

FLUTE and multicast file distribution demo

Stig Venaas
UNINETT
venaas@uninett.no

FLUTE

- FLUTE - File Delivery over Unidirectional Transport
 - draft-ietf-rmt-flute-07.txt
- Unidirectional means good for e.g. satellite
- But also for distribution to large number of recipients
 - Don't want feedback from them
- Based on ALC, RFC 3450
 - Asynchronous Layered Coding
- ALC combines LCT (RFC 3451) and FEC (RFC 3452)
- LCT (Layered Coding Transport)
 - by using layers one can do congestion control
 - multiple rate delivery to receivers
- FEC (Forward Error Correction)
 - recover from packet "small" loss by sending extra data
 - need no ack/nack from receivers
 - good explanation in RFC 3453

MAD-FLUTE

- MAD-FLUTE is an implementation of FLUTE
 - <http://www.atm.tut.fi/mad/>

- Supports IPv4 and IPv6 multicast, only ASM so far
 - Authors working on SSM support
 - Have said they need some help with SSM on Linux
- We've been testing it for a few months in 6NET
 - I'm sending a daily stream with new internet drafts
 - Southampton and some others are listening
 - Works quite well

Large scale file distribution/mirroring

- We want to use MAD-FLUTE for this
- MAD-FLUTE only gives recovery from small packet loss
- If big packet loss, data will be lost, client need to obtain missing data
 - Create scheme with multiple transmissions of same data
 - Client can join when missing data is transmitted
 - Should announce when different filenames are transmitted?
 - Use unicast from source closest mirror?
- In some cases a client may have been off-line for long time
 - Or multicast connectivity down for a while
 - Treat similar to big loss
- When mirroring, client should also delete files
 - when deleted at source
- Distribute file listing (including md5 signatures)?
 - so client can check that is in sync