RACF/SDCC Network Operations
Status Report (Aug 30, 2018)

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Project: RACF/SDCC Network Operations & Interventions
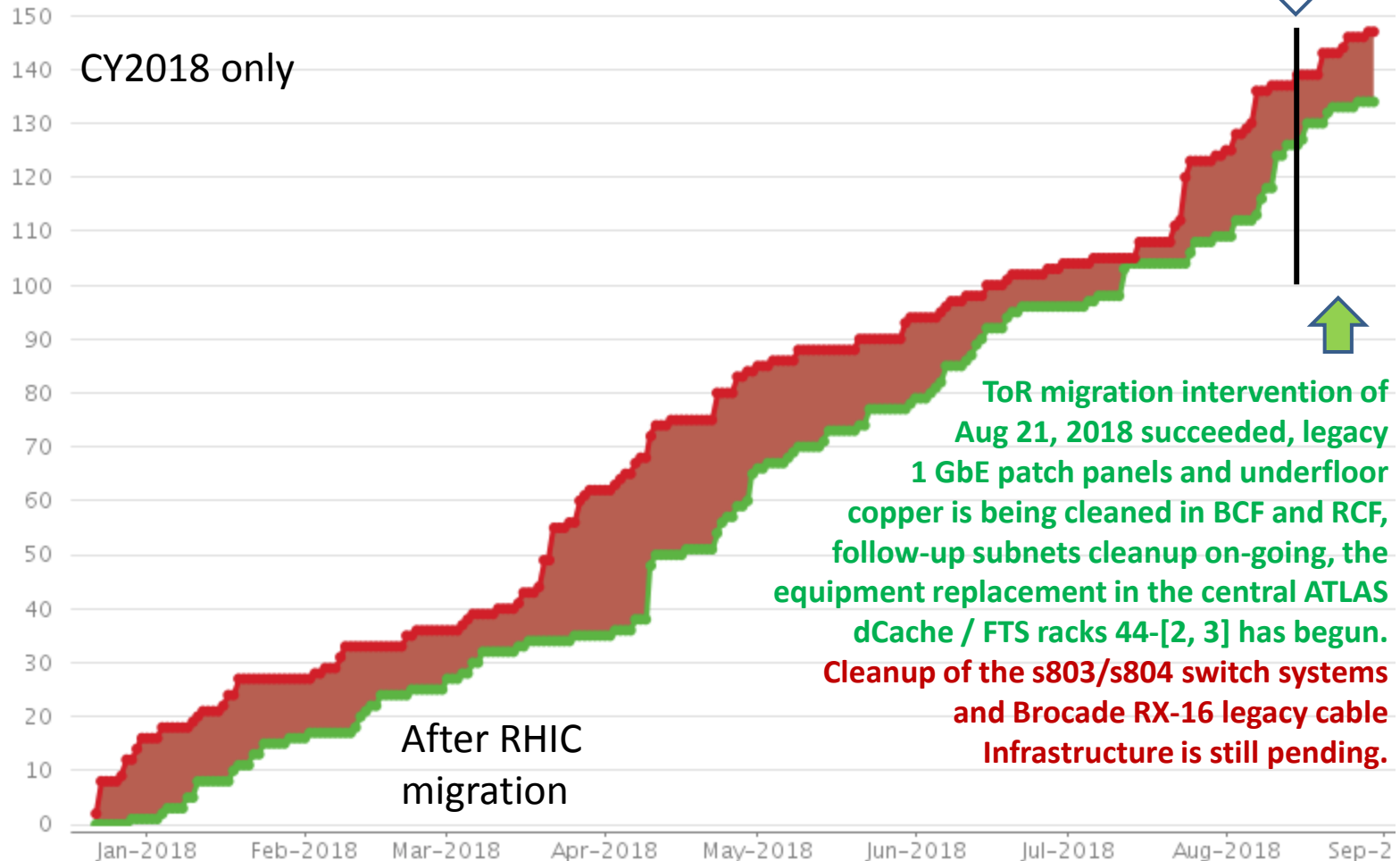
Chart

This chart shows the number of issues **created** vs the number of issues **resolved** in the last **252** days.

