Advanced icommands

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- Go over not commonly used icommands and features
- iput
  - -P output the progress
  - -I   redirect the connection to resource server
  - -N numThreads   number of threads to use.
    - 0 means no thread. Get around firewall issue
  - -T   renew socket co n nection every 10 minutes (some network times out)
  - -X restartFile   restart in case failure

- itrim – trim down the number of replica. Keep 2 copies by default.
  - -N numCopies number of copies to keep
  - -S srcResource the resource of the replica to delete
  - -M admin user perform trim on behave of users
  - e.g.,
    - itrim -SdemoResc xyz (copy in resource demoResc will be trimed if there are more than 2 copies of xy)
- iphymv – move an iRODS file from one resource to another
  - -R destResc the target resource
  - -S srcResc the resource of the copy to be moved. Meaningful only if more than 1 copy.

- irsync – synchronize data between copies.
  - Based on MD5 checksum values by default
  - -s Based on file size, faster
  - Examples:
    - irsync xy i:xy   local file to iRODS file
    - irsync i:xy xy   iRODS file to local file
    - irsync i:xy i:xz   iRODS file to iRODS file
- ireg – register an existing file or directory on the server into iRODS
  - The UNIX user that runs the iRODS server must have access permission to these files/ditectories
  - For non admin iRODS users, they must own these files
  - -R resource   the resource of the server where these files are located
  - ireg -RmyResc -C /usr/tmp/john/localDir /myZone/home/john/mydir

- ibun - Bundle file operations
  - Upload - Tar directory with many small files locally on the client and untar on the server
  - tar -chlf mydir.tar -C /x/y/z/mydir .
  - iput mydir.tar .
  - ibun -x mydir.tar mydir
  - Download - Tar a collection on the server and untar locally
  - ibun -c mydir1.tar mydir1
  - iget mydir1.tar
  - tar -xvf mydir1.tar

- imcoll – mount or link a collection
- Mount a file directory on the server to a collection
  - imcoll -m filesystem -RmyResc /usr/tmp/myDir /tempZone/home/myUser/mymount
  - Files and directories in /usr/tmp/myDir must be accessible by the UNIX user running the irodsServer
  - Files and directories in a mounted collection are not registered in iCat
  - No system and user defined metadata
  - Does not support replication
  - Very efficient iput/iget

- imcoll can be used to soft link a collection to another collection
- Support multiple links in a path
- Support link across zone
- imcoll -mlink /myZone/home/rods/mydir /tempZone/home/rods/xlink
- ils -L /tempZone/home/rods
    - C- /tempZone/home/rods/xlink linkPo   /myZone/home/rods/mydir
- icd /tempZone/home/rods/xlink

- irodsFs – FUSE implementation for iRODS
- Allow user to mount iRods collection
- iRODS files can be accessed as UNIX files using UNIX commands/system calls (cp, ls …)
- Kernel interface runs on Linux kernels 2.4.X - 2.6.X
- Download FUSE library at http://fuse.sourceforge.net/
- Build the FUSE library
- edit the config/config.mk file:
  - Uncomment the line:
    - # IRODS_FS = 1
    - set fuse library directory. e.g.,
    - fuseHomeDir=/usr/local/fuse
- Making irods Fuse:
  - cd clients/fuse
  - make
- Mount a irods collection
  - make a local directory for mounting. e.g.,
    - mkdir /usr/tmp/fmount
  - cd clients/fuse/bin
  - iinit
  - irodsFs /usr/tmp/fmount
- Unmount irods FUSE
  - fusermount -uz /usr/tmp/fmount