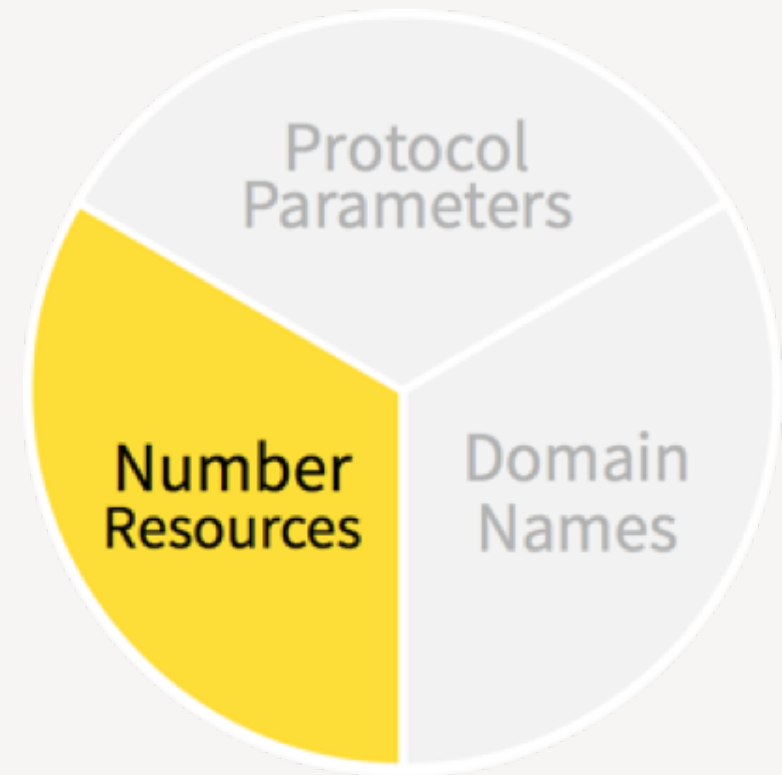


# IANA Numbers Function Update

Kim Davies  
President, PTI

RIPE 79: Rotterdam  
18 October 2019



**PTI** | An ICANN Affiliate

# Our team

---



**Alan Akahoshi**  
PRODUCT MGMT



**Shaunte Anderson**  
AUDIT



**Amanda Baber**  
REQUEST SPECIALIST



**Michelle Cotton**  
IETF RELATIONS



**Kim Davies**  
PRESIDENT



**Aaron Foley**  
CRYPTOGRAPHY



**Selina Harrington**  
REQUEST SPECIALIST



**Marilia Hirano**  
EXCELLENCE & AUDIT



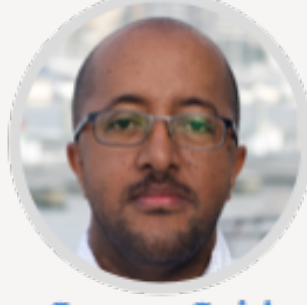
**Jennifer Johnson**  
EXECUTIVE ASSISTANT



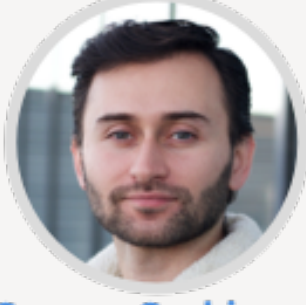
**Ali Mohammadi**  
SOFTWARE



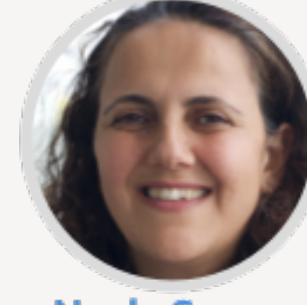
**Andres Pavez**  
CRYPTOGRAPHY



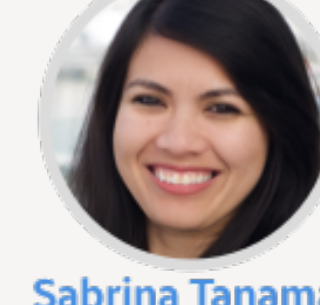
**Seman Said**  
SOFTWARE



**George Sarkisyan**  
REQUEST SPECIALIST



**Naela Sarras**  
SERVICE DELIVERY



**Sabrina Tanamal**  
REQUEST SPECIALIST

# Reverse DNS Service

---

- IANA provides an API service for RIRs to update delegations in in-addr.arpa and ip6.arpa
- Ongoing work to enhance this service
  - Platform upgrades
    - Running new and old services in parallel since July, against the same production database
    - Seek to conclude dual operations by end of year
  - Software improvements
    - Porting to latest Python by end of year
    - Provide a good basis for future enhancement next year

<https://iana.org/performance>

# Number Resource Dashboard

---

- **Today**, we are launching a new IANA service that reports the inputs that inform global allocation policies for number resources
  - Replaces deprecated ICANN Research graphs and other tools
- Highlights
  - Shows specific data directly relevant to the application of allocation policies for the IANA
  - Drill down into specific details per-RIR
    - Average allocation rate, supply forecast, etc.
  - Directly answers a key question:
    - Can an RIR apply for more of a resource?

<https://iana.org/numbers/allocations>

# Number Resource Dashboard



## Number Resources

Overview

### RIR Allocation Data

#### Overview

- IPv6 (AFRINIC)
- IPv6 (APNIC)
- IPv6 (ARIN)
- IPv6 (LACNIC)
- IPv6 (RIPE NCC)
- ASN (AFRINIC)
- ASN (APNIC)
- ASN (ARIN)
- ASN (LACNIC)
- ASN (RIPE NCC)

