

Table of Contents

T0-->T1 Data Transfer tests in preparation for Run2.....	1
Motivation.....	1
Assumptions for the test.....	1
Procedure for the test.....	1
Timeline for the test.....	1
Progress.....	2
March 2017.....	2
January 2016.....	2
October 2015.....	2
July 2015.....	2
April 2015.....	2
Feb 2015.....	2
Nov 2014.....	3

T0-->T1 Data Transfer tests in preparation for Run2

Motivation

Test T0->T1 transfers at the rates expected in Run2, taking into account the relevant changes in Tier-0 and Tier-1 processing, namely:

- Tier-0 processing runs against EOS
- Prompt reconstruction shared with Tier-1s
- Disk/tape separation at Tier-1s
- RECO is a temporary disk-only data format

Assumptions for the test

- Event sizes/rates for 2015 are taken from the presentation at the Fall 2014 O&C week - 3.0 MB/evt RECO, 0.63 MB/evt AOD
 - ◆ <https://indico.cern.ch/event/285674/session/7/contribution/41/material/slides/0.pdf>
 - ◆ TODO - double-check with the significantly lower numbers in the resource request document from February 2014 - 0.8 MB/evt RECO, 0.37 MB/evt AOD
<https://cms-docdb.cern.ch/cgi-bin/DocDB/ShowDocument?docid=12170>
- RAW is produced on EOS/T2_CH_CERN and exported in three copies: one custodial copy on tape at T0_CH_CERN_MSS; one custodial copy on tape distributed across T1_*_MSS; one disk copy distributed across T1_*_Disk
- PromptRECO is produced 50% on EOS/T2_CH_CERN and 50% at T1s; the T2_CH_CERN fraction is exported in one copy distributed across T1_*_Disk
- PromptAOD is produced 50% on EOS/T2_CH_CERN and 50% at T1s; the T2_CH_CERN fraction is exported in two copies: one custodial copy distributed across T1_*_MSS; one disk copy distributed across T1_*_Disk
- The dataset transfers to the Tier-1s are distributed in proportion to their 2015 pledges (either by tape, disk or CPU pledge share - it doesn't matter, since the relative shares don't differ by more than a few percent)
- The rates are calculated assuming a worst-case scenario, with no rerouting in PhEDEx, i.e. each RAW & AOD file is exported from T2_CH_CERN to T1 twice (once to Disk and once to MSS)
- With these assumptions, the rates are calculated here:
 - ◆ https://docs.google.com/spreadsheets/d/1x0DMs6LGU612YHeXX2lotlh_D3eeYxNvpLJXqnr62k/ed

Procedure for the test

- Set the LoadTest rates for T2_CH_CERN-->T0_CH_CERN_MSS, T2_CH_CERN-->T1_*_Disk, T2_CH_CERN-->T1_*_MSS according to the targets in the table
 - ◆ Increasing gradually in steps, e.g. 25%-50%-75%-100%

Timeline for the test

- Nov 11th-17th
- Repeat Nov 18th-24th in case of issues
- 2 Round Feb 16th-19th (Increasing in 2 steps 50%-100%)
- 3 Round April 2015
- 4 Round July 7th - 2015

- 5 Round October 16th - 2015
- 6 Round January 25th - 2016

Progress

March 2017

- Can be monitored at [CompOpsRun2T0T1TransferTestsMarch2017](#)

January 2016

- Can be monitored at <https://twiki.cern.ch/twiki/bin/view/CMSPublic/CompOpsRun2T0T1TransferTestsMonitoring>

October 2015

- Can be monitored at <https://twiki.cern.ch/twiki/bin/view/CMSPublic/CompOpsRun2T0T1TransferTestsMonitoring>

July 2015

- Can be monitored at <https://twiki.cern.ch/twiki/bin/view/CMSPublic/CompOpsRun2T0T1TransferTestsMonitoring>