Previous Report

229

CY2018 only

After RHIC migration

ToR migration intervention of Aug 21, 2018 succeeded, legacy 1 GbE patch panels and underfloor copper is being cleaned in BCF and RCF, follow-up subnets cleanup on-going, the equipment replacement in the central ATLAS dCache / FTS racks 44-[2, 3] has begun. Cleanup of the s803/s804 switch systems and Brocade RX-16 legacy cable Infrastructure is still pending.
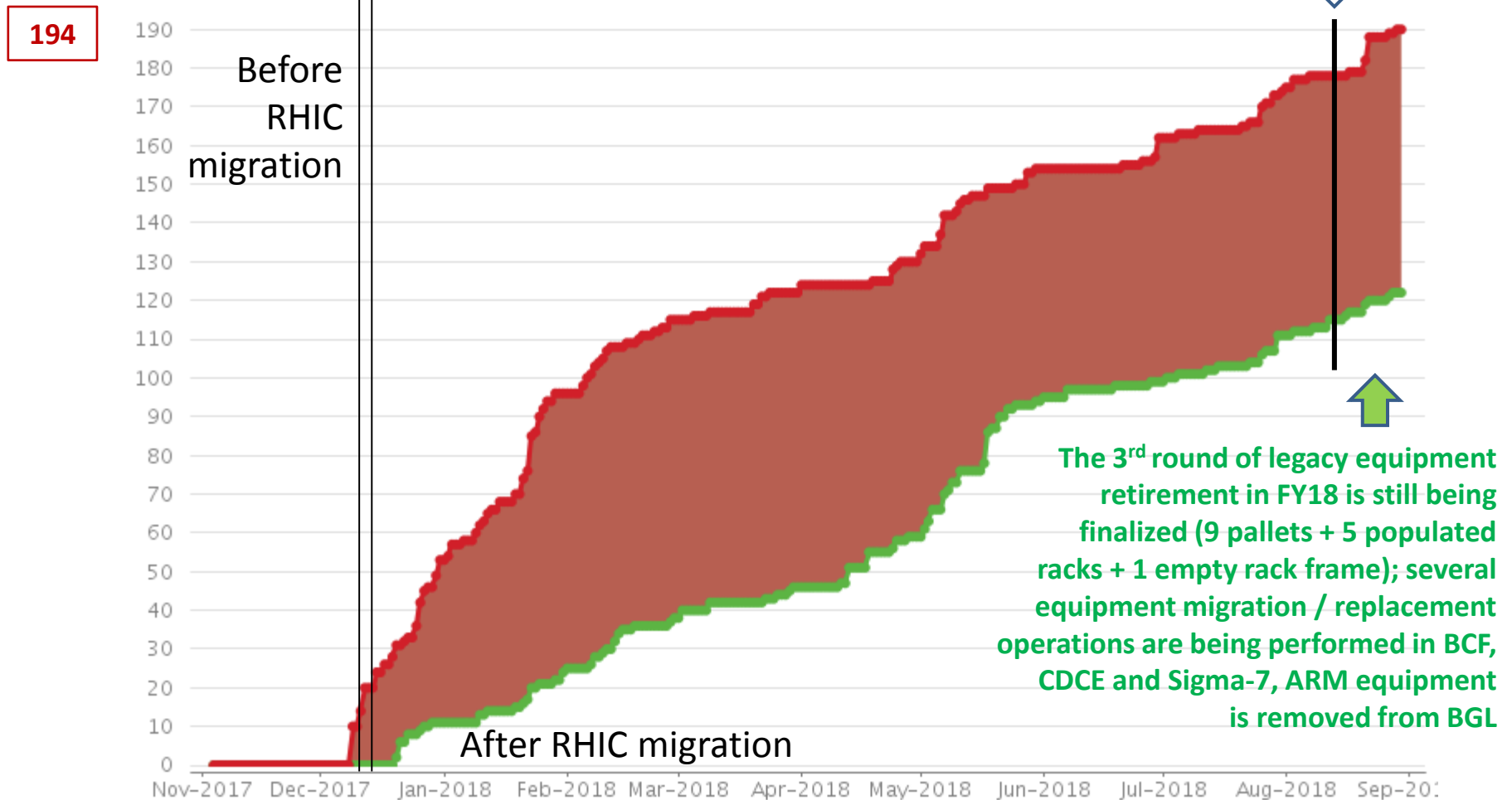
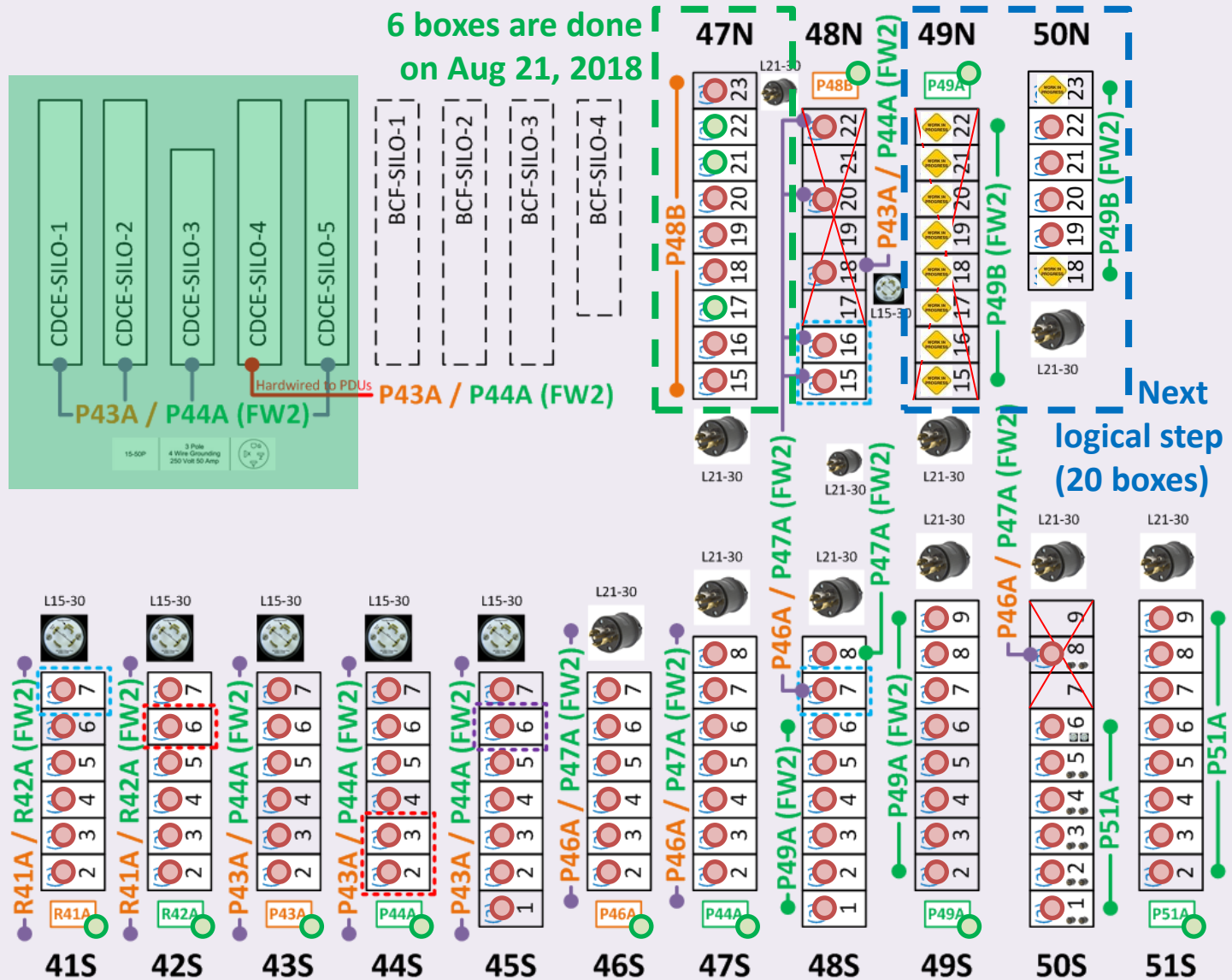# Project: Post RHIC Migration BCF & CDCE Cleansing & Service Normalization (2018Q1-3)

