



RIPE NCC

RIPE NETWORK COORDINATION CENTRE

Operational Update

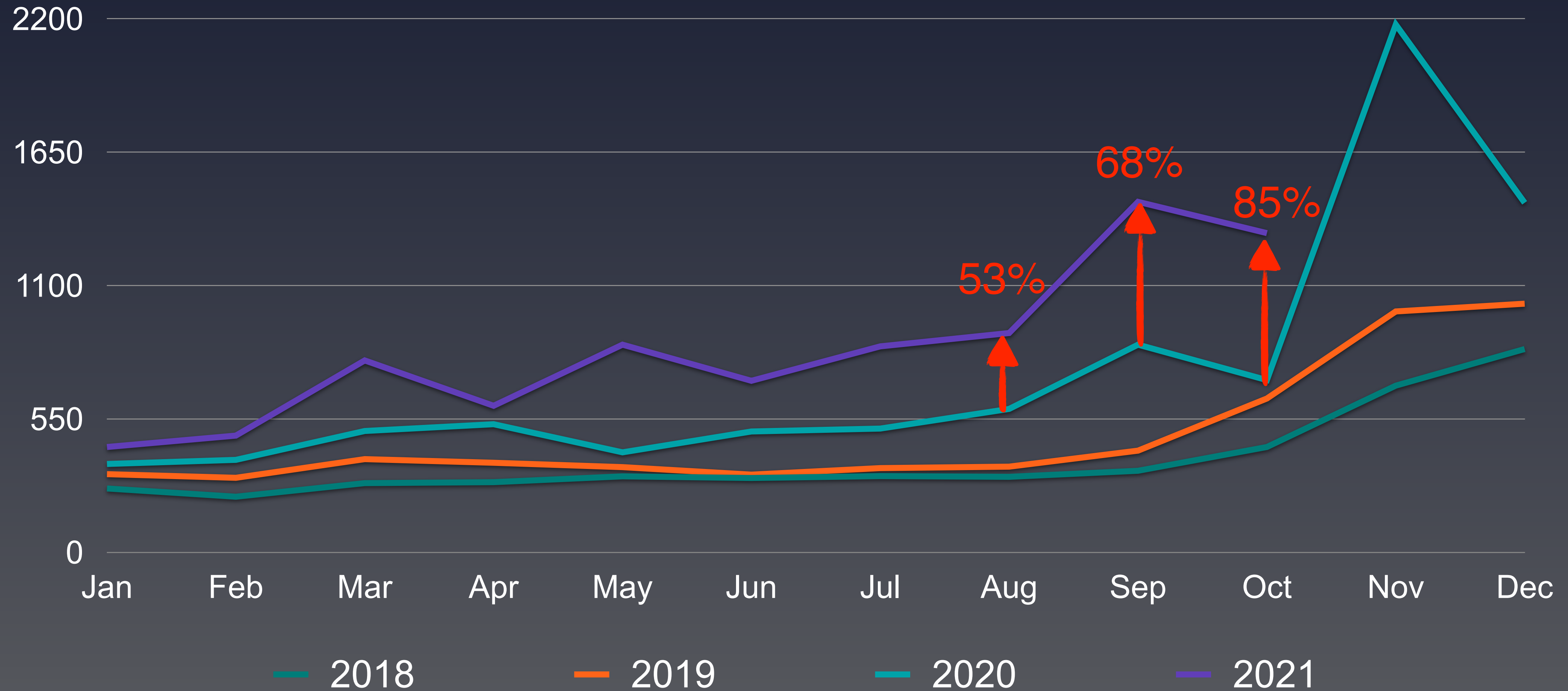
Workload challenges, compliance and resilient infrastructure



