# File updates to Torrent Server for Raptor A

## In the torrent\_suite project of git:

The following sparse tree, located in torrent\_suite/raptorA\_updates must be applied into the Torrent Server:

/etc/init.d

/etc/init.d/ionMountExternal

/etc/init.d/mountExternal

/etc/init.d/mkNewDrive.sh

/etc/init.d/ionRestartTS

/etc/rc2.d

/etc/rc2.d/S95ionRestartTS

/etc/rc2.d/S18ionMountExternal

## Not in git:

The following files must be present in the /root/pkgs directory of the Torrent Server image:

/root/pkgs/db.tar.bz2

NOTE: this is an empty database

any .deb package that installs into /results is going to have to be reinstalled by the mountExternal package, this currently includes the following:

ion-chefupdates\_4.4.5\_amd64.deb

ion-protonupdates\_4.4.3\_amd64.deb

ion-referencelibrary\_2.2.0\_amd64.deb

ion-pgmupdates\_4.4.1\_amd64.deb

ion-publishers\_4.6.0-1\_Linux\_amd64.deb

ion-plugins\_4.6.2-1\_Linux\_amd64.deb

ion-publishers\_4.6.1-1\_Linux\_amd64.deb

The following human genome reference library:

hg19.tar.gz

# Build Procedure

The following procedure is performed on the candidate Torrent Server for Raptor A:

0) clean up of the database:

kill datacollect on the instrument

remove all experiments

remove all entries in the rigs database except for the default entry

.5) cleanup pkg installs (/var/cache/apt/archives):

apt-get clean

rm -rf /var/lib/postgresql

1) shutdown the candidate TS Vm. (sudo shutdown -h now -- MAKE SURE TO USE -h NOT -H!!!)

2) add a new virtual disk (vdc) with the following parameters in the virtual manager:

size = 120G

not allocated all at create time

device type = Virtio disk

Storage Format = qcow2

3) start up the Ts Vm. Perform the following commands:

sudo su

/etc/init.d/mkNewDrive.sh 1

shutdown -h now

4) remove vdc from the virtual manager

5) on the host execute the following commands:

mv /var/lib/libvirt/images/TsVm.img /root

mv /var/lib/libvirt/images/TsVm-1.img /var/lib/libvirt/images/TsVm.img

6) On the host, run the next commands to create the TsVm file.

cd /

tar -zcf /results/TsVm\_`date +%Y\_%m\_%d`.tar.gz var/lib/libvirt etc/libvirt/qemu

7) start the Ts Vm and make sure and MAKE SURE /mnt/.ionFirst has a date time stamp AFTER the tar from step 6. It will take several minutes for /etc/init.d/ionMountExternal to run before /mnt/.ionFirst is created

# Test Procedure

# Test 1: newly built md0:

* Torrent Server should come up without intervention
* inspect /mnt/ionFirstLog
* /results should look like this:

Machine generated alternative text: ionadniin@tsvm:—$ ls /results ___________
analysis cache hef jj  dbase_backup icu  pym Ll:inNedi plugins postgresql proton
ionadmin@tsvni:—$ 
publishers
referenceLibrary IIiTL

* dpkgs -- verify packages for TS

dpkg -l ion-analysis ion-chefupdates ion-dbreports ion-docs ion-gpu ion-igv ion-jk ion-onetouchupdater ion-pgmupdates ion-pipeline ion-plugins ion-protonupdates ion-publishers ion-referencelibrary ion-rsmts ion-torrentr ion-tsconfig

do it this way: **ion\_versionCheck.py**

As of 4/22/15, the current versions on the boot drive are as follows:

ionadmin@tsvm:~$ ion\_versionCheck.py

Torrent\_Suite=4.6 RC1

host=tsvm

analysis=4.6.3-1

chefupdates=4.4.5

dbreports=4.6.4-1

docs=4.4.3-1

gpu=4.6.0-1

onetouchupdater=4.5.0-1

pgmupdates=4.4.1

pipeline=4.6.3-1

plugins=4.6.2-1

protonupdates=4.4.3

publishers=4.6.1-1

referencelibrary=2.2.0

rsmts=4.6.0-1

torrentr=4.6.0-1

tsconfig=4.6.2-1

* make sure you can log into the Torrent Server
* hg19 reference library has been fully installed
* make sure the instrument is register in the rigs database, along with default, like this:

Machine generated alternative text: Select rig to change ________ _____
Action: ‘I aai o of2selected Irilter?
Q Name Ftpserver Location State Serial By ftpser,er
All
Q raptorDHCP 192.168.201.1 Home (None) 192.168.201.1
L] default 192.168.201.1 Home (None)
2 rigs

* make sure there are no experiments in the database
* run analysisTest from instrument and make sure the analysis completed.