Chart

This chart shows the number of issues **created** vs the number of issues **resolved** in the last **300** days.

Previous Report

194

Before RHIC migration

190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0

After RHIC migration

The 3rd round of legacy equipment retirement in FY18 is still being finalized (9 pallets + 5 populated racks + 1 empty rack frame); several equipment migration / replacement operations are being performed in BCF, CDCE and Sigma-7, ARM equipment is removed from BGL

Nov-2017 Dec-2017 Jan-2018 Feb-2018 Mar-2018 Apr-2018 May-2018 Jun-2018 Jul-2018 Aug-2018 Sep-20

# Power Interventions in CDCE:
Next Stage of Receptacle Work (Aug 2018)

RHIC ToR Migration Intervention of Aug 21, 2018

- Phasing out lsstnfs2.lst.bnl.gov (GS group, done)
- Virtualizing xrdstar* server group (Storage Group, done)
- Retiring the dedicated Brahms compute node rcas0006 (Farm Group, done)
- Retirement of the legacy PHENIX dCache DTN node phnxdoor03 (done)
- PHENIX central DB and dCache infrastructure move from rack 4-9 to the new shared RHIC infrastructure rack 45-6 (GS Group, Storage Group, done)
- Re-IP-ing and re-cabling of 800+ compute nodes distributed across 36 RHIC and small experiments Farm compute racks in main BCF and RCF areas to a ToR switch group consisting of 28 ToR switches
    - The combined ToR switch group of our facility is now grown up to 62 switches
    - 34 more 4x 10 GbE connected ToR switches can be added to the existing Spine Group deployed in CDCE
- SciZone and RHIC CH perimeter firewall upgrades – issues encountered; operation postponed until the issues are addressed by Juniper
