

# SDCC Network Operations Status Report (Oct 22, 2020)

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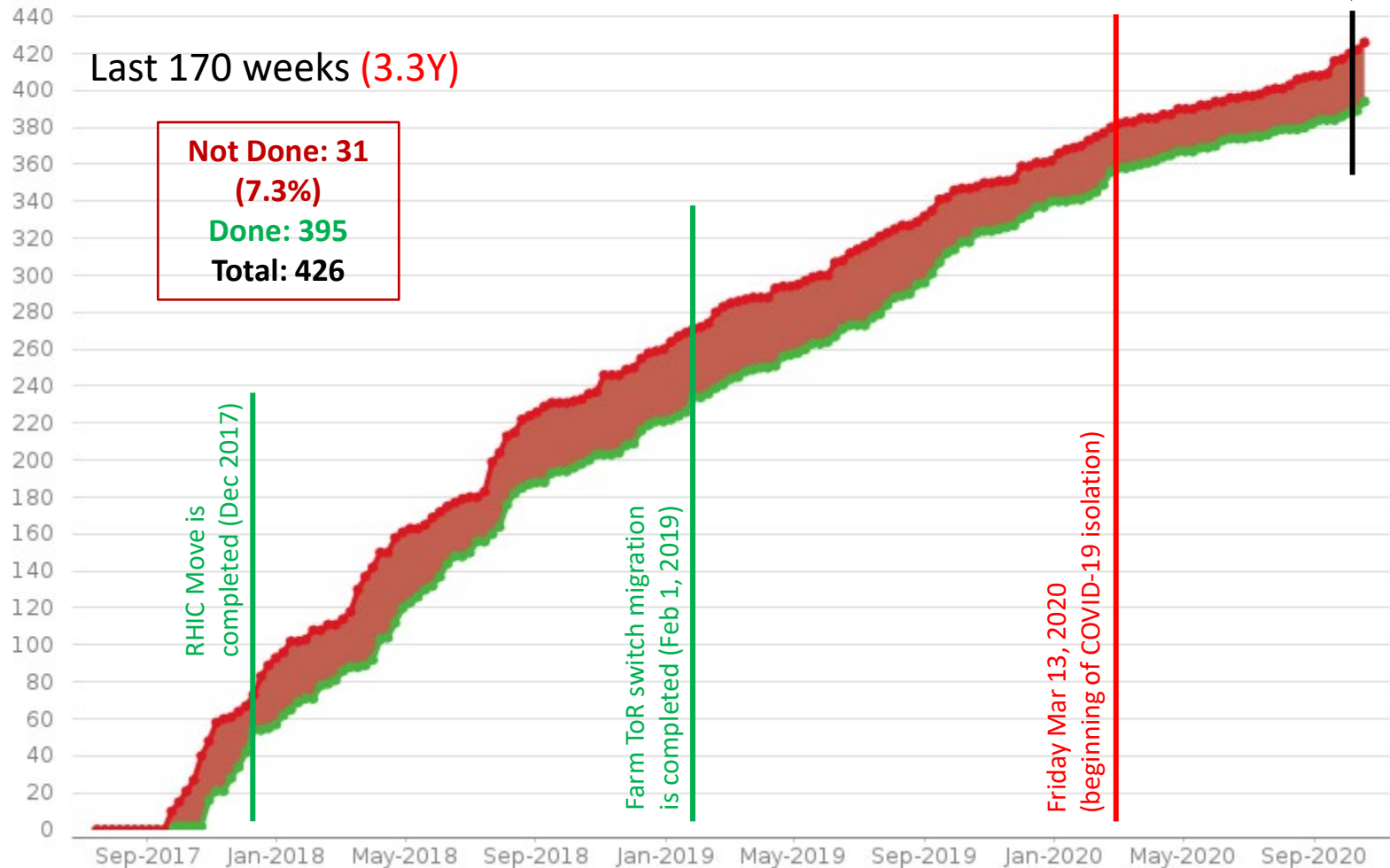
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## Project: SDCC Network Operations & Interventions

### Chart

This chart shows the number of issues **created** vs. the number of issues **resolved** in the last **1190** days.

