

SDCC Network Operations Status Report (Dec 12, 2019)

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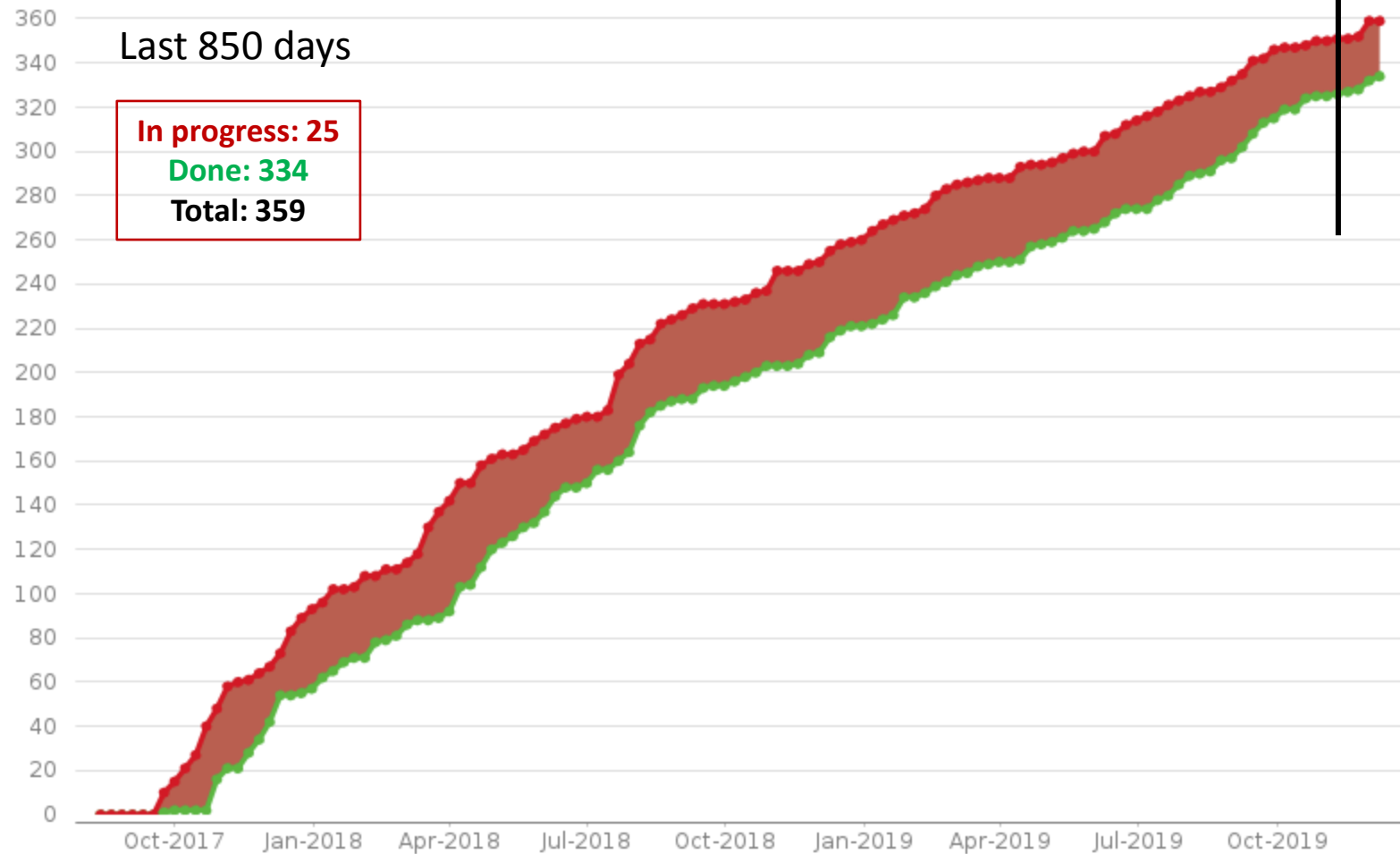
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Project: SDCC Network Operations & Interventions

Chart

Previous Report

This chart shows the number of issues **created** vs. the number of issues **resolved** in the last **850** days.