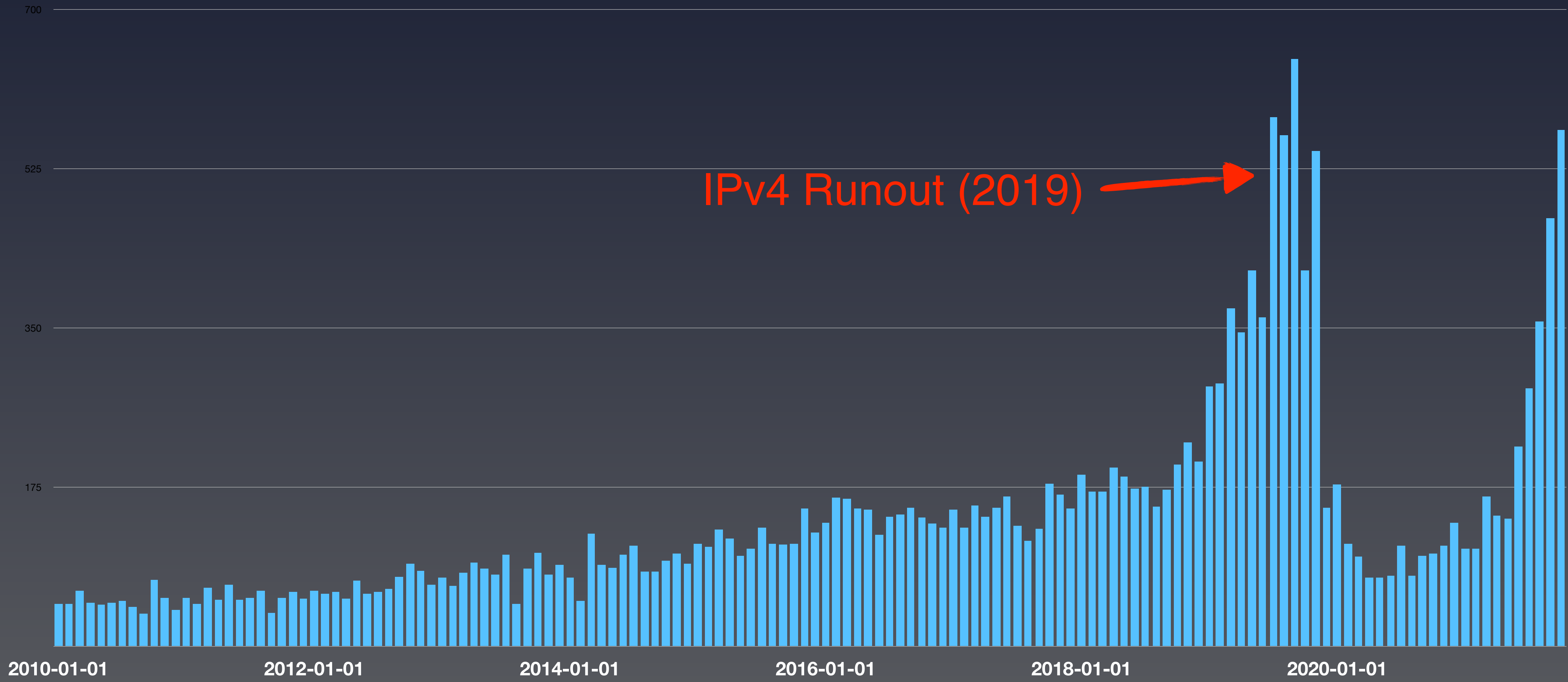
Registry Services

Challenges with workload

Policy Transfer Tickets over Time



Membership Growth

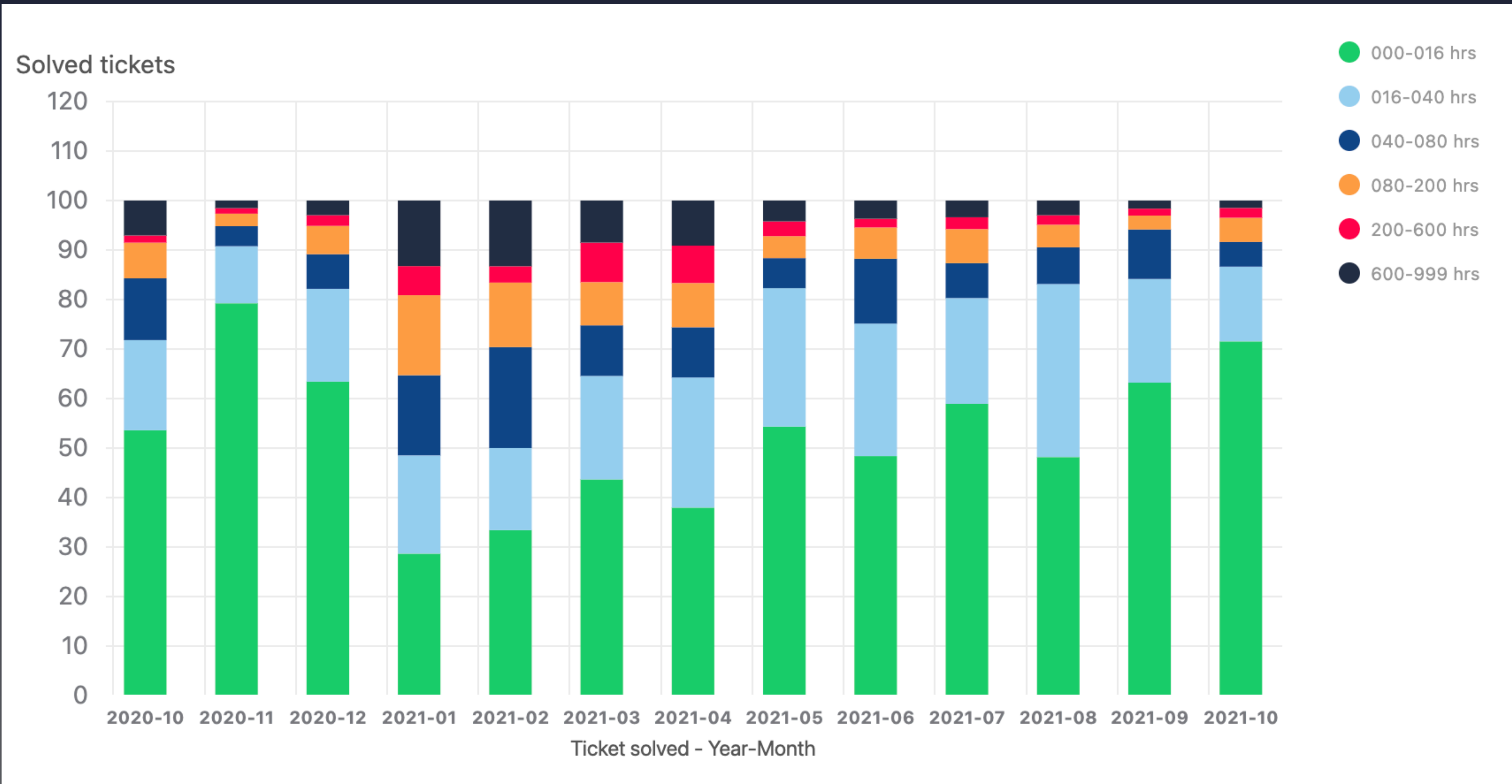


Tickets Not Responded to Within One Business Day



	%	#	Total
February	14.3%	778	5.089
March	2.4%	137	6.261
April	17.4%	931	5.543
May	13.9%	662	4.261
June	12.7%	503	4.426
July	26.7%	1000	4.083
August	35.2%	1511	4.627
September	17.5%	963	5.351
October	6.6%	328	4.807

Policy Transfer Tickets Lead Time



Summary



- Time to resolution has been influenced by four main factors:
 - Significant increase in number of transfer tickets compared to previous years (LIR accounts consolidating after two year waiting period)
 - Significant increase in number of new LIR applications (almost at pre-runout levels)
 - Extra work to ensure EU sanctions compliance
 - Need of vacation for staff - approving most vacation requests was a conscious decision by RIPE NCC senior leadership
- We have prioritised correctness over fast responses
 - An accurate registry is more important than quick ticket resolution

What We're Doing



- We have hired extra staff for Registry Services
 - They have been trained and started picking up tickets beginning of September
- Four temps have been onboarded and are assisting with compliance checks automation
- Short term solution involved making sure relevant queues are properly staffed so expected high number of tickets can be handled
 - That required parking some projects
- Long term solution involves automation and digitisation of the registry
 - Care should be taken not to hire too many staff as trend might be temporary



Compliance

Enhancing our internal controls

Sanctions Transparency Report



- Provides data on how RIPE NCC members, End Users and legacy resource holders are affected by sanctions, while respecting confidentiality and privacy
- <https://www.ripe.net/publications/docs/ripe-768>

Date	Action	Relation	Country	IPv4	IPv6	ASN
9-Nov-21	Restored	Member	IR	1.024	0	1
01-Apr-20	Frozen	Member	IR	17.408	/32	1
01-Apr-20	Frozen	Member	SY	230.400	/29	1
				248.832	/29,/32	3