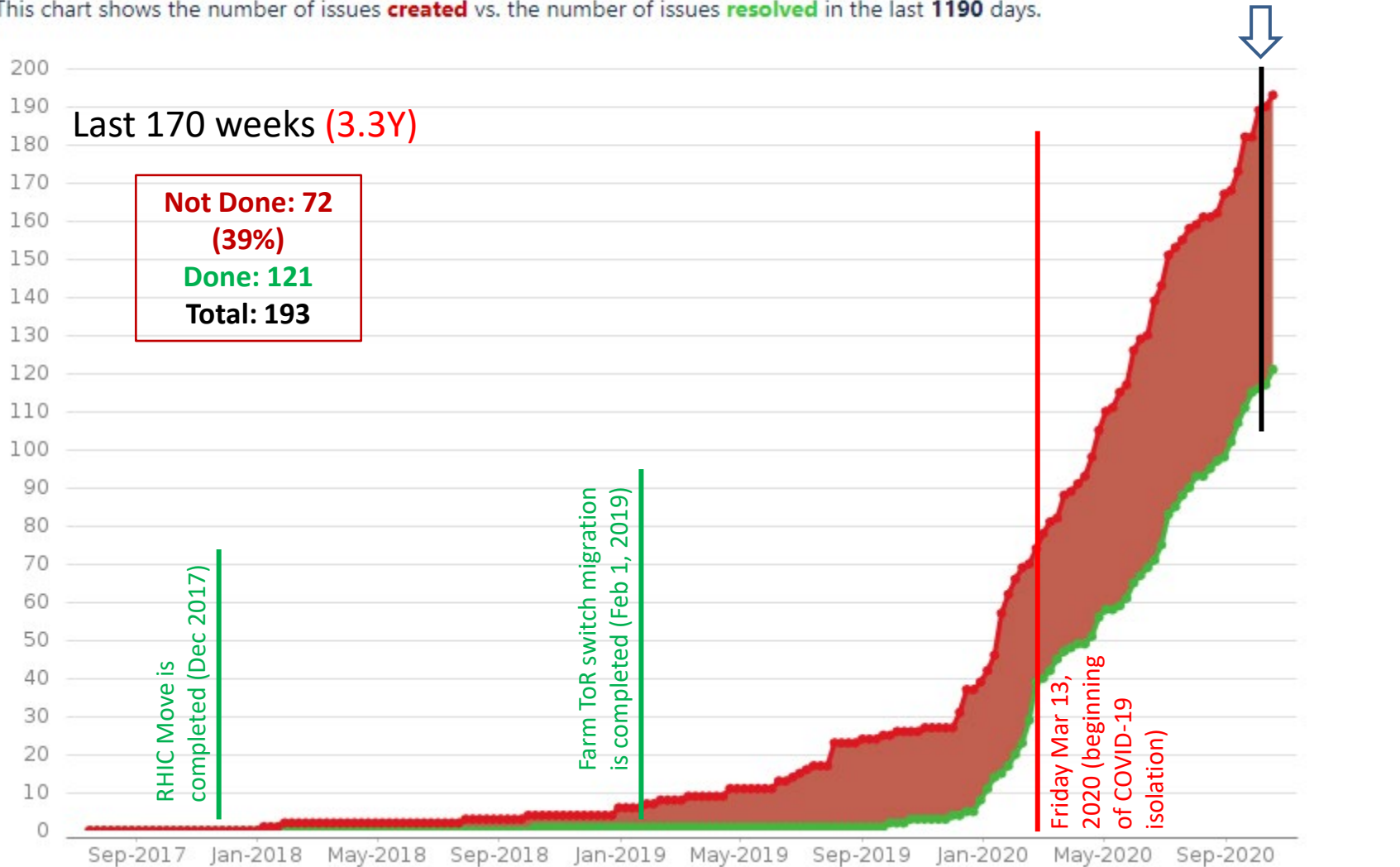
Previous Report



## Project: SDCC Datacenter B515/B725 Transition (CY20-23)

### Chart

This chart shows the number of issues **created** vs. the number of issues **resolved** in the last **1190** days.



