SDCC Network Operations
Status Report (July 16, 2020)

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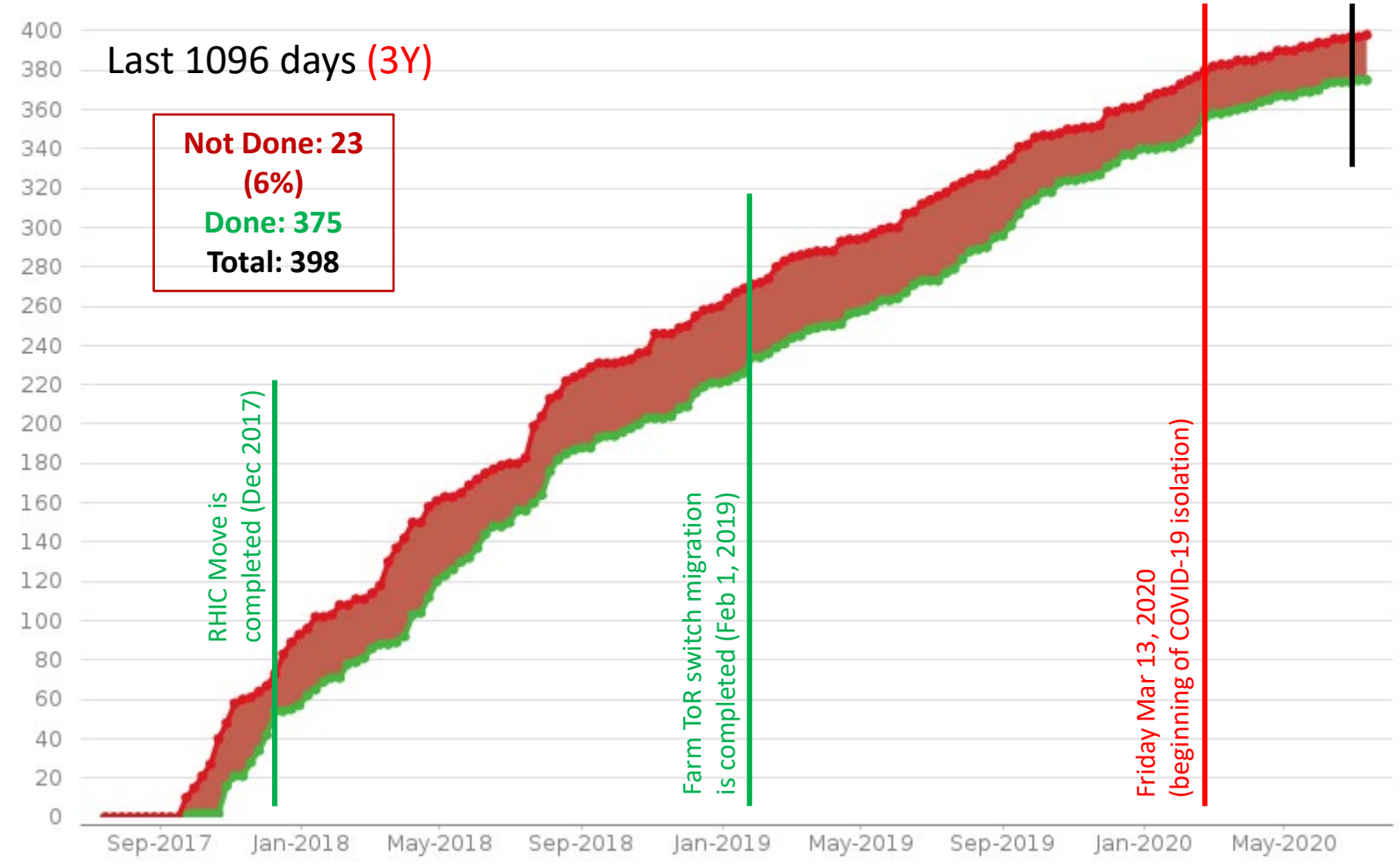
Project: SDCC Network Operations & Interventions

Chart

This chart shows the number of issues **created** vs. the number of issues **resolved** in the last **1096** days.