EU Sanctions Compliance



- Sanctions process has been strengthened over the last few months
 - Usage of third-party tooling (Dun and Bradstreet and Dow Jones)
 - Screening of End Users (19k+ in total)
- Those extra checks added to existing workload
- Goal is to have monitoring fully implemented
 - Only feasible way to regularly screen roughly 40k legal entities and natural persons
 - That involves building a portfolio in these tools
 - This will remove the need for checks during transfers

Due Diligence Automation



- We have made improvements in our ID verification process
- Usage of third-party for ID verification (iDenfy)
 - More consistency, reliability and efficiency
- Work has been successfully deployed in October
- RIPE Labs article about using third-parties to automate our due diligence:
 - https://labs.ripe.net/author/felipe_victolla_silveira/using-third-parties-to-automate-our-due-diligence/



Registry Accuracy

Measuring, automating and
ensuring quality services

Members Last Verified by Date



	< 2 years	2-5 years	> 5 years	%
May	9,712 (48%)	5,381 (27%)	5,060 (25%)	20,153
June	9,592 (47.5%)	5,630 (27.9%)	4,995 (24.7%)	20,153
July	9,512 (47.1%)	5,778 (28.6%)	4,906 (24.3%)	20,196
August	9,501 (47%)	5,831 (28.9%)	4,879 (24.1%)	20,211
September	9,872 (48.6%)	6,141 (30.3%)	4,285 (21.1%)	20,298
October	9,813 (48.4%)	6,273 (30.9%)	4,205 (20.7%)	20,291

End Users Last Verified Date



	< 2 years	2-5 years	> 5 years	%
May	5,263 (26%)	3,893 (19%)	11,301 (55%)	20,457
June	5,109 (25.6%)	3,686 (18.5%)	11,173 (55.9%)	19,968
July	5,903 (30.0%)	3,683 (18.7%)	10,085 (51.3%)	19,671
August	6,833 (34.7%)	3,505 (17.8%)	9,349 (45.5%)	19,687
September	9347 (47.4%)	3,127 (15.8%)	7,252 (36.8%)	19,726
October	10,209 (51.7%)	3,033 (15.4%)	6,483 (32.9%)	19,723

Active Registry Monitoring



- Usage of third-party tooling for monitoring changes in the registry
 - Ensures a compliant, more accurate registry and ease of processing requests
- Work has already started for sanctions
 - Monitoring for members has been largely implemented
 - Work in progress for End Users
- Same tooling will also be used to monitor changes in legal structure (e.g. M&As, legal name changes)
 - That requires integration with our internal tooling and staff to handle incoming requests
 - Aim is to start monitoring in Q1 2022

Improving our Service Delivery



- Align metrics on membership satisfaction across the RIPE NCC
 - More reliable metrics about ticket satisfaction before the end of the year
 - Integrate feedback response in our workflows
- We are publishing quarterly roadmaps for RPKI, RIPE Database and Business Applications
 - Improvements in the Ticketing System in progress, with better integration with the LIR Portal
 - Improvements in the SSO planned for early next year (e.g. more options 2FA, additional profiles)
- Long term goal of digitising trust with digital IDs and signatures



RPKI

Hardening our infrastructure
and processes

RPKI Control Framework



- Framework defined late 2020 with a total of 182 controls
 - Including areas like availability, security and processing integrity
- Gap analysis performed early 2021 and a total of 49 control gaps have been identified
- Most of the control gaps have been closed
 - Seven controls missing
 - Aiming to have all gaps closed before the end of the year
- Getting ready to perform a SOC 3 / ISO audit in Q2 2022

Resilient Infrastructure (1)



- RRDP has been moved to a new setup in our two data-centres in Amsterdam (Equinix)
 - Successful deployment last week
 - It will run in addition to the existing AWS repositories, which will remain as a warm-node backup
 - We will continue using CDN to increase availability and reduce latency
- Next step is to increase resiliency by adding extra nodes (Metal as a Service)
 - In accordance to our cloud strategy

Resilient Infrastructure (2)



- Ensure the resiliency of our RPKI core infrastructure
- Offline HSM will be replaced this year
- Online HSMs are close to reaching end-of-life
 - Planned replacement in 2022
 - Costs planned in the budget
- Penetration testing done
 - Report to be published soon
- Red team testing early 2022



Questions



fvictolla@ripe.net
[@victolla](#)