

NORDUShare

tf-storage 2010, Utrecht



What is NORDUshare?



NORDUshare is a data distribution platform based on bittorrent technology

OK so what does it look like?

(yes hopefully there will be a demo)



Superficially NORDUshare looks like most
torrent sites but with auth and authz
(federated of course)

Use-cases

- Sensor networks
- Provisioning of bulk content (eg video, SCORM objects) for shared LMS or media distribution systems
- Distributed "FTP" service
- VO data sharing

Design goals

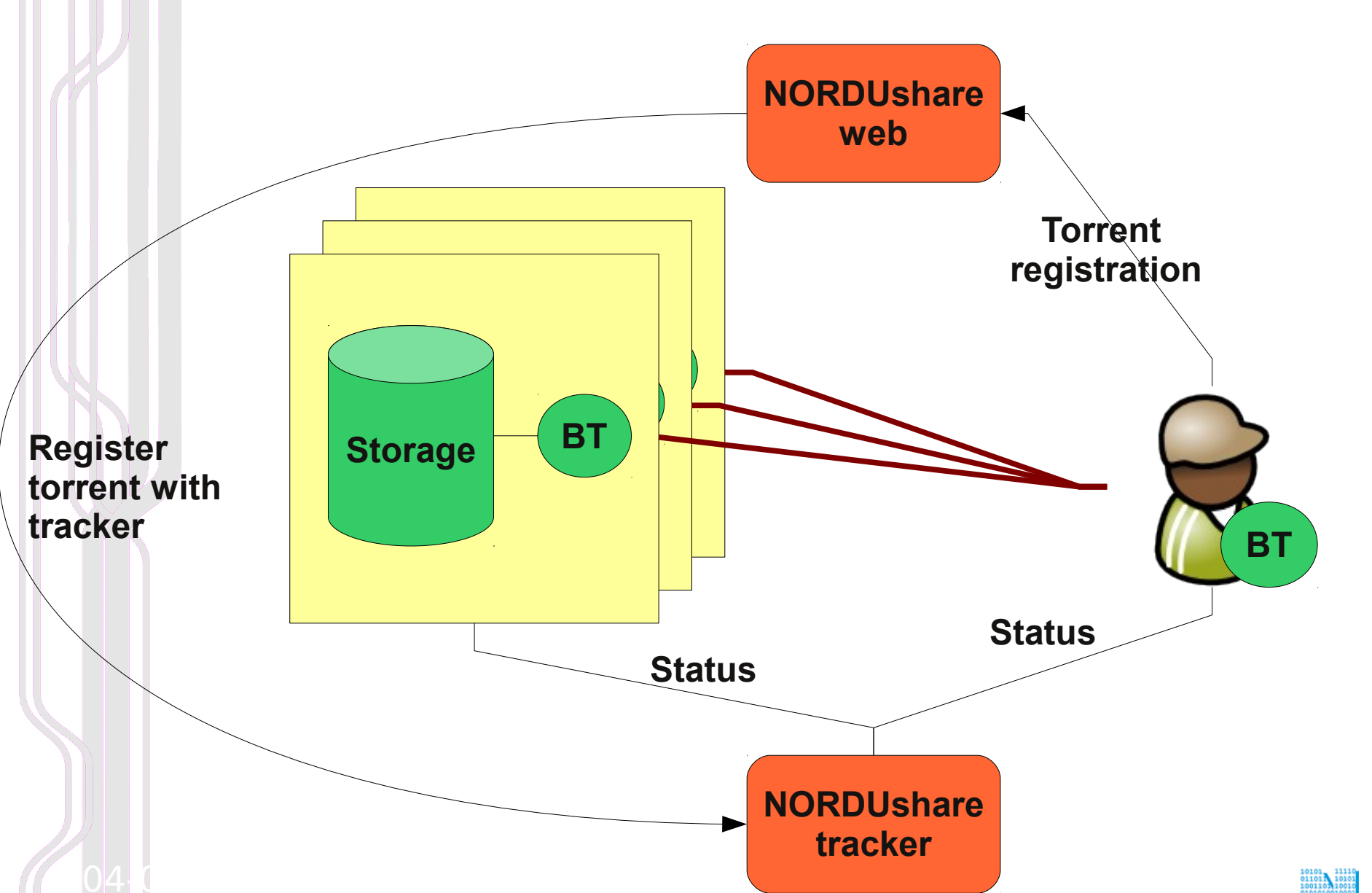
- Programmable – a RESTful API is a MUST
- Extremely easy to integrate with – curl+ctorrent should be enough
- Basic client for entry-level users (java-based)
- Compatible with current thinking around federation VOs (entitlements)
- Scalable – no single point of storage!
- Behave well in the face of mobile, intermittent and varying quality of Internet connectivity

Non-goals

- Duplicate filesender use-cases
 - In fact we believe filesender could be a very nice frontend to nordushare
- Become a distributed filesystem
 - No way José!

Components of NORDUshare

- A tracker (there could be more)
 - only permits whitelisted torrents to be tracked
- A set of seeders (storage nodes)
- A web UI (there could be more of those too...)
 - Federated auth
 - authz based on eduPersonEntitlement
- A few clients
 - java webstart, upload of raw torrent-file, simple cmdline
- A RESTful API
 - time-limited bearer tokens (aka API keys) for auth carrying a set of entitlements

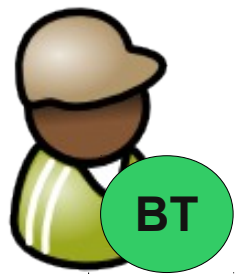


Register torrent with tracker

NORDUshare web

Torrent registration

Storage BT



Status

Status

NORDUshare tracker

Some consequences of the design



- RSS/ATOM based on tags
 - Run a storage-node for your community
 - Automatically download everything for your VO
- Resume for all datatransfers
 - BT does this for you
 - Swarming helps with downloads
- BT is "supported" in common SOHO network equipment
 - The java webstart client uses UPNP to establish NAT port mappings

Demo



Status and Plans



Public Beta in May 2010 using Kalmar Union

(eduGAIN is also a possibility)

Tracking our progress!

git://git.nordu.net/lobber.git
git://git.nordu.net/lobber-client.git

Q & A