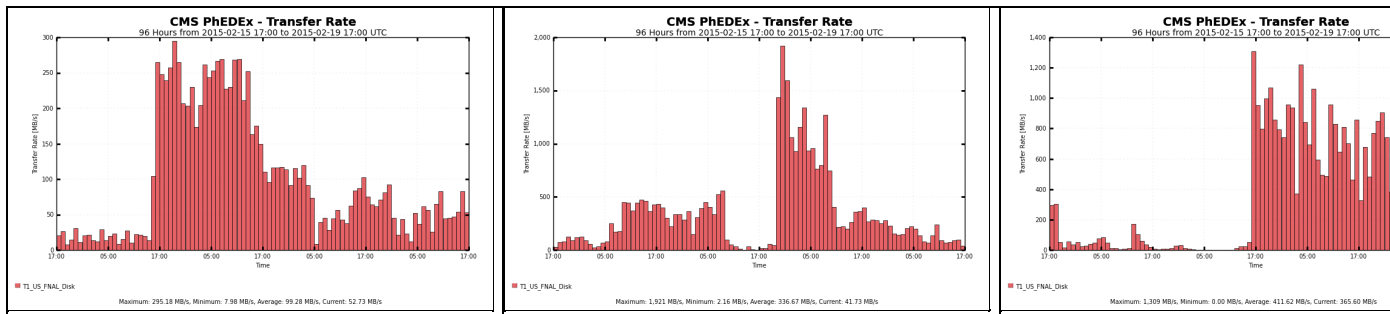
April 2015

- Can be monitored at <https://twiki.cern.ch/twiki/bin/view/CMSPublic/CompOpsRun2T0T1TransferTestsMonitoring>

Feb 2015

Site	16Feb	17Feb	18Feb
FNAL_MSS	288 ↗ /350	266 ↗ /350	353 ↗ /350
FNAL_Disk	218 ↗ /550	65 ↗ /550	40 ↗ /550
CNAF_MSS	38 ↗ /38	73 ↗ /76	73 ↗ /76
CNAF_Disk	86 ↗ /90	147 ↗ /180	174 ↗ /180
RAL_MSS	22 ↗ /24	46 ↗ /47	46 ↗ /47
RAL_Disk	53 ↗ /56	103 ↗ /111	89 ↗ /111
KIT_MSS	29 ↗ /30	56 ↗ /59	51 ↗ /59
KIT_Disk	60 ↗ /60	117 ↗ /124	105 ↗ /124
PIC_MSS	14 ↗ /15	29 ↗ /30	29 ↗ /30
PIC_Disk	35 ↗ /36	68 ↗ /71	69 ↗ /71
JINR_MSS	-	-	-
JINR_Disk	47 ↗ /67	53 ↗ /133	91 ↗ /133
Transfer Quality	Plot ↗	Plot ↗	Plot ↗

* FNAL_Disk: Outgoing transfers and incoming transfers(Staging Test) in the production instance affected the test.