## Test 2: putting a new boot drive into a system with an existing /results drive on the Torrent Server already running the 4/21/15 TS image.

* new boot drive will not cause the results drive to be rebuilt. Inspect /mnt/ionFirstLog to ensure results file system was not rebuilt nor was postgresql database migrated. File should look like this:

* Machine generated alternative text: Due Apr 21 16:21:59 EDT 2015
  + RAIDDEVICE=/dev/vdb
  + Force=no
  + OpType=
  + [ 2 -gt e ]
  + shift 1
  + OpType=build_resul.ts
  + shift 1
  + [ 0 -gt 0 ]
  + echo buil.dresul.ts
  + sed -e si uig
  + OpType=build_resul.ts
  + [ build resul.ts = build resul.ts ]
  + build resul.ts
  + REDO=0
  + MOUNTED=
  + [ no = yes ]
  + [ ! -e /mnt/.ionMadeExternal. ]
  + REDO=2
  + mount
  + grep external.
  + MOUNTED=
  = ]
  + mount /dev/vdb /mnt/external.
  + mount
  + grep external.
  + MOUNTED=/dev/vdb on /mnt/external. type ext4 (rw)
  + [ /dev/vdb on /mnt/external. type ext4 (ni) = ]
  + [2= 1]
  + chmod 777 /mnt/external./1..ost+found /mnt/external./resul.ts
  + mount
  + grep external.
  + MOUNTED=/dev/vdb on /mnt/external. type ext4 (ni)
  + [ /dev/vdb on /mnt/external. type ext4 (ni) != ]
  + echo 1
  + l.s -1. /mnt/external./resul..ts
  + grep postg res
  + + sed -e si \+/ /g
  cut-d -f3
  + [ statd != postgres ]
  find /resul.tsipostgresql. -print

* verify that existing experiments are present and valid
* run analysis self test

## Test 3: putting a new boot drive into a system with an existing /results drive on the Torrent Server running the 7/31/14 TS image

* Start with a disk image that is 1/26/15 or older
* new boot will not cause /results to be rebuilt. postgresql database will be migrated

Following successful migration, the contents of /mnt/ionFirstLog will look similar to this:

Tue Apr 21 15:55:32 EDT 2015

+ RAIDDEVICE=/dev/vdb

+ Force=no

+ OpType=

+ [ 2 -gt 0 ]

+ shift 1

+ OpType=build\_results

+ shift 1

+ [ 0 -gt 0 ]

+ echo build\_results

+ sed -e s/ //g

+ OpType=build\_results

+ [ build\_results = build\_results ]

+ build\_results

+ REDO=0

+ MOUNTED=

+ [ no = yes ]

+ [ ! -e /mnt/.ionMadeExternal ]

+ REDO=2

+ mount

+ grep external

+ MOUNTED=

+ [ = ]

+ mount /dev/vdb /mnt/external

+ mount

+ grep external

+ MOUNTED=/dev/vdb on /mnt/external type ext4 (rw)

+ [ /dev/vdb on /mnt/external type ext4 (rw) = ]

+ [ 2 = 1 ]

+ chmod 777 /mnt/external/lost+found /mnt/external/rawdata /mnt/external/results

+ mount

+ grep external

+ MOUNTED=/dev/vdb on /mnt/external type ext4 (rw)

+ [ /dev/vdb on /mnt/external type ext4 (rw) != ]

+ echo 1

+ ls -l /mnt/external/results

+ grep postgres

+ sed -e s/ \+/ /g

+ cut -d -f 3

+ [ 123 != postgres ]

+ find /results/postgresql -print <- a whole bunch of files will be printed out

Tue Apr 21 15:55:52 EDT 2015

+ RAIDDEVICE=/dev/vdb

+ Force=no

+ OpType=

+ [ 2 -gt 0 ]

+ shift 1

+ OpType=restart\_TS

+ shift 1

+ [ 0 -gt 0 ]

+ echo restart\_TS

+ sed -e s/ //g

+ OpType=restart\_TS

+ [ build\_results = restart\_TS ]

+ [ restart\_TS = restart\_TS ]

+ restart\_TS

+ [ no = yes ]

+ [ ! -e /mnt/.ionFirst ]

+ [ -e /mnt/.ionMadeExternal ]

+ [ ! -e /results/postgresql ]

+ [ no = yes ]

+ **python /opt/ion/manage.py migrate rundb**

~

* a reboot of the Torrent Server has a startup appended to the bottom of /mnt/ionFirstLog as in test 2
* verify that existing experiments are still present and accessible
* verify that hg19 genome reference is present and valid
* run analysis self test