### Abuse Issues

- Overview
- Questions and Answers

## Number Resource Allocation Data

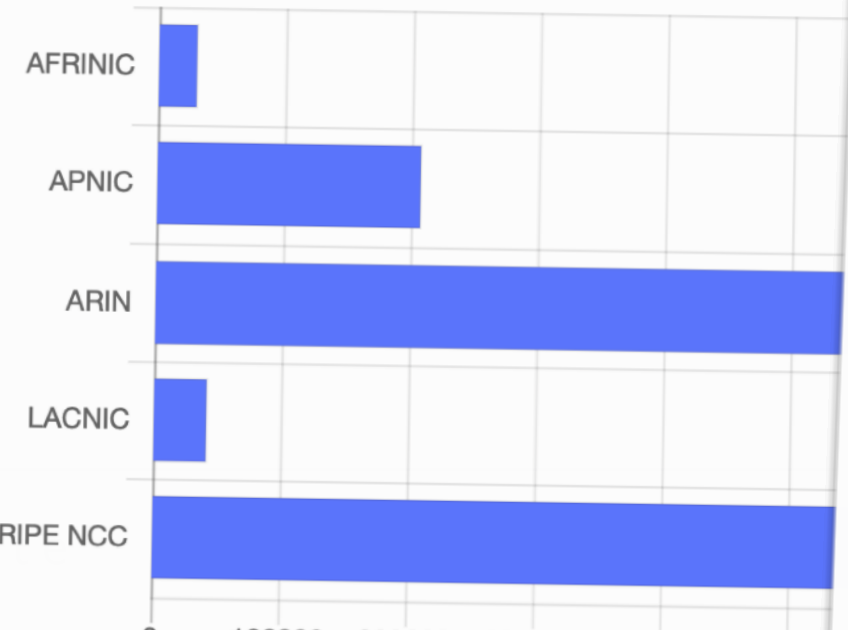
Our primary role in managing [Internet number resources](#) is to provide pools of unallocated IP addresses and AS numbers to Regional Internet Registries (RIRs) according to their needs as described by [ICANN's Global Addressing Policies](#).

These policies contain allocation algorithms that are based on the level of resource utilization of prior allocations. We track allocation rates here and provide analysis of eligibility for future RIR allocations.

### IP Address Allocations

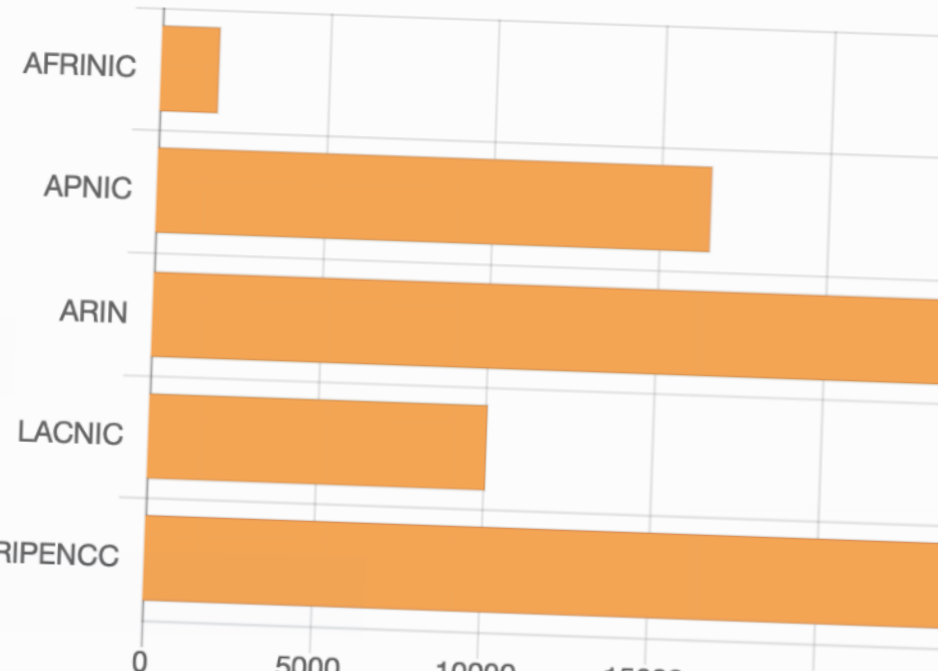
The chart below summarizes allocations of IPv6 addresses RIRs that have not been represented as IANA's supply has been exhausted and on space does not factor in utilization.

Detailed information is available for each RIR by clicking the



### Autonomous System Number Allocations

The chart below summarizes allocations of AS numbers that RIRs have not been represented as IANA's supply has been exhausted and on space does not factor in utilization. Detailed information is available for each RIR by clicking the

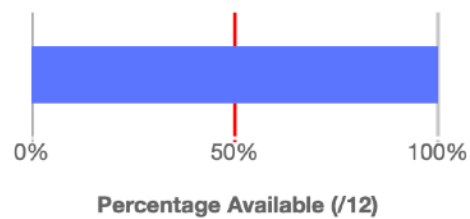


# Number Resource Dashboard

## RIPE NCC IPv6 Allocations

Allocations of IPv6 address space are made to regional Internet registries according to their needs, based on allocation rates they publish. Specifically, RIRs are eligible for further allocations if their available space of existing allocations is less than 50% of a /12 address block, or less than their necessary space for the following 9 months.

### Current Space and Eligibility

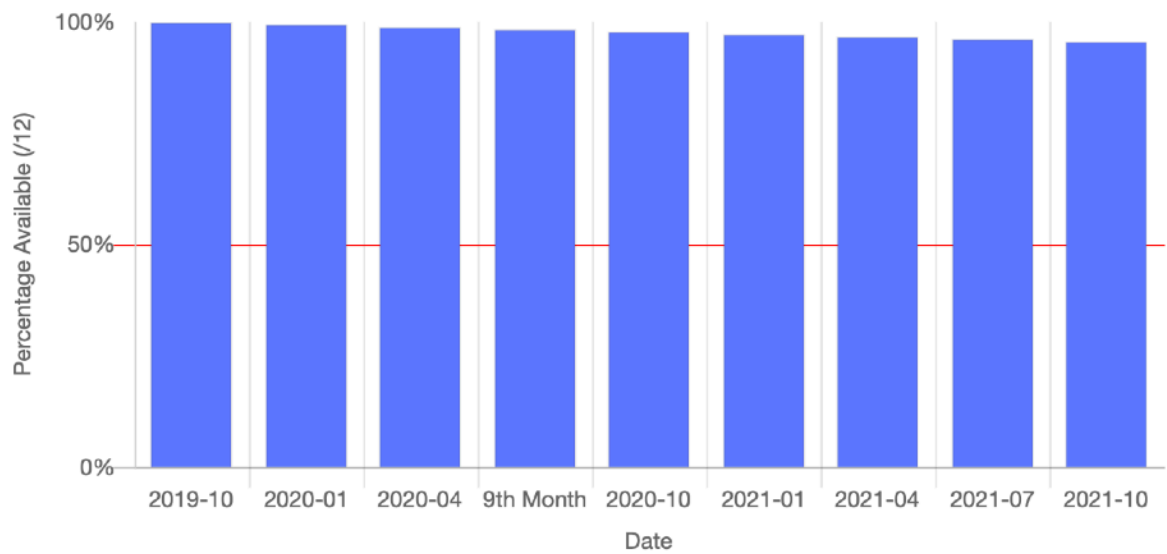


Eligibility	Not Eligible
Available Space	1,198,311
Necessary Space	17,208
Monthly Average	1,912

measurements are in /32

### 24 Month Forecast

The chart below uses RIPE NCC's current average allocation rate to forecast their available IPv6 space over the next 24 months. This can be used to estimate if RIPE NCC will become eligible to apply for additional IPv6 space in the near future.



