

# NFSv4.2 Authentication

# Problem

NFS authentication mechanisms seem to be stuck in the 90s

There's a relationship to the authentication and identity representation that gets a namespace reduction when it hits the server – for a reasonable reason:

Linux & FreeBSD map back to kernel UID mechanisms and let the kernel do the work of validating access to file objects

# Problem Continued

- Enabling bearer tokens
  - OpenID Connect based on oauth
  - Built into projects like Large Hadron Collider, Square Kilometer Array
  - The “cloud”
- Anything that isn't enterprise domain / enterprise scale greenfield
  - Wow, the pain of kerberizing my house with
    - FreeBSD NFS server
    - Linux / Windows 11 / FreeBSD / Mac OS clients
    - ID mapping hurts, hurts so bad

# Any interest in this?

- Likely some type of GSSAPI extension to enable access to identity & authentication beyond Kerberos v5
- Be there dragons here?
- What if you can't use LDAP as a mapping oracle?