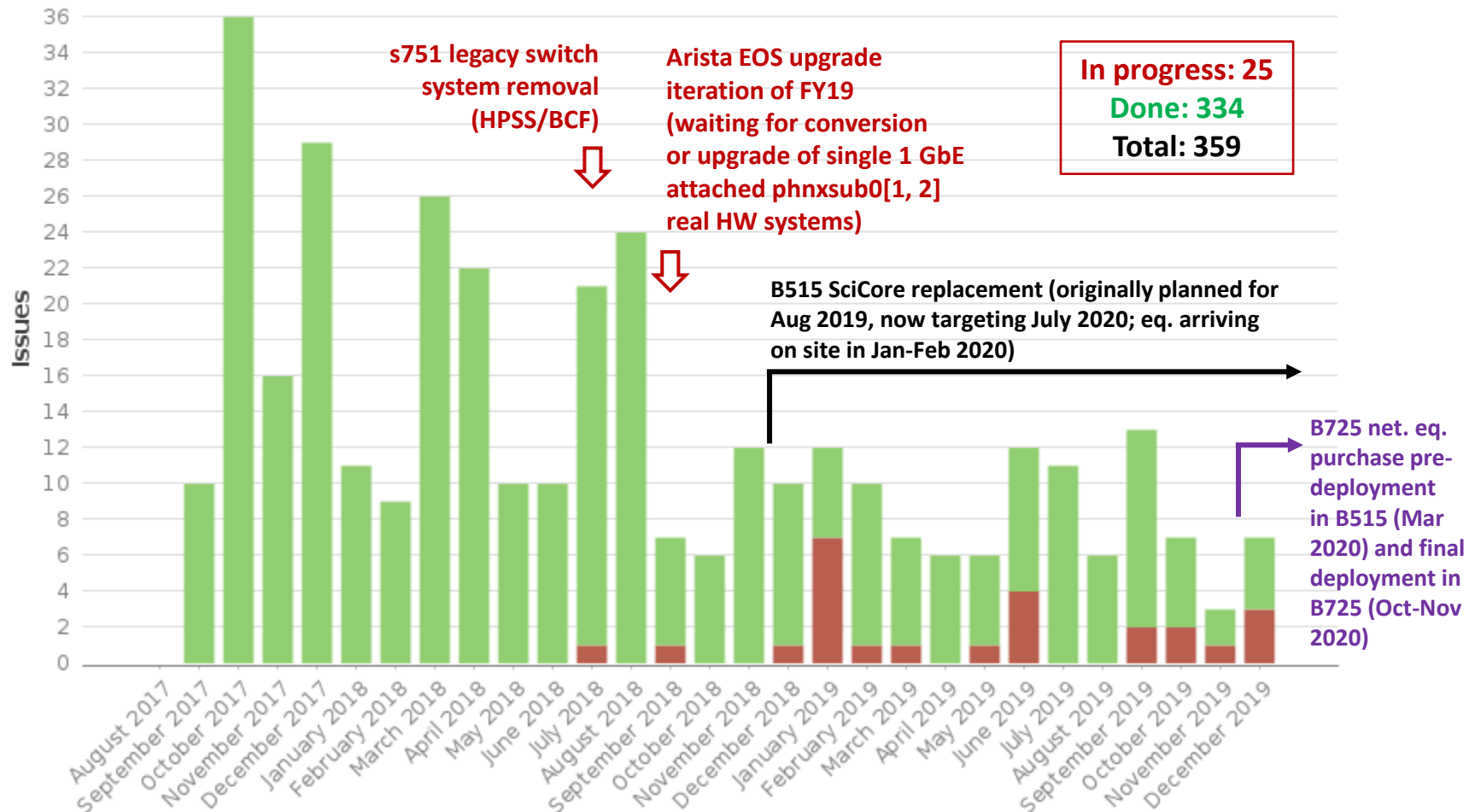


Recently Created Issues Report

Project: SDCC Network Operations & Interventions

Chart

This chart shows the issues created in the last **850** days

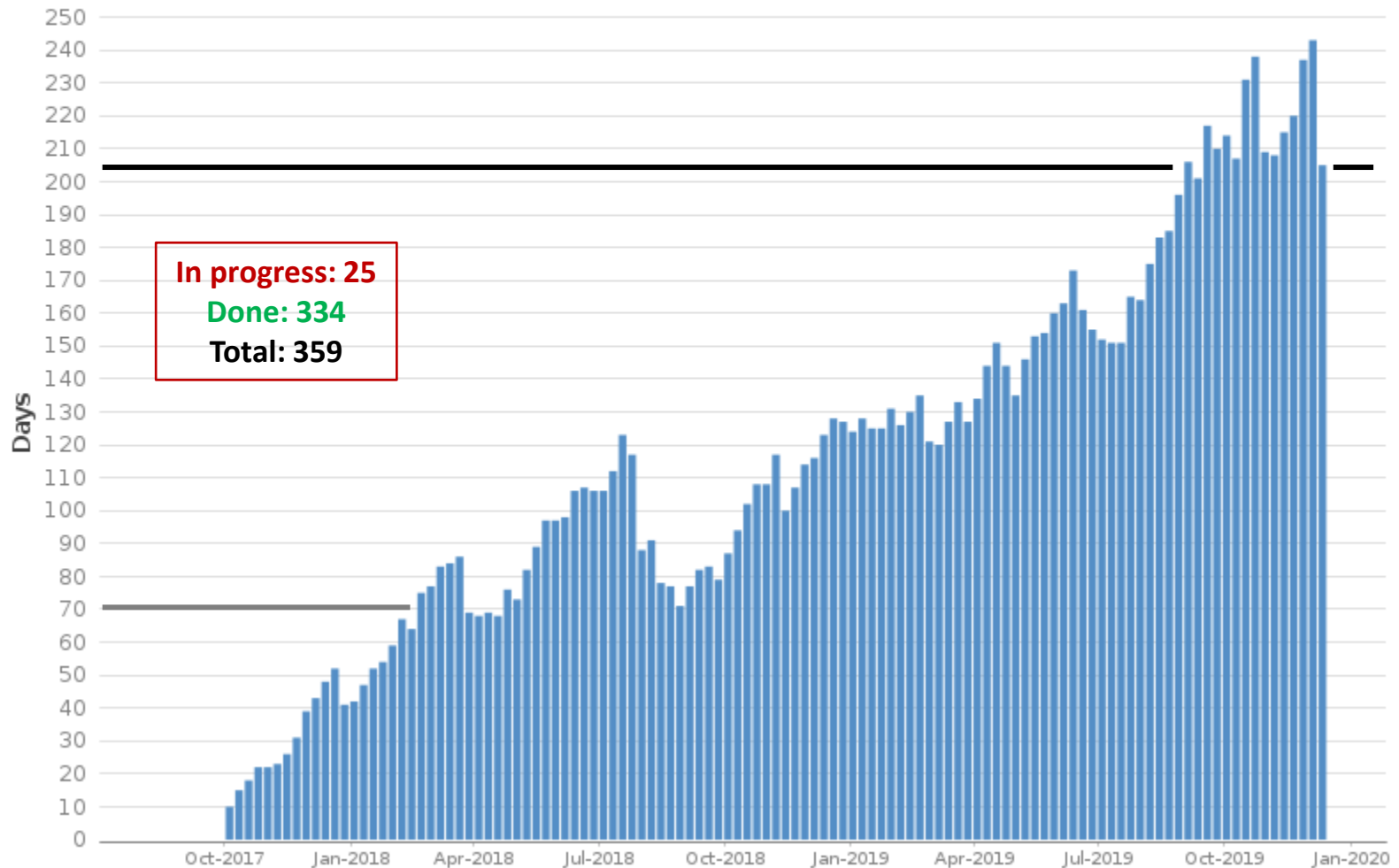


Average Age Report

Project: SDCC Network Operations & Interventions

Chart:

This chart shows the average number of days issues were unresolved for on a given day over the past **850** days.