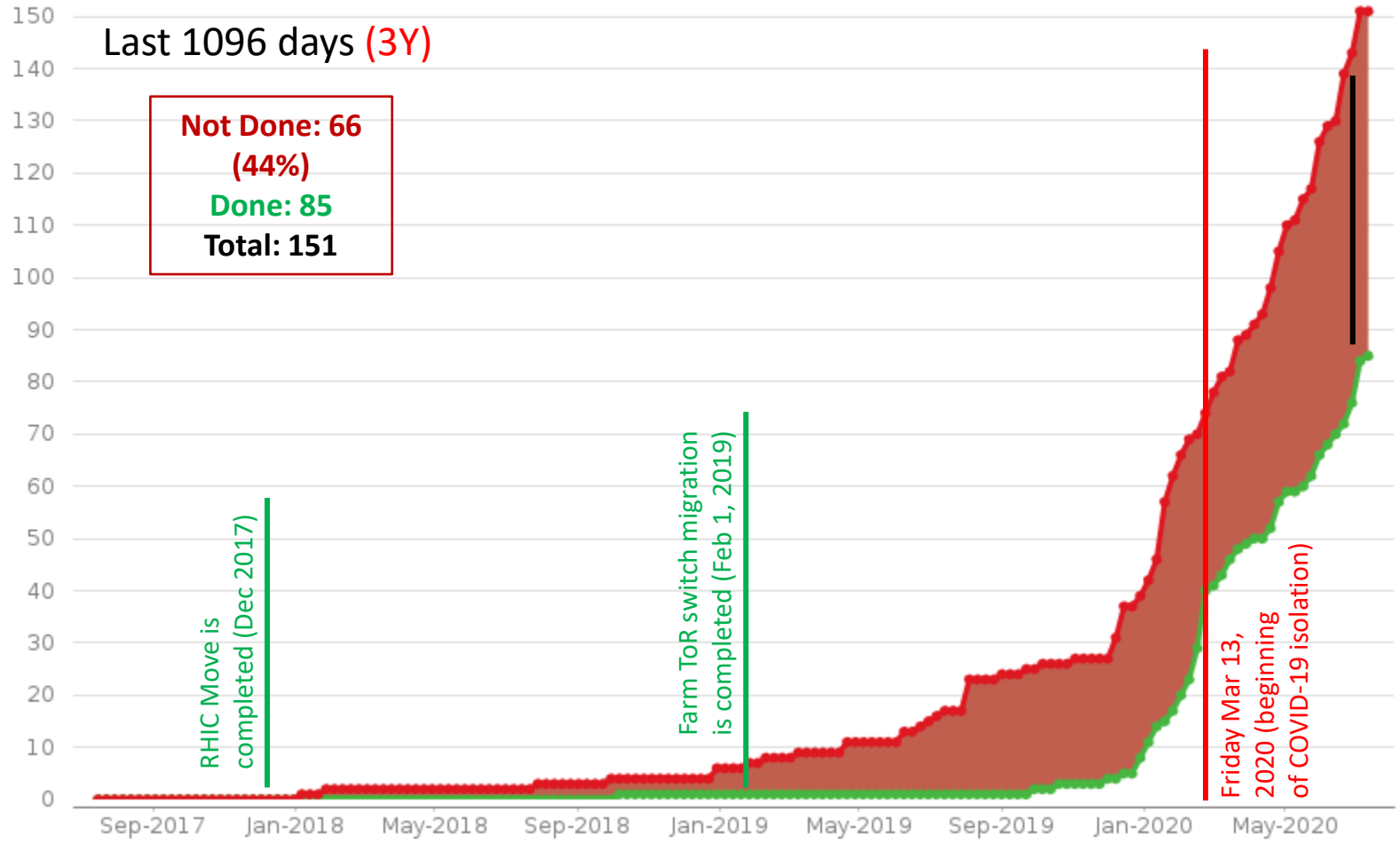


Project: SDCC Datacenter B515/B725 Transition (CY20-23)

Chart

This chart shows the number of issues **created** vs. the number of issues **resolved** in the last **1096** days.