Nov 2014

Values: Actual Rate/Target Rate

Site	11Nov	12Nov	13Nov	14Nov	15Nov	16Nov
FNAL_MSS	59 ↗ /60	114 ↗ /120	155 ↗ /180	31 ↗ /235	252 ↗ /235	71 ↗ /235
FNAL_Disk	157 ↗ /140	262 ↗ /280	386 ↗ /420	451 ↗ /556	471 ↗ /556	496 ↗ /556
CNAF_MSS	19 ↗ /19	37 ↗ /38	55 ↗ /57	72 ↗ /76	75 ↗ /76	74 ↗ /76
CNAF_Disk	51 ↗ /45	86 ↗ /90	127 ↗ /135	172 ↗ /180	172 ↗ /180	174 ↗ /180
RAL_MSS	12 ↗ /12	23 ↗ /24	35 ↗ /36	46 ↗ /47	46 ↗ /47	46 ↗ /47
RAL_Disk	31 ↗ /28	54 ↗ /56	80 ↗ /84	106 ↗ /111	107 ↗ /111	107 ↗ /111
IN2P3_MSS	11 ↗ /11	21 ↗ /22	32 ↗ /33	37 ↗ /44	43 ↗ /44	43 ↗ /44
IN2P3_Disk	29 ↗ /26	45 ↗ /52	75 ↗ /78	86 ↗ /104	101 ↗ /104	100 ↗ /104
KIT_MSS	13 ↗ /15	32 ↗ /30	9 ↗ /45	60 ↗ /59	51 ↗ /59	64 ↗ /59
KIT_Disk	31 ↗ /30	58 ↗ /60	48 ↗ /90	140 ↗ /124	120 ↗ /124	119 ↗ /124
PIC_MSS	8 ↗ /8	16 ↗ /16	22 ↗ /24	29 ↗ /30	30 ↗ /30	29 ↗ /30
PIC_Disk	21 ↗ /18	35 ↗ /36	52 ↗ /54	69 ↗ /71	68 ↗ /71	70 ↗ /71
JINR_MSS	-	-	-	-	-	-
JINR_Disk	38 ↗ /34	65 ↗ /68	97 ↗ /102	120 ↗ /133	122 ↗ /133	117 ↗ /133
Transfer Quality	Plot ↗	Plot ↗	Plot ↗	Plot ↗	Plot ↗	Plot ↗

Site	Target Rate	18Nov	19Nov	20Nov	21Nov	22Nov	23Nov
FNAL_MSS	235 MB/s	245 ↗	212 ↗	99 ↗	5 ↗	123 ↗	268 ↗
FNAL_Disk	556 MB/s	305 ↗	187 ↗	214 ↗	257 ↗	110 ↗	278 ↗
CNAF_MSS	76 MB/s	73 ↗	74 ↗	74 ↗	74 ↗	73 ↗	75 ↗
CNAF_Disk	180 MB/s	158 ↗	164 ↗	175 ↗	182 ↗	184 ↗	172 ↗
RAL_MSS	47 MB/s	47 ↗	46 ↗	47 ↗	46 ↗	46 ↗	46 ↗
RAL_Disk	111 MB/s	106 ↗	108 ↗	107 ↗	107 ↗	108 ↗	106 ↗
IN2P3_MSS	44 MB/s	47 ↗	43 ↗	42 ↗	43 ↗	43 ↗	43 ↗
IN2P3_Disk	104 MB/s	97 ↗	105 ↗	100 ↗	82 ↗	104 ↗	106 ↗
KIT_MSS	59 MB/s	1 ↗	49 ↗	40 ↗	48 ↗	1 ↗	7 ↗
KIT_Disk	124 MB/s	96 ↗	59 ↗	18 ↗	68 ↗	6 ↗	20 ↗
PIC_MSS	30 MB/s	22 ↗	5 ↗	25 ↗	15 ↗	35 ↗	30 ↗
PIC_Disk	71 MB/s	34 ↗	5 ↗	50 ↗	34 ↗	73 ↗	70 ↗
JINR_MSS	40 MB/s	-	-	-	-	-	-
JINR_Disk	133 MB/s	108 ↗	100 ↗	113 ↗	109 ↗	120 ↗	110 ↗
Transfer Quality		Plot ↗	Plot ↗	Plot ↗	Plot ↗	Plot ↗	Plot ↗

Opened tickets

- KIT: https://ggus.eu/index.php?mode=ticket_info&ticket_id=110155 [↗](#)
- KIT: https://ggus.eu/?mode=ticket_info&ticket_id=107580 [↗](#)
- PIC: https://ggus.eu/index.php?mode=ticket_info&ticket_id=110258 [↗](#)

-- NicoloMagini - 2014-11-10

This topic: CMSPublic > CompOpsRun2T0T1TransferTests

Topic revision: r32 - 2017-03-18 - SiddharthMNarayanan



Copyright &© 2008-2020 by the contributing authors. All material on this collaboration platform is the property of the contributing authors.

Ideas, requests, problems regarding TWiki? Send feedback