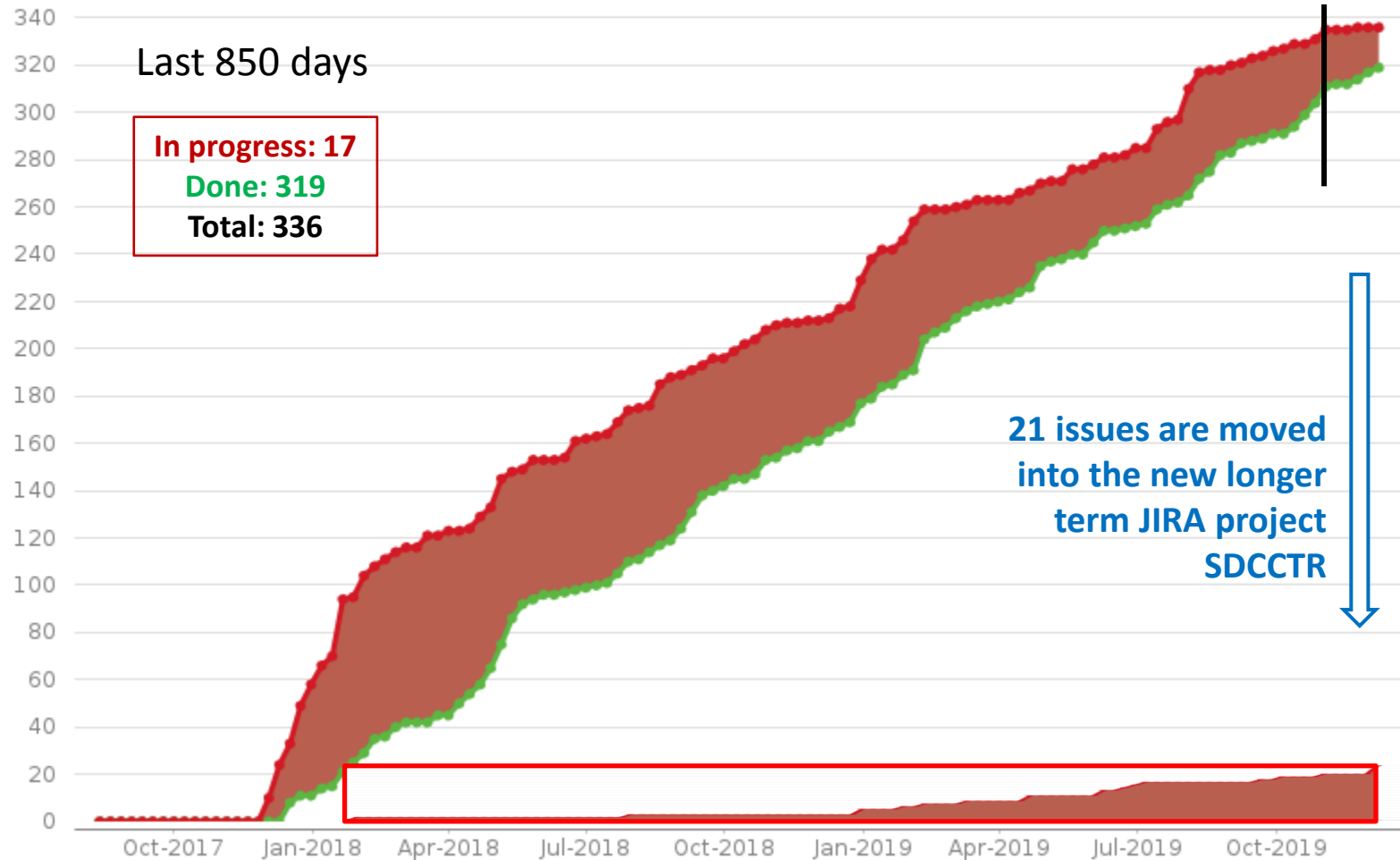
No more extensions

Project: Post RHIC Migration B515 Datacenter Cleansing & Service Normalization (CY18-19)

Chart

This chart shows the number of issues **created** vs. the number of issues **resolved** in the last 850 days.