Previous Report

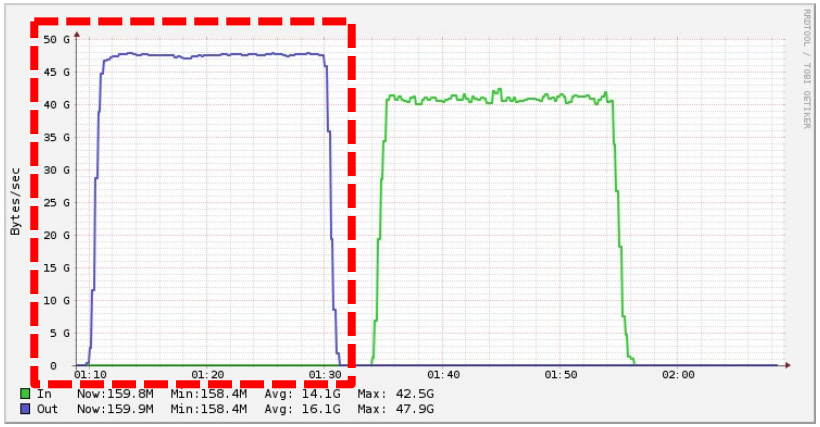


Ongoing/Upcoming Interventions and Equipment Deployment/Retirement Operations

- GP Lustre MDSes (GS Group) – destination: rack 45-2 in CDCE
  - GP Lustre MDS servers are on the way – still on the way
- The combined FY20 RHIC & ATLAS CPU procurement (Farm/Fabric Group)
  - The retirement of the legacy CPU racks in row 50N is needed in order to make space and power available for 4 new CPU racks in positions 50-[20-23] in CDCE
  - Sanitization process is completed by the Farm/Fabric group
  - Patch panels and BoR switches are removed, migration of CDCE Sensaphone to row 49N completed, un-cabling completed, racks are rolled out into row 48N to give way for the installation of the new CPU racks and deploying network equipment in them
  - New CPU racks are in place in positions 50-[20-23] and provided with power and network connectivity (up to 2x 1 GbE (LACP) per node)
  - The legacy equipment from rack positions 50-[19-23] is removed from the Facility
- Two 14 TB HDD JBOD based storage purchases are now in the procurement pipeline
  - EIC Lustre storage (GS Group; 2x JBOD + headnode pairs) and tape drives (Storage/HPSS Group)
  - Additional ATLAS dCache Storage (Storage/HPSS Group; 2x JBOD + headnode pairs)
  - Network uplinks are provisioned, rack frame 45-1 is adjusted and ready (CDUs on standby)
  - Partial delivery of servers occurred this week, the JBODs are still on the way

Ongoing/Upcoming Interventions and Equipment Deployment/Retirement Operations

- Network technology test and evaluation
  - The historically (for SDCC) highest throughput of 47.9 GB/s = 96% of theoretical maximum through a single node / OS instance was demonstrated with iperf3 tests using the CSI DGX-2 unit connected via 4x 100 GbE (LACP) LR uplink through the B515 SciCore and Storage Core systems last week (in the direction of SDCC to DGX-2 (this is done in preparation for of the CFN 4DSTEM data processing pipeline based on this infrastructure):



  - The AMD EPYC 7402P CPU based PCIe Gen.4 enabled network testbed host (Dell PE R7515 server) is delivered and being commissioned, opening the way for testing the network connectivity solutions with up to 400 Gbps per server and up to 200 Gbps per PCIe slot:
    - 200 GbE, HDR IB (200 Gbps/port) and non-blocking dual port 100 GbE
    - Future SFP56 based dual port 50 GbE NICs expected to become available in FY21

Questions & Comments