    - More details are available in NETOPS-211 (no solution yet)
    - New time window will have to be defined for a retry, hopefully before the end of CY2018
- Major legacy 1 GbE copper and patch panel and underfloor cable infrastructure removal is underway in BCF and RCF areas for the racks migrated to ToRs
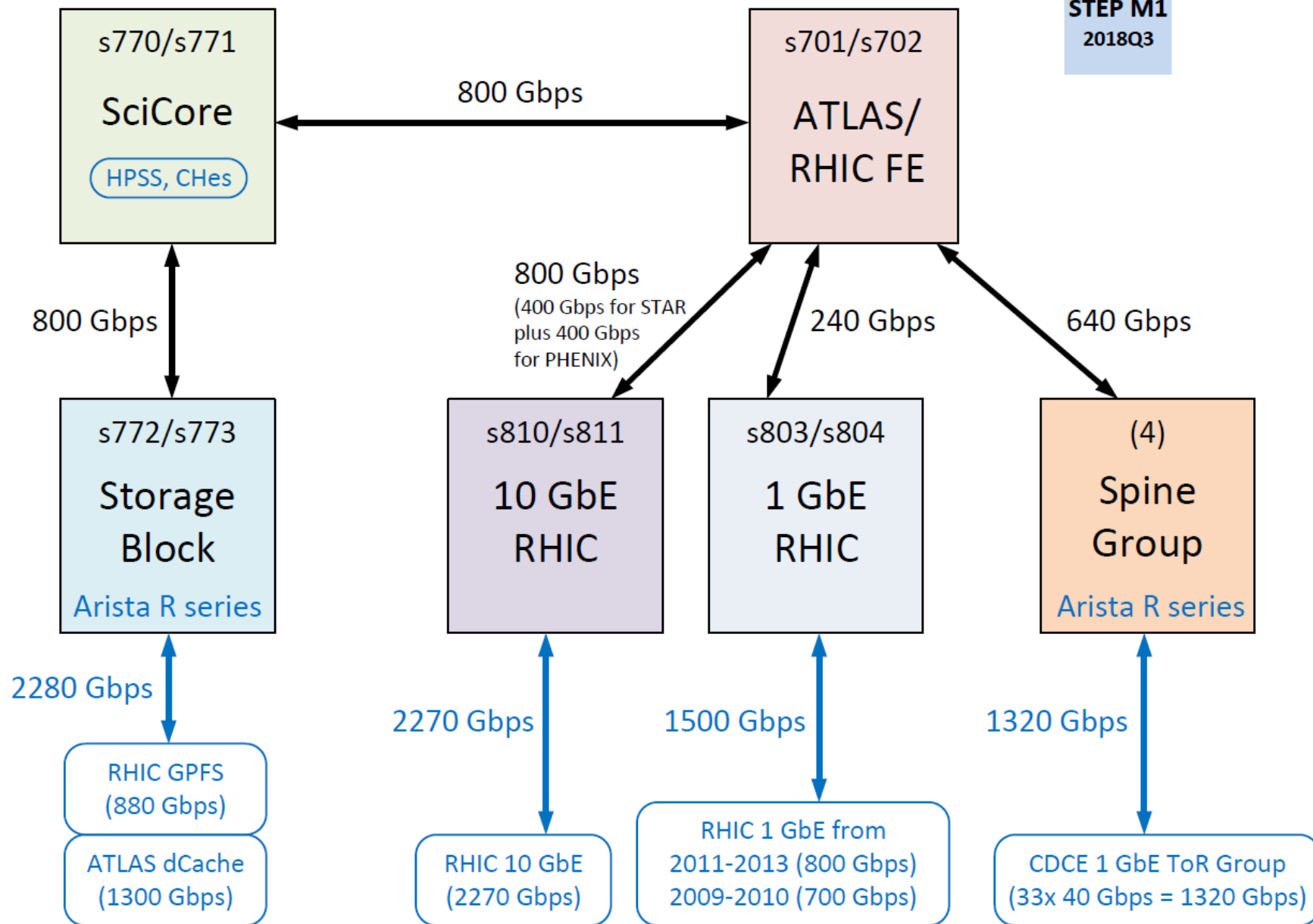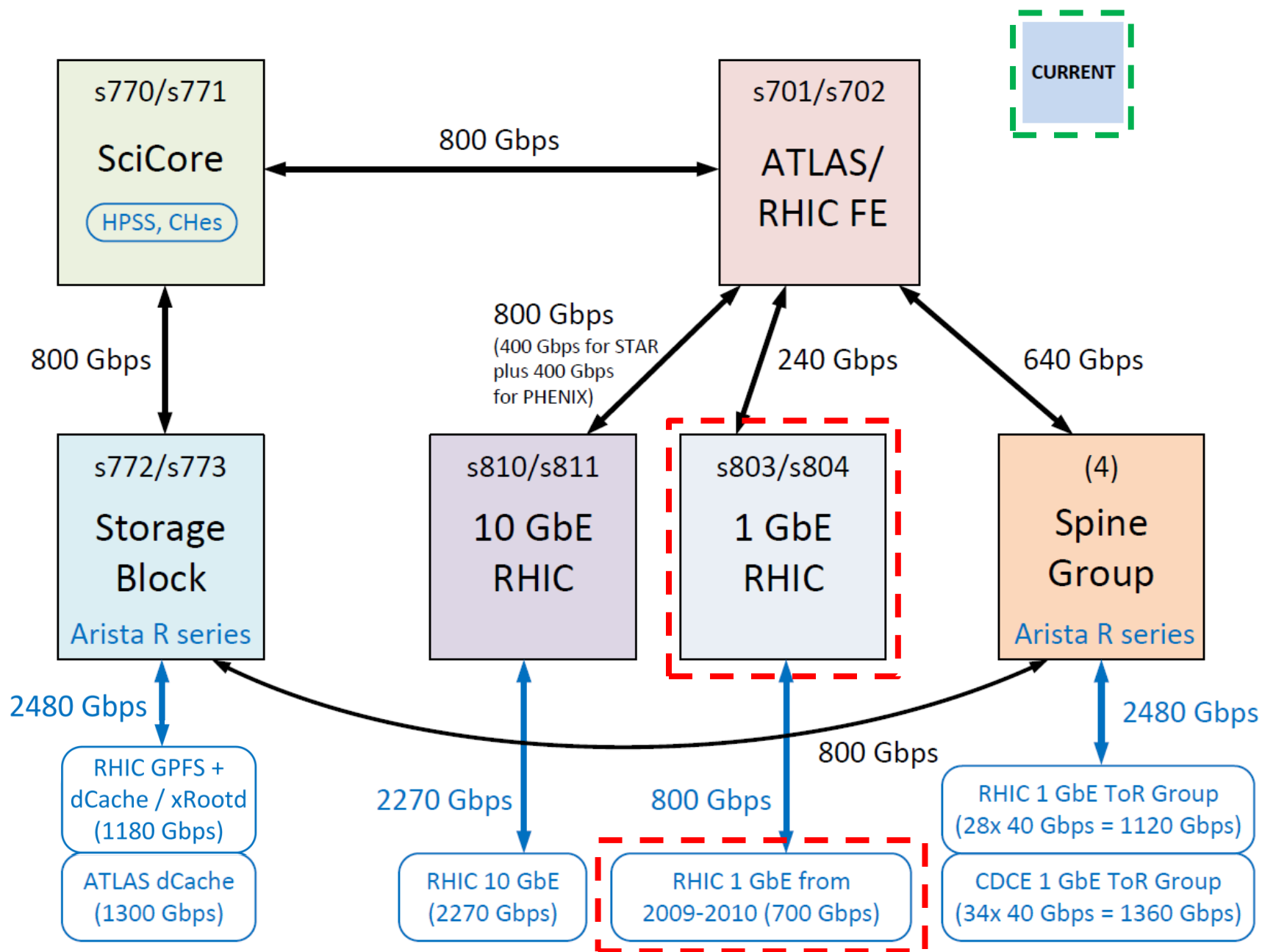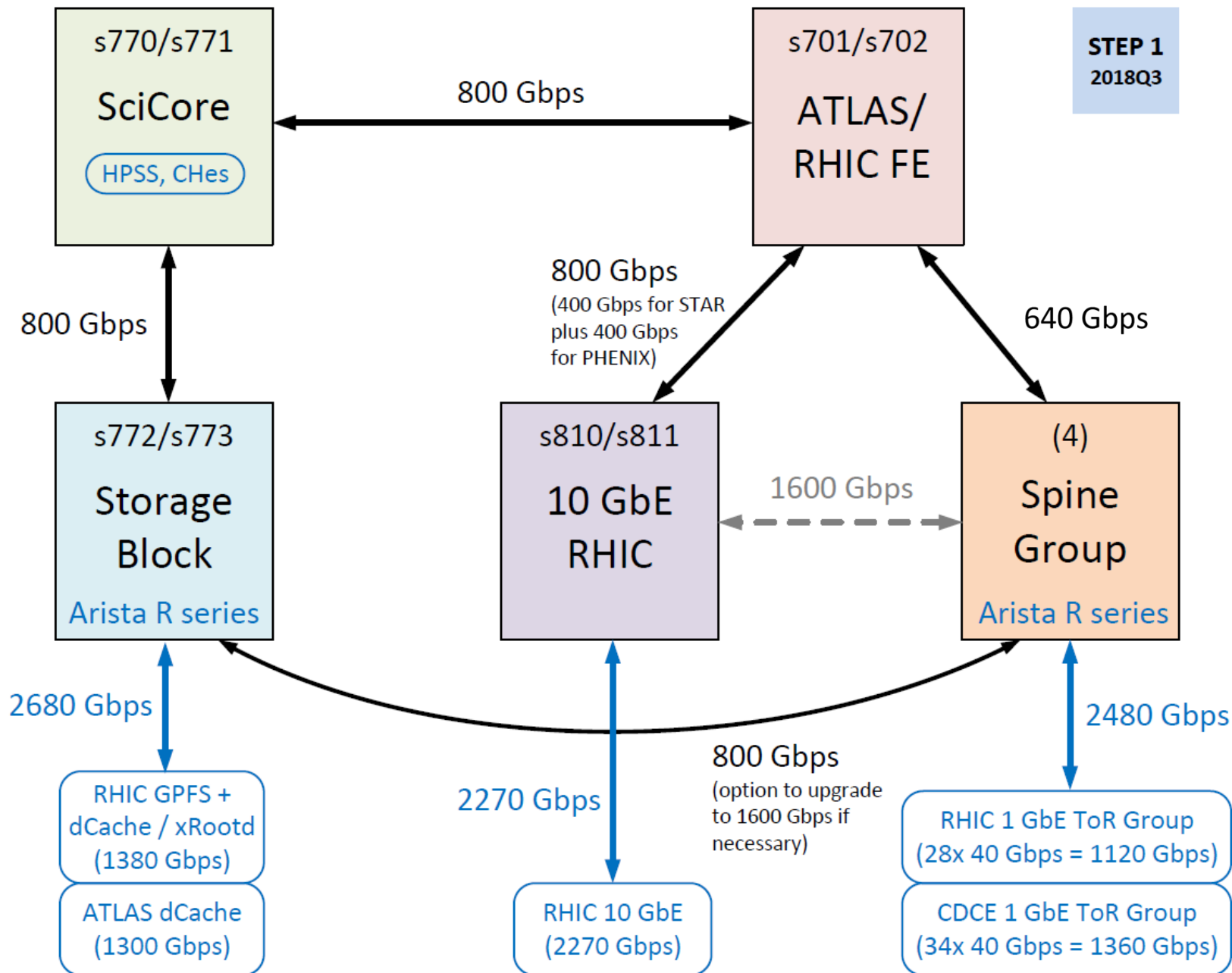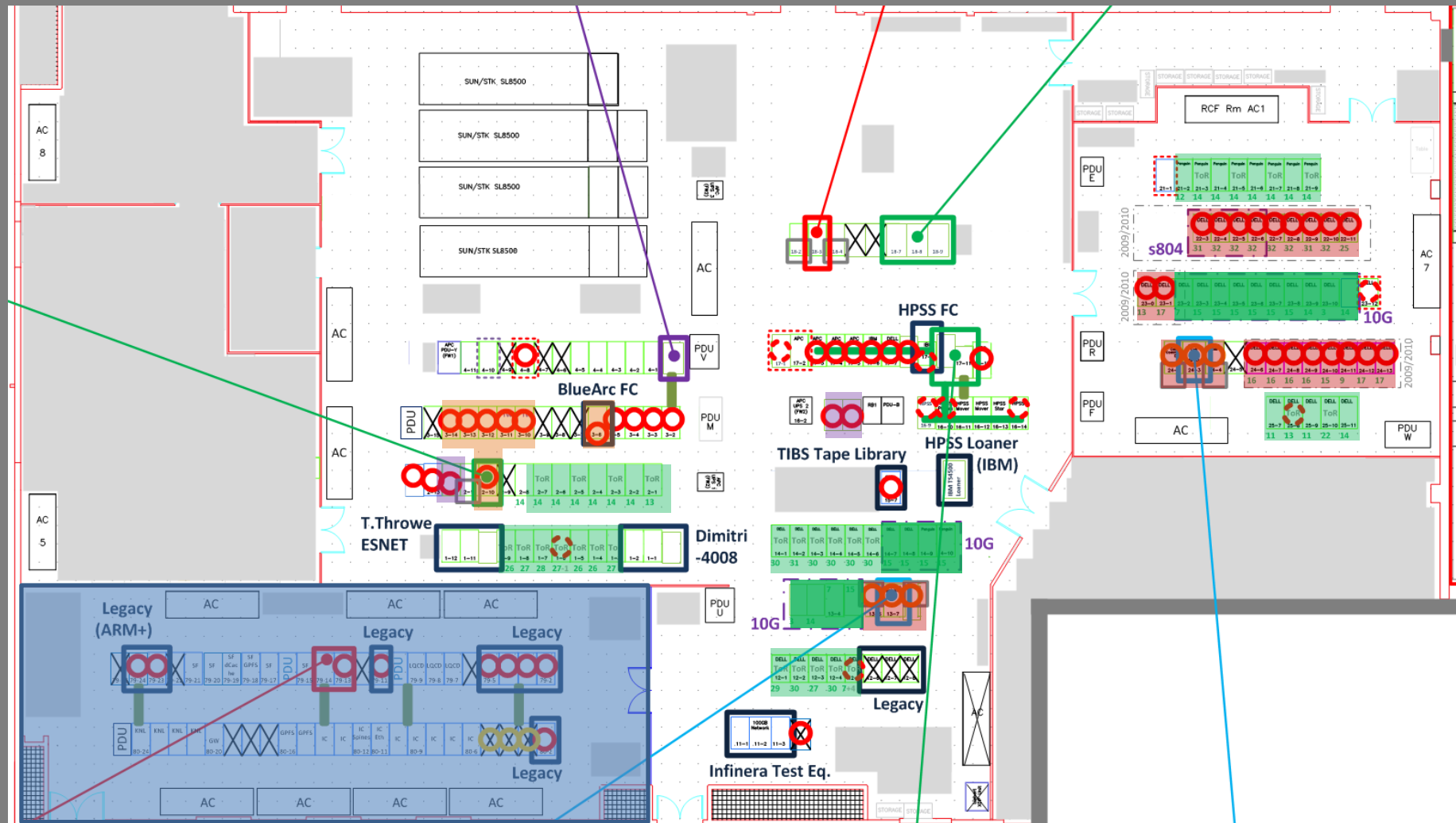
Other Recent Developments