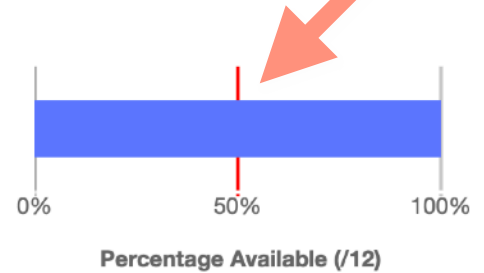


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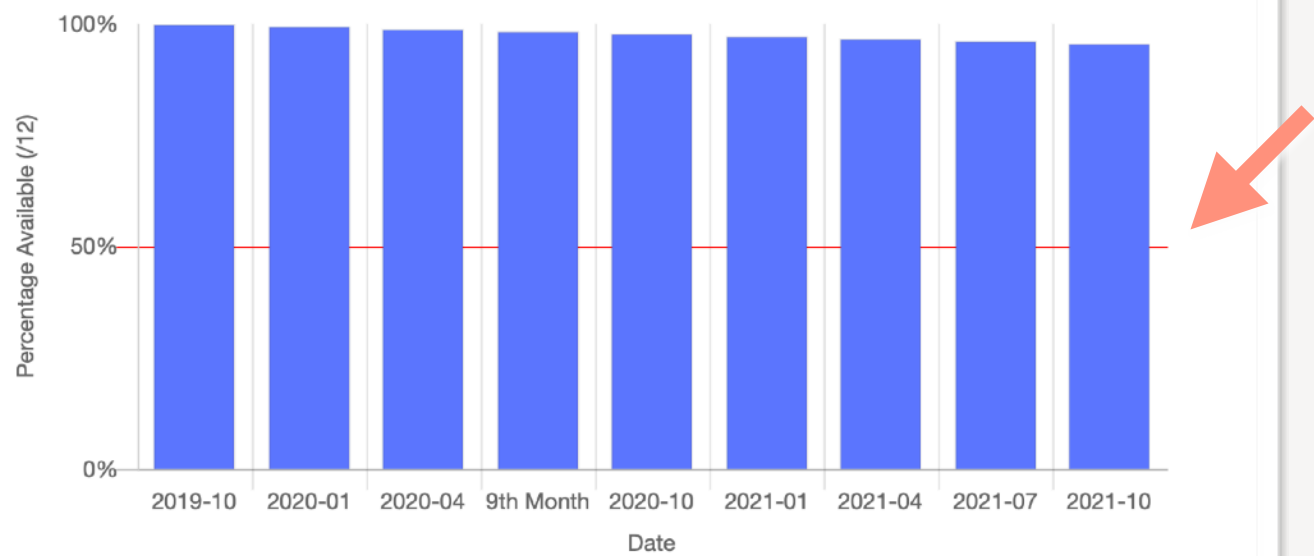


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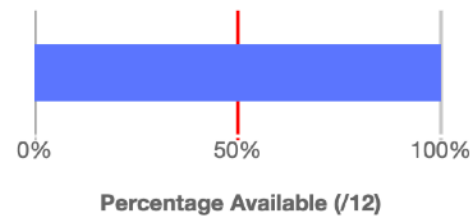
## Eligibility Threshold

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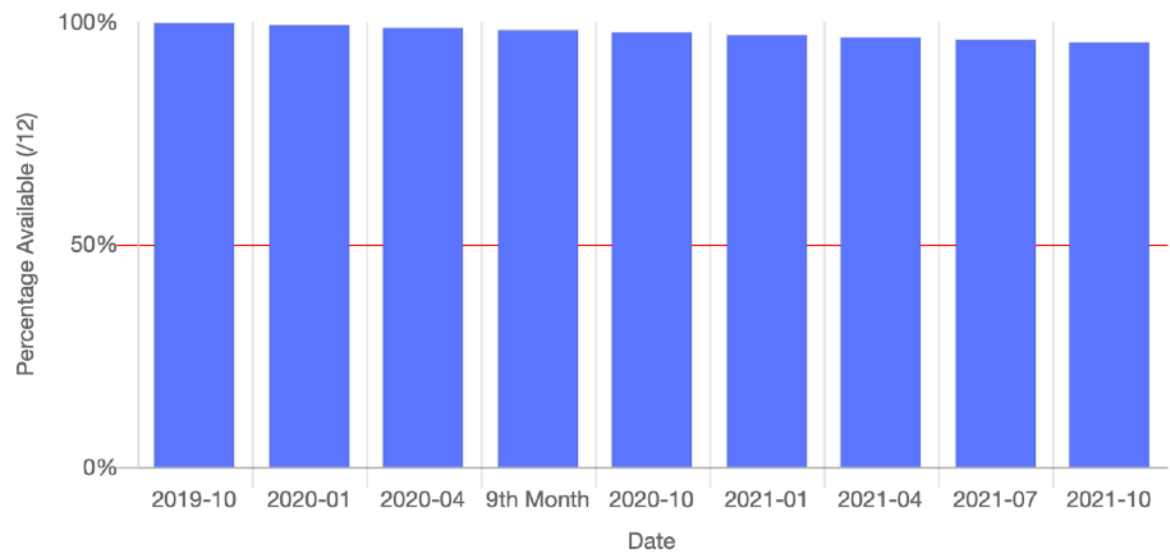


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Eligibility Threshold  
Eligibility Status

