

# NAVO/HEASARC Validation and Monitoring infrastructure

by Tess Jaffe

on behalf of

NASA's High Energy Astrophysics Science Archive Research Center (HEASARC),  
Michael Preciado (developer), Andy Ptak (Director)

and

NASA's Astrophysical Virtual Observatories (NAVO)


presented to

IVOA Operations session at Interop November 2023

# Infrastructure Services: <https://heasarc.gsfc.nasa.gov/navo/summary/> (click on Developers)

- Funded through NASA Astronomical Virtual Observatories (NAVO)
  - collaboration among HEASARC, IRSA, NED, and MAST.
- Monitoring of VO services' uptime
  - worldwide, subset of each site's services,
  - DAL types Cone, SIAP, SSA, TAP, SIAPV2, and Registry.
  - hourly
  - opt-in for notification
- Validation of VO services' results
  - worldwide, everything
  - automatic, roughly monthly
  - also available as a web tool, i.e., put in your URL and request immediate validation
- Performance monitoring for NAVO services
  - open source infrastructure

# Infrastructure Services: monitoring VO services worldwide

 National Aeronautics and Space Administration

## NAVO: NASA Astronomical Virtual Observatories

[Astronomers](#) [Developers](#) [About NAVO](#) [NAVO Internal](#) [Feedback](#)

### VO Monitor ?

VO Data Services (2023/11/08 09:40:11 - 2023/11/08 10:04:22)

Site <span>?</span>	Status	Passed % <span>?</span>	All Up % <span>?</span>	Site <span>?</span>	Status	Passed % <span>?</span>	All Up % <span>?</span>	Site <span>?</span>	Status	Passed % <span>?</span>	All Up % <span>?</span>
3CR Snapshots	Fail	0	0	Harvard ADS *	OK	100	100	NRAO	Fail	0	0
AIP	OK	100	100	Harvard CXC *	OK	100	100	OCA	OK	100	100
ARCHES	Fail	66.6	0	Heidelberg	OK	100	100	OSUG	OK	100	100
ARVO	Fail	0	0	Helio VO	Fail	0	0	OVGSO	OK	100	100
ASTRON	OK	100	100	IAA	OK	100	100	Obs Haute Provence	OK	100	100
ASU	OK	100	100	IACVO	OK	100	100	Obs Lyon	Fail	0	0
ArVO Byu	OK	100	100	IAP CZ	OK	100	100	PADCC	OK	100	100
BIRA	OK	100	100	IDOC	Fail	33.3	0	PDS	Fail	50	0
BSDC	OK	100	100	INAF	OK	100	100	ROE Astrogrid	Fail	71.4	0
CADC	OK	100	100	IRSA *	OK	100	100	SAO RAS	Fail	33.3	0
CDPP	OK	100	100	IVOA	OK	100	100	SAO TDC	OK	100	100
CDS	OK	100	100	IVOA RofR	OK	100	100	SDSS	OK	100	100
CEFCA	OK	100	100	JAO	OK	100	100	SSDC	OK	100	100
CESAM	OK	100	100	JIVE	OK	100	100	SVO	OK	100	100

- Current status summary
- Organized by site

# Infrastructure Services: monitoring VO services worldwide

NASA National Aeronautics and Space Administration

## NAVO: NASA Astronomical Virtual Observatories

out NAVO | NAVO Internal | Feedback

The % of passed tests = total number of services passed divided by the number of services tested

/08 09:40:11- 2023/11/08 10:04:22)

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ASU	OK	100	100	IACVO	OK	100	100	Obs Lyon	Fail	0	0
ArVO Byu	OK	100	100	IAP CZ	OK	100	100	PADCC	OK	100	100
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CDS	OK	100	100	IVOA RofR	OK	100	100	SDSS	OK	100	100
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NAVVO Internal Feedback

2023/11/08 10:04:22)

The all up % represents the uptime of the SITE. If any services are down, the service uptime is 0%. All services tested must be up to achieve a 100% uptime.