- Retirement of the legacy BNL Cloud installation (racks 49-[15-19]) and its out-of-support legacy Brocade RX-16 network core (rack 48-19) is scheduled for July 2018
  - All 5 racks are ready for removal in the 4th round of equipment requirement of FY18

- New equipment deployments and existing equipment migration:
  - New ATLAS HPSS movers rack 44-4 (new rack frame deployed, no CDUs yet)
  - 5x ATLAS dCache dcdoor* servers are being replaced (Storage Group)
  - Central XRootD and FTS servers are being replaced, functionality being migrated from rack 44-3 to rack 43-6 (Storage Group)
  - LHCOPN perfmon server group is being migrated from rack 44-2 to 43-6 (Storage Group)
  - New LHCOPN 80 Gbps (unidirectional) capable perfmon server is being established in rack 43-6 (Storage Group)
  - General purpose SDCC DTN server (80 Gbps pass-through capable) is being migrated from rack 17-2 to 43-6 (Storage Group)
  - New staff/admin SSH gateways replacement servers are moved from rack 4-8 to 17-2 – not in production yet, no visible service interruption of any kind (GS group)
  - Two new Invenio (CSI) system servers are deployed in the rack 44-6 (C. Gamboa)
  - The process of decommissioning of the rack 4-8 (central RCF services) has started freeing the space for the second stage of deployment of the ATLAS HPSS Read Cache system
  - The process of decommissioning of the racks 44-[2, 3] has started freeing the space for the future new HPSS RHIC and other clients movers racks

Questions & Comments