Previous Report



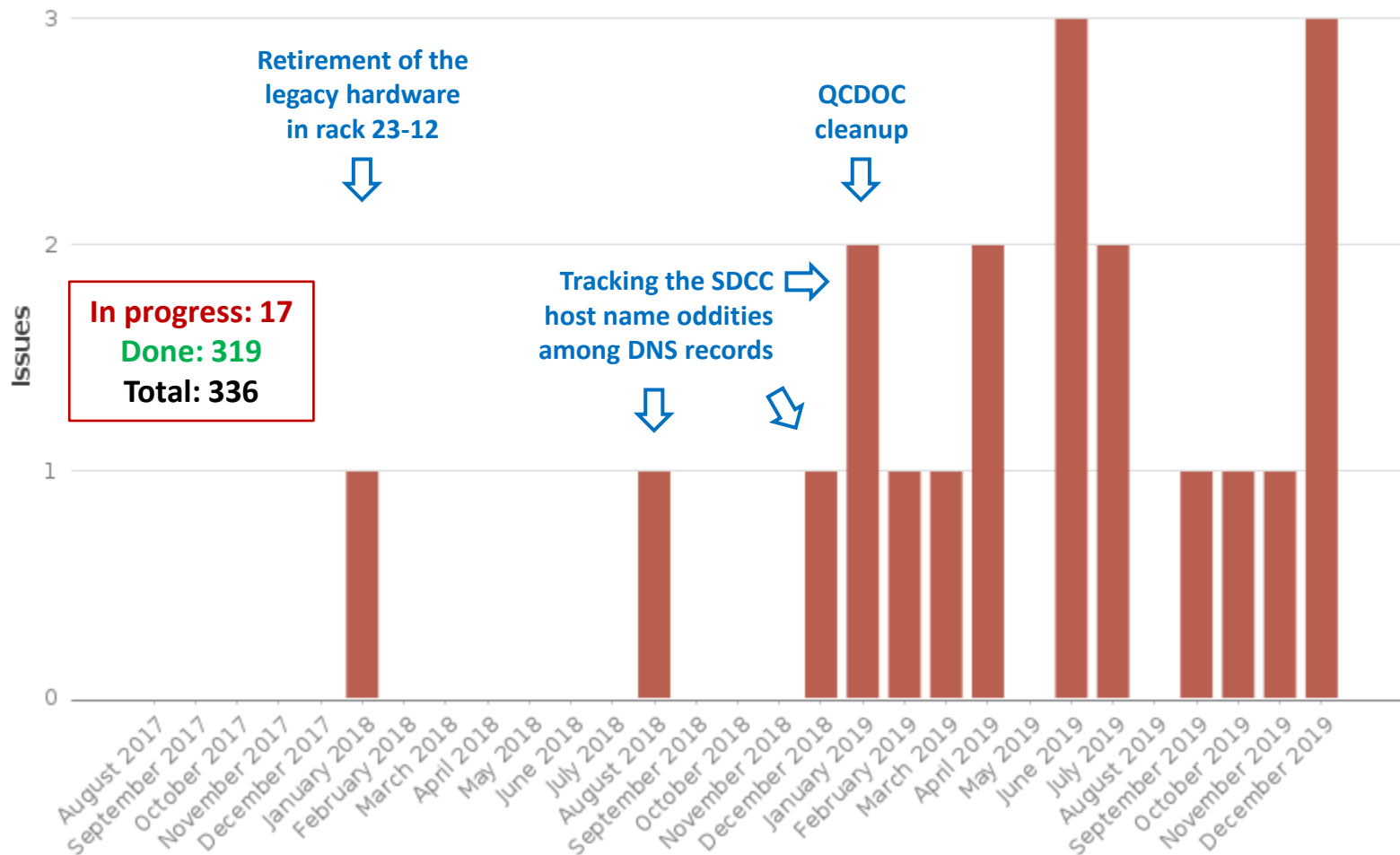
Project: SDCC Datacenter B515/B725 Transition (CY20-23)