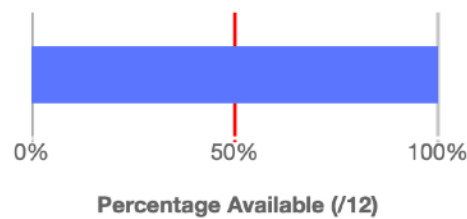


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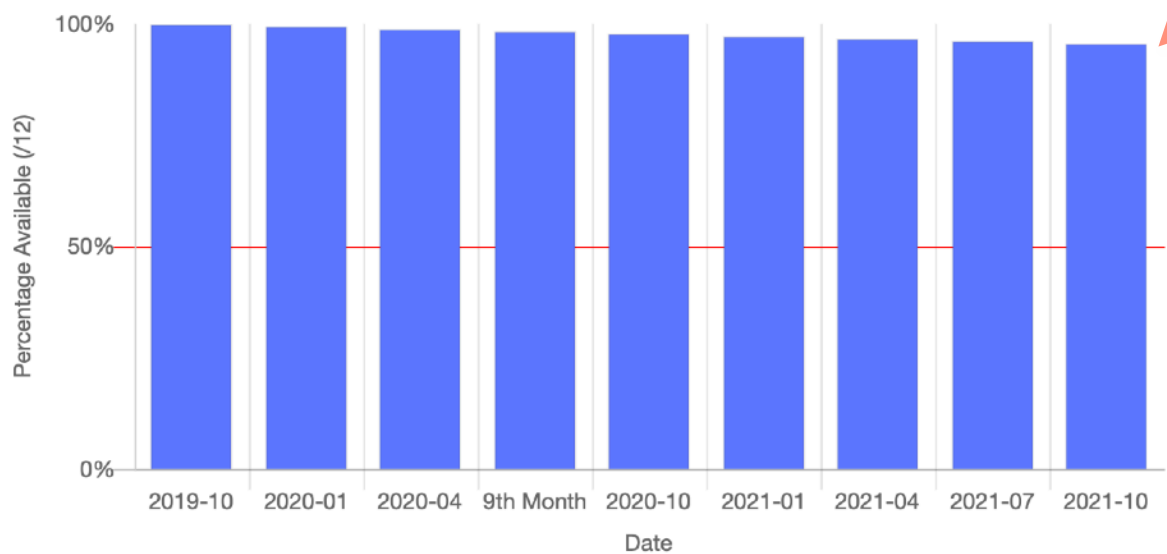


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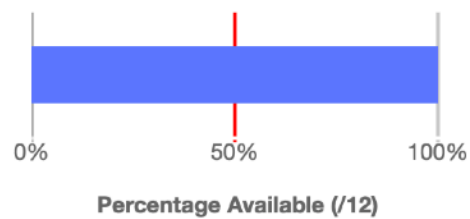
Eligibility Threshold  
Eligibility Status  
Trend and Forecast

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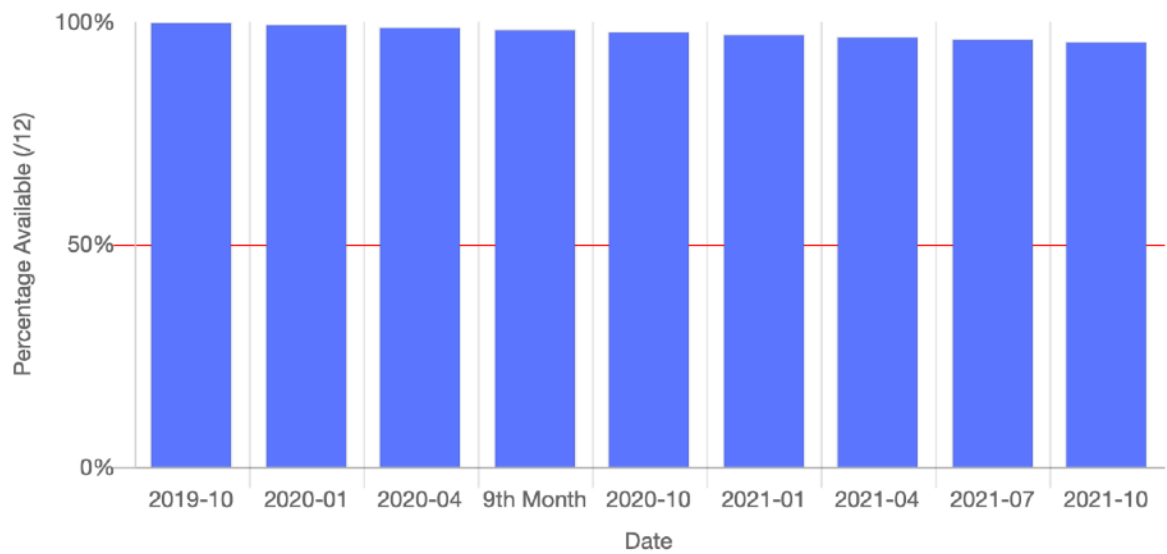


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Eligibility Threshold  
Eligibility Status  
Trend and Forecast  
**Additional Data**

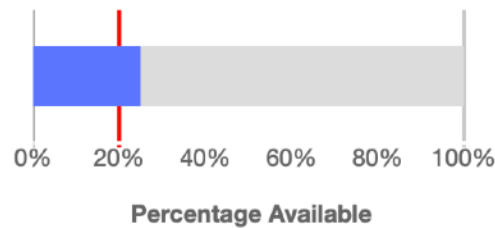
Allocation by Status  
Allocation by Country  
Last six months  
Fragmented allocations

# Number Resource Dashboard

## RIPE NCC ASN Allocations

Allocations of autonomous system numbers are made to regional Internet registries according to their needs, based on allocation rates they publish. Specifically, RIRs are eligible for further allocations if their available address space is 80% allocated, or the available pool does not satisfy two months of need based on the previous six months' average allocation rate.