# Ongoing/Upcoming Interventions and Equipment Deployment/Retirement Operations

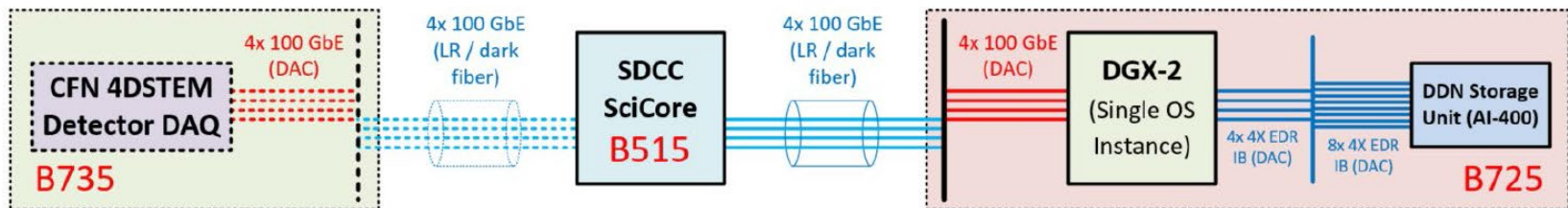
- OSG storage backend purchase (addition to Lustre installation in row 45S, 0.5 PB usable)
  - The headnode is delivered to CDCE; the JBOD is still on its way
- NSLS II HPC cluster: 2 racks to be deployed in positions 33-[4, 5] in QCDOC
  - Purchase of the CPU racks and Arista ToR switch for those are in progress
  - Fiber connectivity provisioning is done up to the extent that can be addressed without having racks in place (to be finalized once the racks are in final position)
  - ESD for the Arista switch in early Nov 2020
- NSLS II Lustre addition: 2 racks to be deployed in positions 33-[2, 3] in QCDOC
  - Purchase of the servers storage backend, rack frames and fiber materials is in progress
  - Rack frames are on its way; the CDUs are already delivered
- NSLS II infrastructure addition: MongoDB and Kafka servers to be deployed in position 33-6 in QCDOC using the existing rack and CDU set
  - Purchase of fiber materials and transceivers associated is yet to be initiated
  - All new NSLS II systems are expected to enter production only after the Dec 1, 2020 intervention
- The first instalment of sPHENIX central storage (5.4 PB usable) is initiated
  - Purchase is in progress
  - Rack frame 46-8 preparation is being finalized
  - The purchase of central sPHENIX dCache components is being prepared

# Ongoing/Upcoming Interventions and Equipment Deployment/Retirement Operations

- B515 SciCore Cut-In Intervention is tentatively scheduled on Tuesday Dec 1, 2020 (6:00-18:00 LT network connectivity interruption for the SciZone)
  - No roadblocks detected so far, proceeding as planned
  - Announcements for collaborations is to be released on Oct 28, 2020 – Nov 2, 2020 followed by the reminders during the week of Nov 23, 2020
  - The migration of functionality of all HPSS movers located in main BCF (the last high bandwidth connectivity block keeping the old B515 SciCore in place) to the HPSS movers in row 44S in CDCE is expected to happen during the week of Nov 2, 2020
  - The completion of consolidation of HPSS central infrastructure into CDCE (save the two SL8500 silos to be migrated in 2020Q4-2021Q1 that are no longer using Ethernet connectivity provisioned from BCF) is expected to happen by the end of Nov 2020 to drop all the legacy FC and Ethernet infrastructure associated with HPSS in BCF
- The construction of the SMF fiber infrastructure connecting Lab C to CDCE through the basement of B515 (bypassing BCF) is in the final stages
  - The “last mile” of the B515/B725 1.6 Tbps interbuilding link depends on it
- The pre-deployment of B725 active central network equipment in B515 / BCF row 17 is entering final stages as well, as we are getting the last components delivered

# Ongoing/Upcoming Interventions and Equipment Deployment/Retirement Operations

- The CFN/B735 interbuilding link to B515/SciCore was upgraded from 20 Gbps to 400 Gbps configuration earlier this week
  - 400 Gbps (unidirectional non-blocking) bandwidth channel (4x 100 GbE) is now established all the way through between CFN/B735 and B725/area 1-181 (CSI ACF)
  - Part of the CSI streaming data analysis project, currently aiming at the CFN/4DSTEM future detector yet to be deployed in B735 in the upcoming months
  - The new channel is to be stress tested before the end of Oct 2020
  - Nvidia DGX A100 unit is expected to be deployed in B725/area 1-181 next week



# Questions & Comments