Recently Created Issues Report

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

Chart

This chart shows the issues created in the last **850** days



Ongoing/Upcoming Interventions and Equipment Deployment/Retirement Operations

- New HPSS movers and infrastructure components in row 44S in CDCE
 - Replacement rstk* servers in racks 44-[2, 6] – installed, rstk* server replacement is scheduled to Nov 13, 2019 [DONE]
 - Replacement HPSS DB servers in racks 44-[2, 6] – installed; migration of functionality is expected on Nov 19, 2019 [50% DONE]
 - HPSS core server (primary) physical relocation to rack 44-6 and re-IP-ing to Storage Core HPSS subnet – expected to be performed on Nov 19, 2018; re-IP-int is already done, only the physical relocation remains [DONE]
 - Second rack of RHIC movers to be established in position 44-3 – purchase of IT components in progress; CDUs are delivered and installed; servers and FC cards are delivered [DONE]
 - HPSS STAR GW is moved to the RHEV and re-IP-ed on during Nov 13, 2019 intervention [DONE]
- BCF Silo #3 migration to CDCE Silo position #7 is expected on Nov 18-19, 2019 (silo is moving empty; the electrical work to begin on Nov 15, 2019) [DONE]
- The new B515 SciCore equipment is being purchased and expected to be delivered on site next week already (2x Arista 7500R3 chassis + linecards + transceivers) – goes to new network rack in position 48-17 in CDCE; to be deployed for production in July 2020
- The central network equipment for B725 datacenter is being purchased (10x Arista 7500R3 chassis + minimum set of linecards and transceivers) and expected to be delivered on site for pre-deployed in B515 in Mar 2020; to be deployed for production in B725 in Oct-Nov 2020 (pending CFR schedule confirmation)

BCF Silo #3 Relocation to CDCE (Nov 15-19, 2019)

All Done:

Both RSTK and HPSS Core servers are now in CDCE

1 of the 2 critical HPSS DB servers is now in CDCE

HPSS subnet .11 network uplinks are now moved out of legacy s751 switch system for all 9 silos

Next Major Steps Expected before the end of FY20:

Moving the SDP2 Oracle console server to CDCE Silo #6 / subnet 148 and thus detaching it from s751 switch system

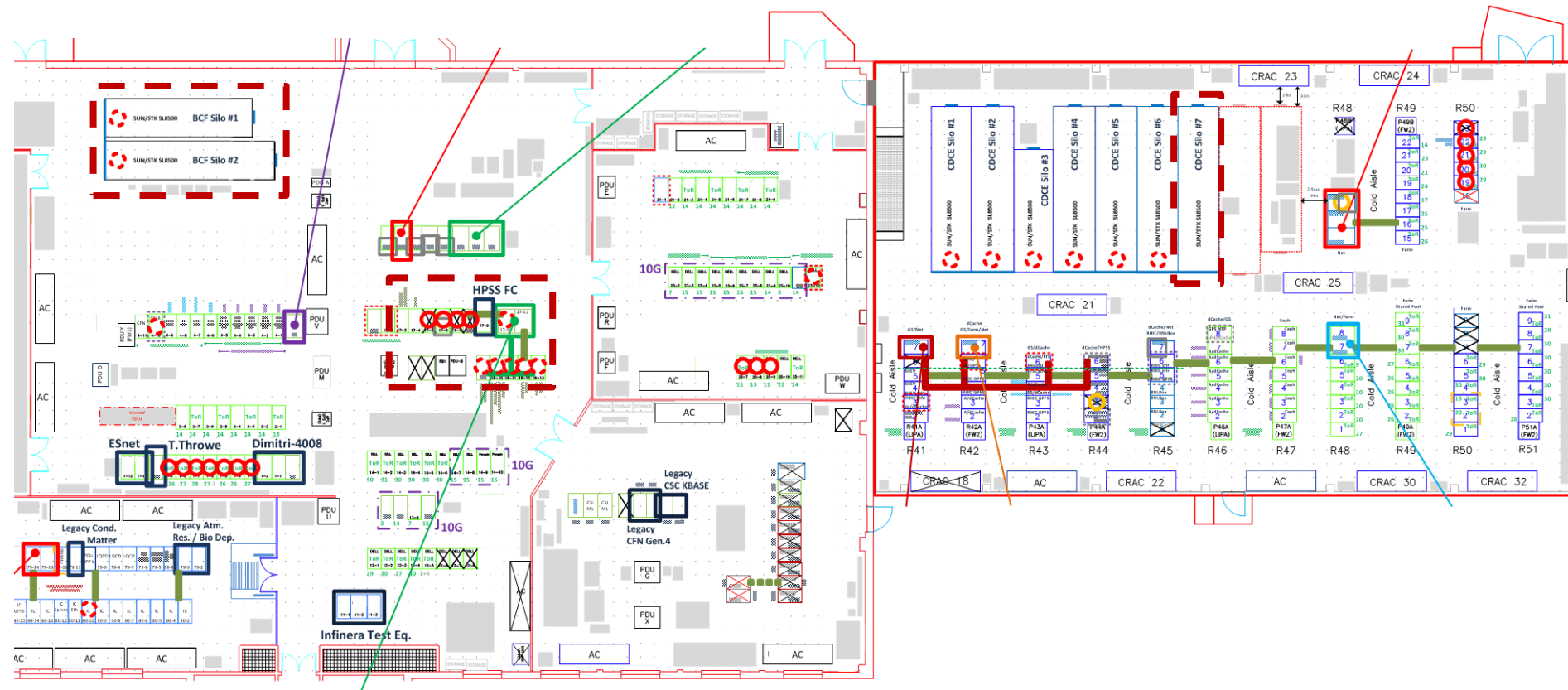
Migrating the remaining two BCF silos to positions CDCE Silo #8 and #9