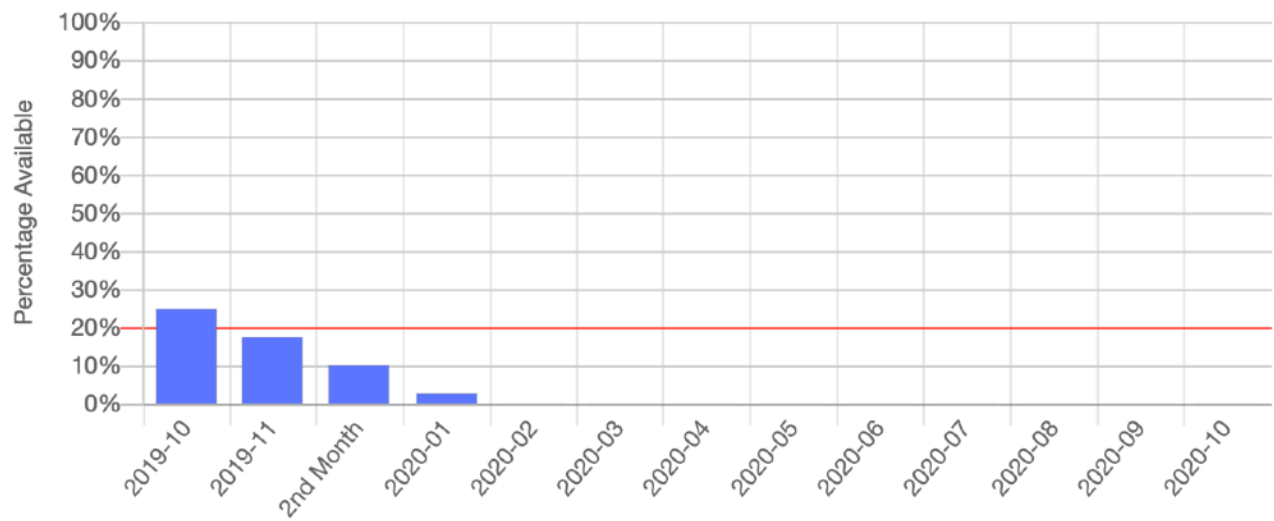
### Current Pool and Eligibility



Eligibility	Not Eligible
Available	756
Two Month Need	454
Monthly Average	227
Last Allocation by IANA	3,072 ASNs (2018-08-20)

### 12 Month Forecast

The graph below uses RIPE NCC's current average allocation rate to forecast their available ASN space over the next 12 months. This can be used to estimate if RIPE NCC will become eligible to apply for additional AS Numbers in the near future.

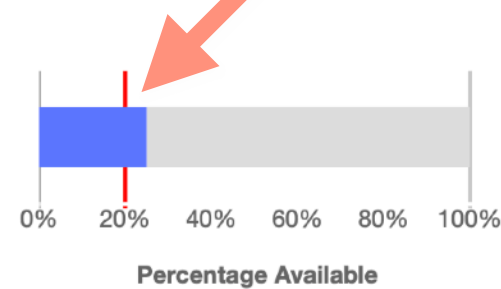


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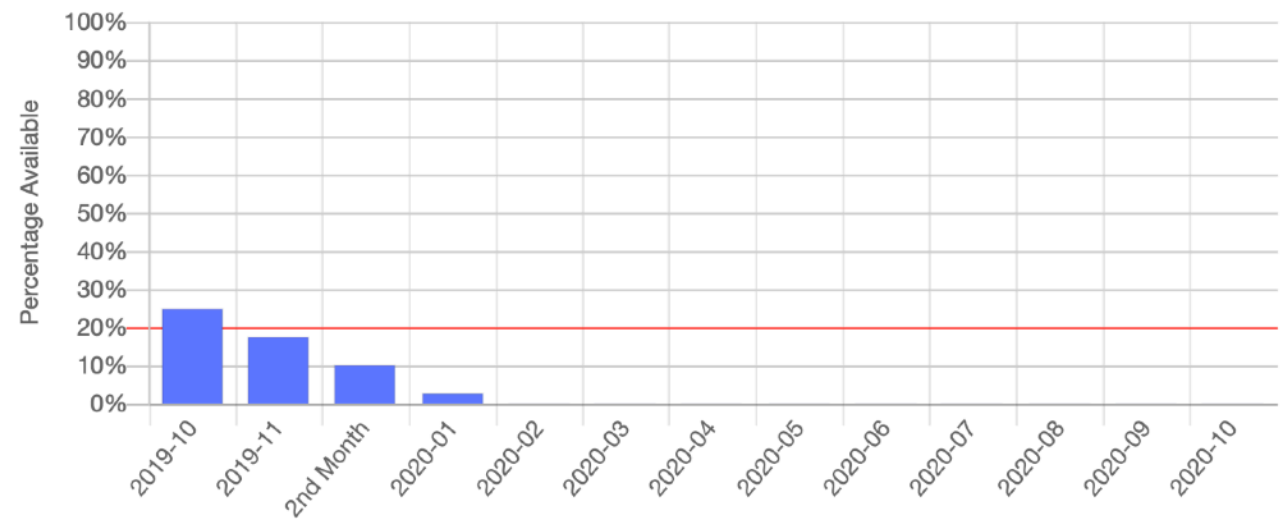
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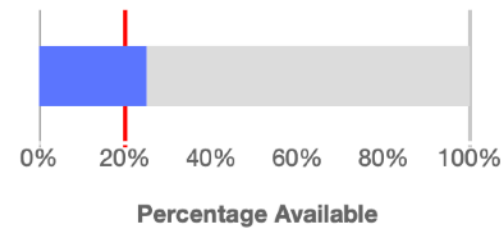
## Eligibility Threshold

# Number Resource Dashboard

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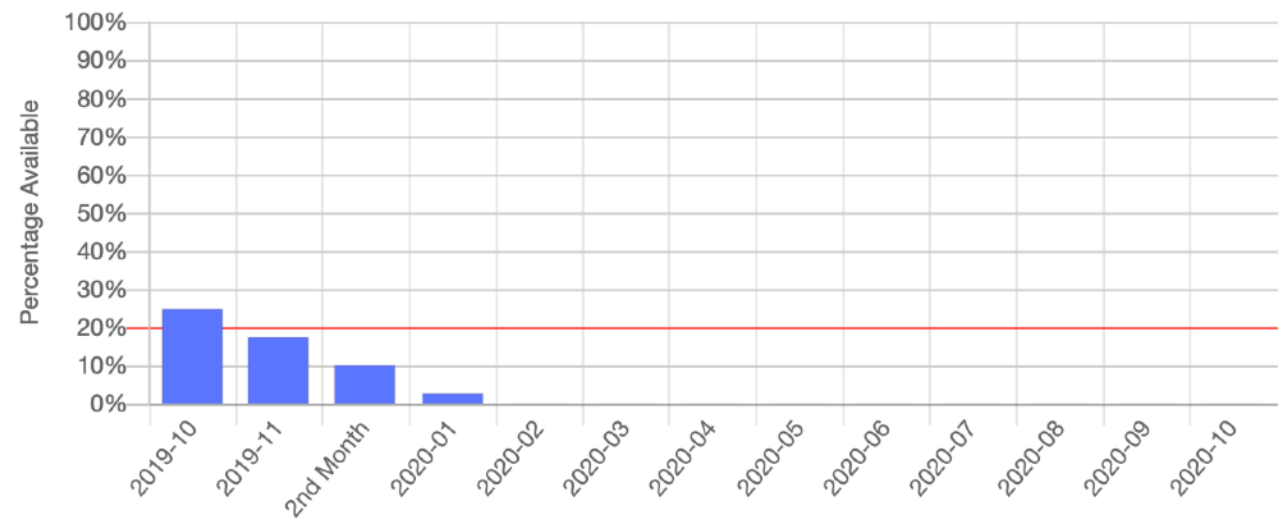
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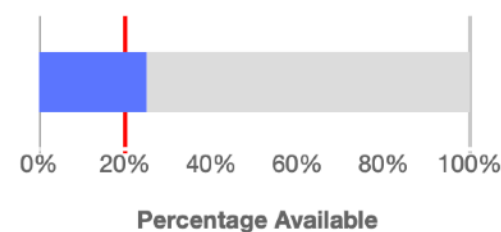
Eligibility Threshold  
Eligibility Status

