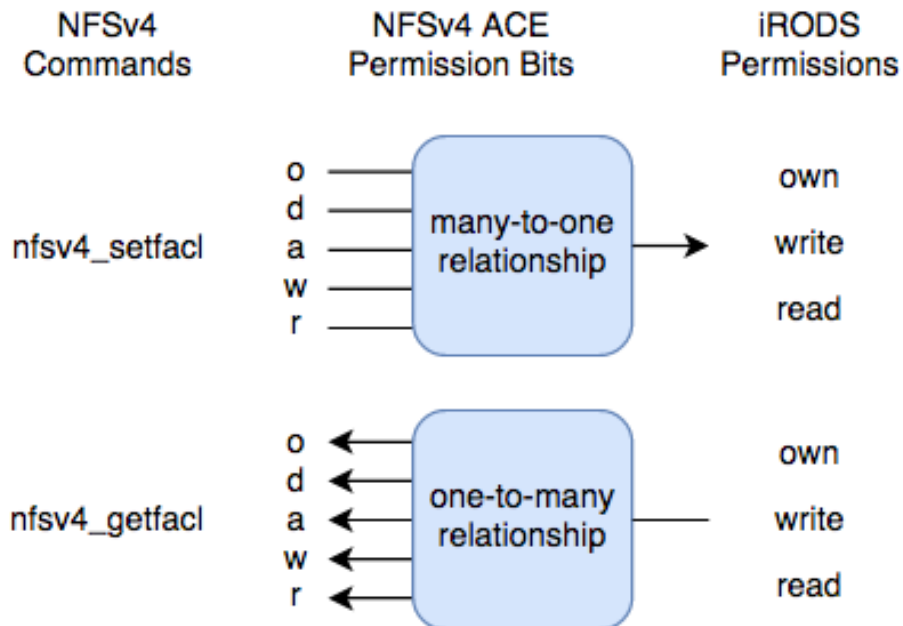
1. NFSRODS Configuration *(shaved down for conciseness)*:

```
$ cat /home/ubuntu/nfsrods_config/server.json
{
    "irods_client": {
        "ssl_negotiation_policy": "CS_NEG_REQUIRE"
    }
}
```

Could also be set to **CS_NEG_DONT_CARE**.

2. Launch the NFSRODS Docker container with your SSL certificate:

```
$ docker run -d --name nfsrods \
        -p 3000:2049 \
        -v /home/ubuntu/nfsrods_config:/nfsrods_config:ro \
        -v /etc/passwd:/etc/passwd:ro \
        -v /<full/path/to/certificate.crt>:/nfsrods_ssl.crt:ro \
        irods/nfsrods:latest
```

NFSRODS - Enabling sssd

Thanks to **Jonathon Anderson (CU Boulder)**,
NFSRODS can use sssd to resolve users and
groups as an alternative to /etc/passwd.

Launch the NFSRODS Docker container with the sssd socket:

```
$ docker run -d --name nfsrods \
        -p 3000:2049 \
        -v /home/ubuntu/nfsrods_config:/nfsrods_config:ro \
        -v /var/lib/sss:/var/lib/sss \
        irods/nfsrods:latest
```

Enables support for LDAP and Active Directory.

- Hard Links

- Parallel Transfer

- Performance (e.g. "ls")

- Unit Testing

- NFStest - POSIX Filesystem Level Access Testing

- SMBRODS - Possible sister project to make iRODS accessible to Microsoft Windows machines

Questions?

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- Thank you!

- This version (NFSv4.1) of NFSRODS was built by:
  - Kory Draughn, iRODS Consortium
  - Alek Mieczkowski, iRODS Consortium
  - Mike Conway, NIH/NIEHS
  - Jason Coposky, iRODS Consortium
  - Terrell Russell, iRODS Consortium

- Inspired by work (NFSv3) presented at UGM2016 (slides, paper):
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  - I. Fé, Center for Informatics UFPE, Brazil
  - A. Lobo Jr., Center for Informatics UFPE, Brazil
  - F. Silva, Center for Informatics UFPE, Brazil
  - G. Callou, Center for Informatics UFPE, Brazil
  - V. Alves, Center for Informatics UFPE, Brazil
  - P. Maciel, Center for Informatics UFPE, Brazil
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