Migrating all PHENIX and RHIC mover functionality to the new equipment in row 44S and the new FC infrastructure

Migrating the second critical HPSS DB to the new server in CDCE

Moving the remaining parts of legacy HPSS VM infrastructure to RHEV

Retiring all legacy HPSS equipment in rows 16 and 17, including the old FC core



Current RHIC Farm Structure for the Equipment Left in Main BCF and RCF Areas of B515

- **[B1]** "Row 1 (2012), 1U" RHIC Farm 1 GbE attached equipment of estimated **36 kHS06** and **1440 TB** integral (DISK and CPU replacement is already purchased) - racks 1-[3-9] (7 racks)
- **[B2]** "Row 14 (2012), 1U" RHIC Farm 1 GbE attached equipment of estimated **36 kHS06** and **1440 TB** integral (DISK replacement is already purchased, CPU replacement is to be purchased in FY21) - racks 14-[1-6] (6 racks)
- **[B3]** "Row 12 (2011), 1U" RHIC Farm 1 GbE attached equipment of estimated **25 kHS06** and **960 TB** integral (DISK and CPU replacement is to be purchased in FY21) - racks 12-[1-5] (5 racks)
- **[B4]** "Row 2 (2013), 2U" and "Row 21 (2013), 2U" RHIC Farm 1 GbE attached equipment of estimated **67 kHS06** and **5280 TB** integral (DISK and CPU replacement is to be purchased in FY22) - racks 2-[1-8] and 21-[2-9] (16 racks)
- **[B5]** Row 14 (2014), 2U & Racks 23-[10, 11] (2018) & Racks 13-[2, 3] (2018)" and "Racks 23-[8, 9] (2016), 2U" RHIC Farm 10 GbE attached equipment of estimated **115 kHS06** and **11744 TB** integral (DISK and CPU replacement is to be purchased in FY23) - racks 14-[7-10], 13-[2-5], 23-[2-11] (17 racks)
- **Total:** **279 kHS06**, **20864 TB**, 51 racks (STAR & PHENIX combined)
- **PHENIX dCache I/O concurrency (distributed storage only):**
2260 (in blocks B[1-3]) + 2370 (in blocks B[4, 5]) = 4630 concurrent threads supported
- **Final central DISK replacement configuration currently envisioned in FY23:** 20x JBOD+headnode pairs (about 1.05 PB usable on average due to drive capacity scaling in FY21-23; about 210 concurrent I/O threads each; 6 are already deployed): up to **2100 concurrent threads on PHENIX half of the system**

Questions & Comments