# Number Resource Dashboard

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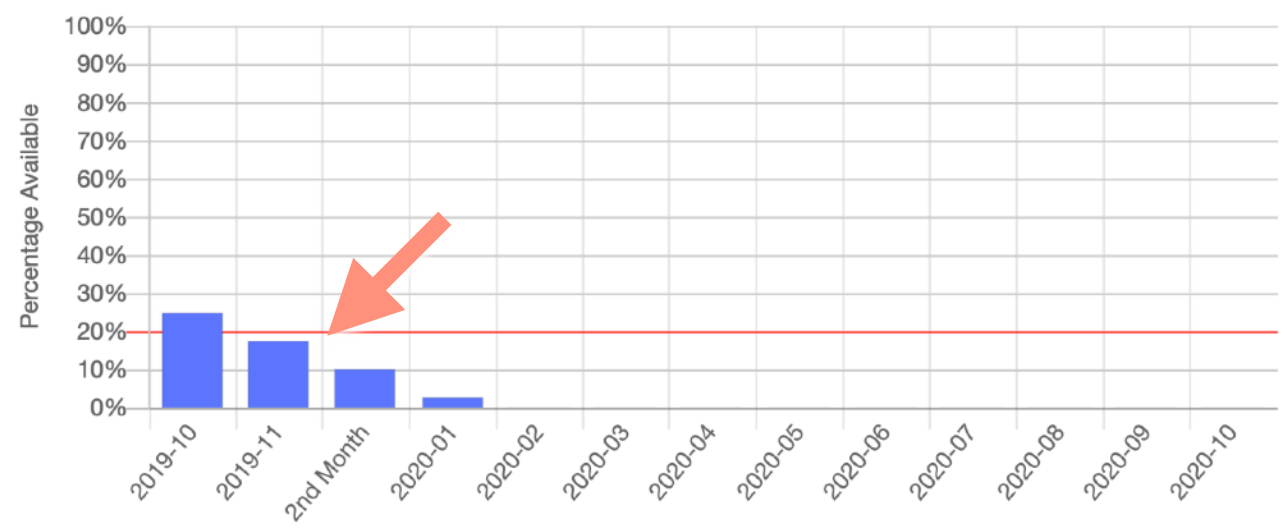
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Eligibility Threshold  
Eligibility Status  
Trend and Forecast

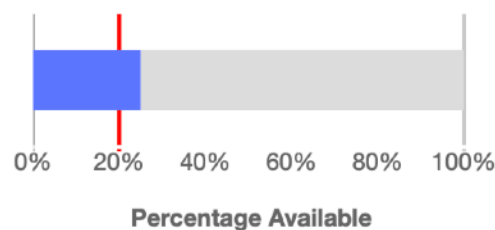


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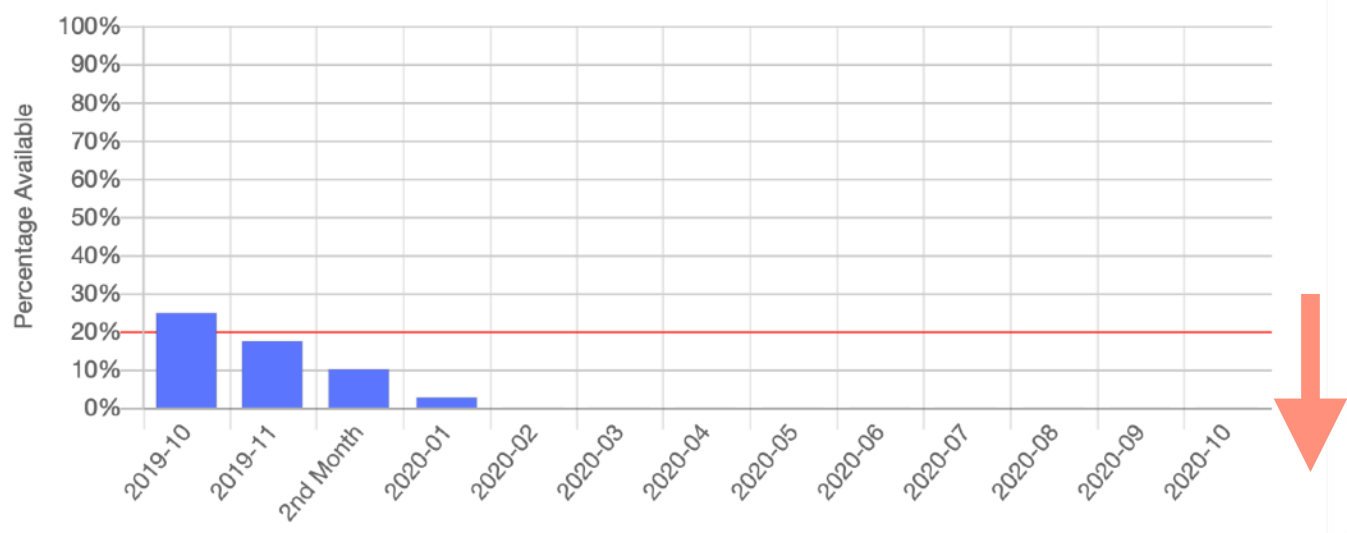
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Eligibility Threshold  
Eligibility Status  
Trend and Forecast  
**Additional Data**