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Monitor Statistics  
 Table (2013 - present) ⓘ  
 Calculator ⓘ  
 Last Time Service Up ⓘ

- Current status summary
- Organized by site

- Can specify a date range to compile stats





# Infrastructure Services: monitoring details, re-run buttons, etc.

## NAVO: NASA Astronomical Virtual Observatories

Astronomers      Developers      About NAVO      NAVO Internal      Feedback

### VO Services Monitor ?

Tests of JVO Services (Most Recent Test Results: Last test at: 2022/10/04 15:43:29)						
Site	Test Name	Status	Contact	Test	Raw Test Results	Service URL
JVO	<a href="#">JVO SIAP V2 FITS</a>	pass		<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
JVO	<a href="#">JVO SSA FITS</a>	pass		<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
JVO	<a href="#">JVO TAP</a>	pass		<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
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JVO	<a href="#">JVO SIAP V2</a>	pass		<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
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JVO	<a href="#">JVO SIAP FITS</a>	pass		<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
JVO	<a href="#">JVO Registry</a>	pass		<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>

Click Contact icon to retrieve contact information for service  
Click Test link to run a test on the service in real time  
Click Run link to get the service's response at a default position  
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Earlier Tests on Site's Services (2022/10/04 15:43:29 - 2022/10/04 03:43:06)			
Name	Test Name	Status	Time
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JVO	JVO SIAP	pass	2022/10/04 15:43:17
JVO	JVO SIAP V2	pass	2022/10/04 15:43:11
JVO	JVO SSA	pass	2022/10/04 15:43:09
JVO	JVO SIAP FITS	pass	2022/10/04 15:43:03

- Details for a given site
- This can take a noticeable time to open.
- Top panel shows most recent results
- Lower panel shows history.

# Infrastructure Services: monitoring details, re-run buttons, etc.

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### VO Services Monitor ?

See last result

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# Infrastructure Services: monitoring details, re-run buttons, etc.

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### VO Services Monitor ?

**Rerun test**      **See last result**

Tests of JVO Services (Most recent test at: 2022/10/04 15:43:29)						
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JVO	<a href="#">JVO TAP</a>	pass	✉	<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
JVO	<a href="#">JVO SIAP</a>	pass	✉	<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
JVO	<a href="#">JVO SIAP V2</a>	pass	✉	<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
JVO	<a href="#">JVO SSA</a>	pass	✉	<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
JVO	<a href="#">JVO SIAP FITS</a>	pass	✉	<a href="#">Test</a>	<a href="#">Run</a>	<a href="#">URL</a>
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- Details for a given site
- This can take a noticeable time to open.
- Top panel shows most recent results
- Lower panel shows history.
- Due to a system migration issue, the 'Test' and 'Run' links are not currently (Nov 2023) available. We anticipate resolving this issue by the end of the year.

Who is using this?