Allocation by country  
Last six months

# Number Resource Dashboard

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- Updated daily
- This is the first version, feedback welcome on further improvement

<https://iana.org/numbers/allocations>

# Customer Satisfaction

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- Annual Engagement Survey closed October 11. Results will be shared during ICANN 66 in November.
- Customer satisfactions survey sent after the closure of tickets
  - For Q3 2019:
    - 36% response rate
    - 82% satisfaction rate
    - No responses from number functions in period

<https://iana.org/performance>

# "How did we do?"

- Launched in October 2018
- A simple one question survey with a binary response
- To either response, a followup comment can be optionally provided which will be reviewed by our continuous improvement team, and triaged for follow-up if requested.
- Surveys are limited to one in a period (e.g. 60 days)
- Customers can opt-out permanently

The image shows a screenshot of an email survey from IANA Services. The email header includes the sender's name 'IANA Services' with a green circular logo containing the letters 'IS', and the email address '<noreply-45900088aa66416ba9fa085fb6874313@iana.org>'. The subject line is 'How was your recent IANA service experience regarding .fk?'. The email body starts with 'Dear Colleague,' and explains that the recipient's recent request was handled by a team, and they are asking for feedback via a single question survey. It mentions that on 5 October 2018, the recipient submitted a change request for the .fk domain. Below the text, there are two buttons: a green one labeled 'I had a good experience' and a red one labeled 'I had a problem'. To the right of the main email content, there is a separate box titled 'Thank you!' which states that the feedback will help identify areas for improvement and that the recipient will be contacted if they provide a comment and ask to be contacted. This box also contains a text area for 'Provide any additional comment (optional)', a checkbox for 'Please contact me to discuss my experience further', and a blue 'Submit' button. At the bottom of the email, there is a small link for 'Don't want to receive these surveys?' with a brief explanation that feedback is valuable but the team doesn't want to be intrusive, and a link to stop receiving surveys.

How was your recent IANA service experience regarding .fk?

**IANA Services** <noreply-45900088aa66416ba9fa085fb6874313@iana.org>  
Seman Said;  
Monday, October 15, 2018 at 3:39 PM  
[Show Details](#)

Dear Colleague,

We'd like to hear about how your recent request was handled by our team. Please take a single question survey to provide us your feedback.

On 5 October 2018, you submitted a change request for the .fk domain. How do you rate your experience?

[I had a good experience](#) [I had a problem](#)

**Thank you!**

Your quick feedback will help us identify areas for improvement. If you provide a comment and ask us to contact you, we'll be in touch soon to learn more about your issue and try to make things right.

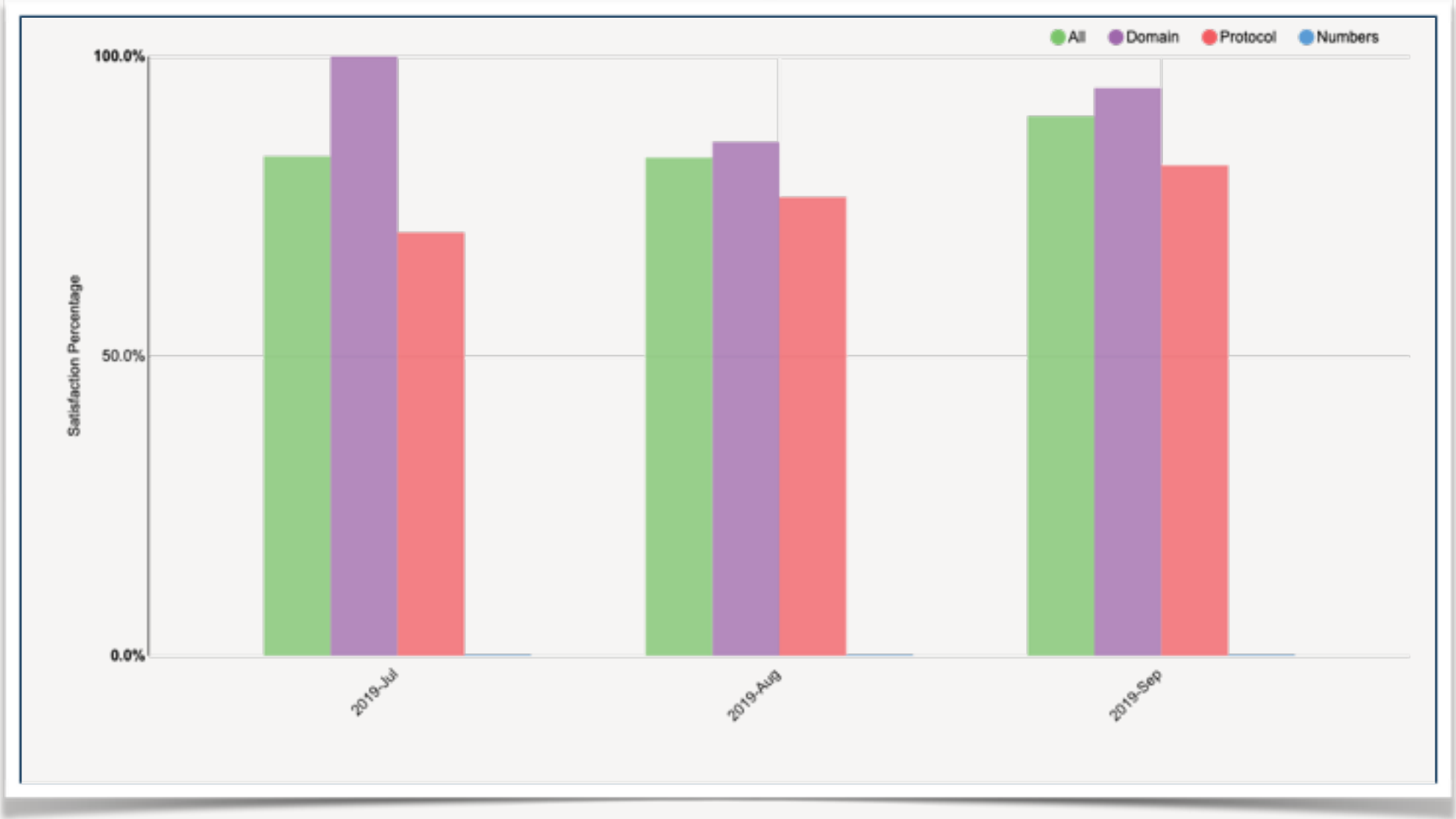
Provide any additional comment (optional)

☐ Please contact me to discuss my experience further

[Submit](#)

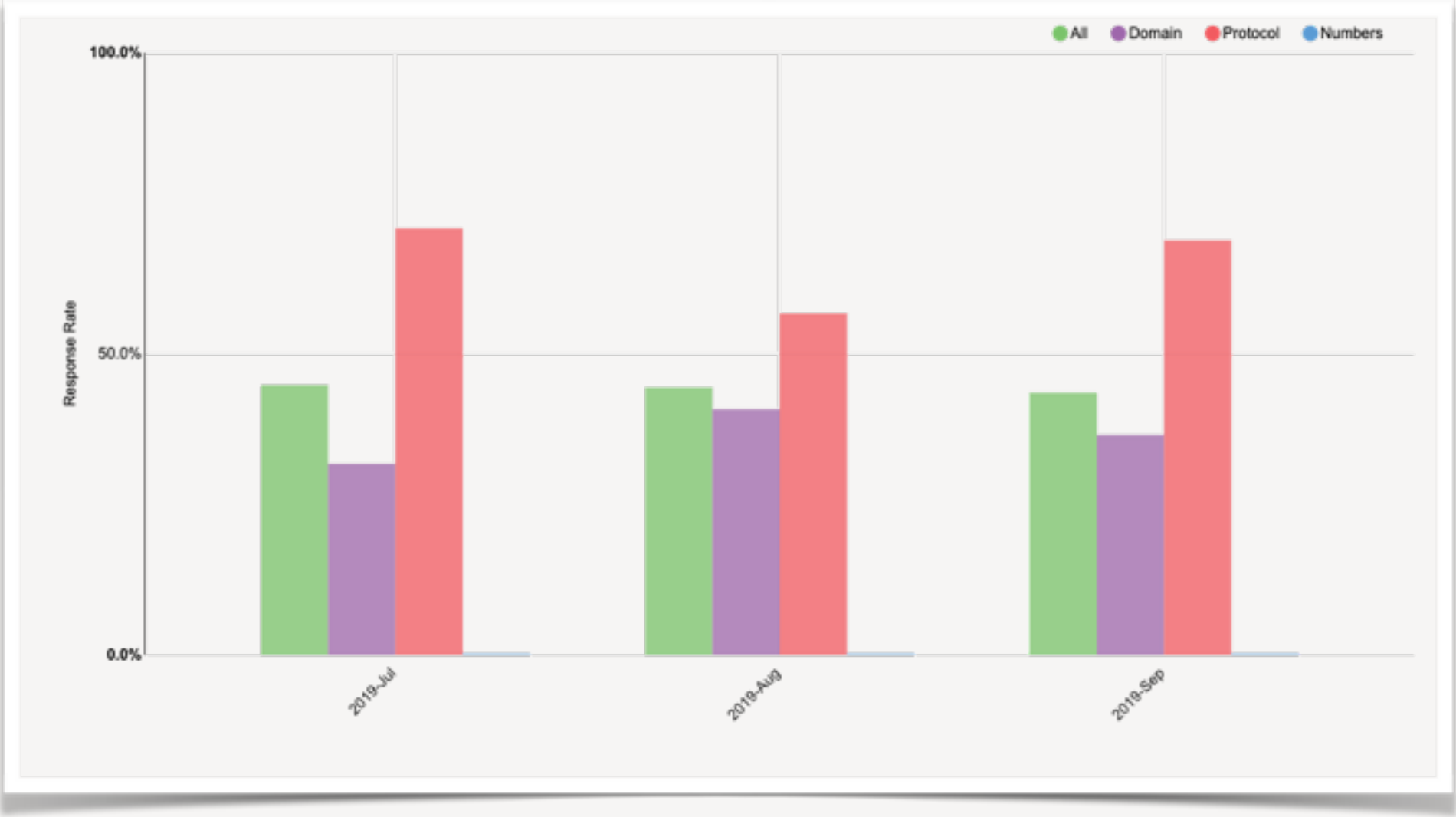
Don't want to receive these surveys?  
While your feedback as our customer is valuable, we don't want to bother you if you find these intrusive. We don't send more than one of these requests every 60 days. If you wish to permanently stop receiving customer survey click here.

# Customer Satisfaction



Satisfaction Rate

# Customer Satisfaction



Response Rate



# Customer Satisfaction

---

- Doesn't distinguish between:
  - Service dissatisfaction — the IANA team/product did not provide satisfactory customer service
  - Policy dissatisfaction — customer is unhappy because they were ineligible under the policies IANA is required to implement
- Further work is being done to refine approach
- Performing comprehensive followup with respondents to further understand negative responses

<https://iana.org/performance>



<https://iana.org/performance>

# FY21 Budget

- PTI has posted its draft budget for July 2020-June 2021 for public comment



## PTI Funding/ICANN Funding

FY21 Funding of PTI is \$10.0M provided solely from ICANN and is driven by the FY21 Expenses



## PTI baseline cash expenses

FY21 Expenses of \$10.0M (including \$0.5M contingency) increased versus FY20 Forecast driven by inflationary Personnel increases of \$0.3M, partially offset by decreases in administrative activities of \$0.2M



## PTI contingency

Contingency of \$0.5M remains flat in FY21 compared to FY20 Forecast. Contingency is about 10% of the Direct Dedicated costs and represents an amount of budgeted expense unallocated to specific activities or departments



## Capital Budget

Capital for FY21 is for a Hardware Security Module (HSM) Replacements and Key Management Facility (KMF) improvements

TOTAL PTI in Millions, USD	PTI Services FY21 Budget	PTI Services FY20 Forecast	Under/(Over)		PTI Services FY19 Actuals	Under/(Over)	
			Total	%		Total	%
Operating Expenses (a)	\$9.9	\$9.8	(\$0.1)	-1.2%	\$7.6	(\$2.3)	-30.6%
Capital	\$0.1	\$0.1	\$0.0	0.0%	\$0.3	\$0.2	64.0%
<b>TOTAL</b>	<b>\$10.0</b>	<b>\$9.9</b>	<b>(\$0.1)</b>	<b>-1.2%</b>	<b>\$7.9</b>	<b>(\$2.1)</b>	<b>-26.8%</b>

(a) Included budgeted contingency of \$0.5M.

**Thank you!**

[kim.davies@iana.org](mailto:kim.davies@iana.org)