National Aeronautics and Space Administration

# NAVO: NASA Astronomical Virtual Observatories

Astronomers		Developers		About NAVO				NAVO Internal				Feedback	
Center	Tested	Total #Services	2014-01-01 2014-12-31	2015-01-01 2015-12-31	2016-01-01 2016-12-31	2017-01-01 2017-12-31	2018-01-01 2018-12-31	2019-01-01 2019-12-31	2020-01-01 2020-12-31	2021-01-01 2021-12-31	2022-01-01 2022-12-31	2023-01-01 2023-11-02	
3CR Snapshots	1	1	96.3	98.9	99.8	99.5	99.7	97.8	85.4	31.4	22.8	0	
ARCHES	2	2	0	0	97.0	96.7	86.7	96.7	93.8	97.0	72.3	51.6	
ARVO	1	1	0	95.6	98.1	92.4	92.3	93.4	39.6	0	0	0	
ASDC	1	1	99.3	98.8	99.9	97.9	99.8	99.4	99.0	100	0	0	
ASU	4	17	99.0	99.7	98.4	0	92.6	98.3	99.6	99.5	91.2	98.9	
Astronet	2	30	49.1	88.9	75.1	25.7	95.4	96.5	44.4	0	0	0	
BIRA	2	2	0	0	0	0	100	100	99.9	99.9	98.8	99.9	
BSDC	3	8	0	84.7	98.8	98.6	99.3	95.6	98.5	99.9	99.6	99.8	
CADC	4	6	98.6	93.8	97.0	96.1	98.2	98.9	96.8	95.8	94.6	98.4	
CDPP	1	5	0	97.4	99.6	97.7	99.6	88.2	99.3	99.9	99.9	95.1	
CDS	7	20773	99.7	99.5	99.4	99.0	98.9	98.9	99.1	99.3	99.1	99.2	
CDS SIMBAD	2	2	99.1	98.9	99.2	99.6	99.2	98.5	99.6	99.5	99.7	99.7	
CESAM	2	11	0	0	0	0	0	0	0	99.9	99.8	99.3	
CSIRO	5	15	98.7	98.9	99.0	98.1	72.5	95.3	91.4	97.2	88.6	96.1	
ChiVO	4	4	0	0	0	0	87.9	90.8	90.3	85.3	58.0	69.6	
China VO	3	4	95.1	87.6	98.2	99.1	99.8	99.8	88.3	97.4	97.6	99.0	
DAME	1	2	0	81.5	98.3	84.4	86.2	0	0	0	0	0	
ESA VO	5	27	99.5	98.8	98.3	99.4	97.1	98.3	97.6	94.8	96.2	97.9	
ESO ORG	3	4	59.9	99.7	99.0	99.9	95.5	99.6	99.7	99.7	99.8	99.3	
FU-Berlin	2	2	0	0	0	0	100	97.1	99.9	99.9	99.9	99.9	
GAVO	6	71	99.3	99.4	99.7	98.3	99.0	99.6	99.5	99.8	99.9	99.7	
GAVO Purx	1	3	0	0	0	0	99.9	99.3	99.5	94.7	97.2	86.5	
GCP	2	2	0	0	0	0	96.1	99.7	99.6	98.3	98.6	95.2	
HEASARC	7	1052	96.9	97.6	98.2	99.3	99.5	98.8	99.5	99.7	99.2	99.7	
HESIOD	2	6	97.0	96.8	98.2	99.4	98.6	98.2	92.1	89.6	94.5	98.9	

- Percent uptime by site
- Average over each year

Who is using this?

# Infrastructure Services: validation

- Validation tools

- Statistics updated daily
- Rotating subset of 1000 services tested per day, each service hit roughly monthly.
- Tools for browsing, re-testing, viewing errors, etc.

- We use:

- VO Paris to validate SSA and SIAP V2 service
- the NCSA validators to validate Cone and SIAP services.
- UK Bristol's taplint to validate TAP services
- OVAL, a 3rd party validator, to validate Registry services.

- Home page shows

- the pass rate for the VO as a whole
- a search box so that users can get the current validation status of individual services at their site.
- buttons to see the validation results by 'center' or by 'type'
- a button is provided to validate the service in real-time

0:17

Validation Statistics for All VO Services ⓘ		
Total Number of Active Services	27131	
In Validation Queue	0	
Validated	27131	
Deprecated	13	
Status	Total	Percent
Passed	23826	87.8
Failed	3230	11.9
Skipped Validation ⓘ	0	0
Aborted	75	0.27

[View Results By Center](#)

[View Results By Type](#)

[View Most Recent Test Results](#)

[View Most Recent Test Stats](#)

Query by identifier or string. Any identifiers containing this string will be matched



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Validation Statistics for All VO Services <i>i</i>		
Total Number of Active Services	27131	
In Validation Queue	0	
Validated	27131	
Deprecated	13	
Status	Total	Percent
Passed	23826	87.8
Failed	3230	11.9
Skipped Validation <i>i</i>	0	0
Aborted	75	0.27

[View Results By Center](#)

[View Results By Type](#)

[View Most Recent Test Results](#)

[View Most Recent Test Stats](#)

Query by identifier or string. Any identifiers containing this string will be matched

Statistics for Services Recently Tested <i>i</i>		
Total Number of Active Services	300	
In Validation Queue	0	
Validated	300	
Deprecated	0	
Status	Total	Percent
Passed	287	95.6
Failed	13	4.33
Skipped Validation <i>i</i>	0	0
Aborted	0	0



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- Tools for browsing, re-testing, viewing errors, etc.

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- the pass rate for the VO as a whole
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- buttons to see the validation results by 'center' or by 'type'
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0:17

Validation Statistics for All VO Services ⓘ		
Total Number of Active Services	27131	
In Validation Queue	0	
Validated	27131	
Deprecated	13	
Status	Total	Percent
Passed	23826	87.8
Failed	3230	11.9
Skipped Validation ⓘ	0	0
Aborted	75	0.27

[View Results By Center](#)

[View Results By Type](#)

[View Most Recent Test Results](#)

[View Most Recent Test Stats](#)

Query by identifier or string. Any identifiers containing this string will be matched

# Infrastructure Services: validation

- Validation tools
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  - Rotating subset of 1000 services tested per day, each service hit roughly monthly.
  - Tools for browsing, re-testing, viewing errors, etc.
- We use:
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Query by identifier or string. Any identifiers containing this string will be matched


# Infrastructure Services: validation results by center

Last Updated (UTC): 2022-10-04T13:00:11

Center <a href="#">i</a>	Active Services	Total Validated	Not Validated	Pass Rate % <a href="#">i</a>	Passed	Skipped	Deprecated	Failed	Aborted	Error Types per Center <a href="#">i</a>
3CRSnapshots	1	1	0	0	0	0	0	1	0	<a href="#">View List</a>
ARCHES	2	2	0	0	0	0	0	2	0	<a href="#">View List</a>
ARVO	1	1	0	0	0	0	0	1	0	<a href="#">View List</a>
ASTRON	23	23	0	56.5	13	0	0	10	0	<a href="#">View List</a>
ASU	16	16	0	87.5	14	0	0	1	1	<a href="#">View List</a>
Astronet	30	30	0	0	0	0	0	2	28	<a href="#">View List</a>
BIRA	2	2	0	0	0	0	0	1	1	<a href="#">View List</a>
BSDC	8	8	0	62.5	5	0	0	3	0	<a href="#">View List</a>
BYU ArVO	4	4	0	50	2	0	0	1	1	<a href="#">View List</a>
CADC	6	6	0	33.3	2	0	0	4	0	<a href="#">View List</a>
CDPP	3	3	0	100	3	0	0	0	0	<a href="#">View List</a>
CDS SIMBAD	1	1	0	0	0	0	0	1	0	<a href="#">View List</a>
CDS Vizier	24433	24433	0	95.2	23270	0	0	1078	85	<a href="#">View List</a>
CEFCA	26	26	0	42.3	11	0	0	9	6	<a href="#">View List</a>
CESAM	3	3	0	66.6	2	0	0	1	0	<a href="#">View List</a>

# Infrastructure Services: validation results by center

Last Updated (UTC): 2022-10-04T13:00:11

Center <sup>i</sup>	Active Services	Total Validated	Not Validated	Pass Rate % <sup>i</sup>	Passed	Skipped	Deprecated	Failed	Aborted	Error Types per Center <sup>i</sup>
3CRSnapshots	1	1	0	0	0	0	0	1	0	<a href="#">View List</a>
ARCHES	2	2	0	0	0	0	0	2	0	<a href="#">View List</a>
ARVO	1	1	0	0	0	0	0	1	0	<a href="#">View List</a>
ASTRON	23	23	0	56.5	13	0	0	10	0	<a href="#">View List</a>
ASU	16	16	0	0	0	0	0	0	0	<a href="#">View List</a>
Astronet	30	30	0	0	0	0	0	0	0	<a href="#">View List</a>
BIRA	2	2	0	0	0	0	0	0	0	<a href="#">View List</a>
BSDC	8	8	0	0	0	0	0	0	0	<a href="#">View List</a>
BYU ArVO	4	4	0	0	0	0	0	0	0	<a href="#">View List</a>
CADC 	6	6	0	0	0	0	0	0	0	<a href="#">View List</a>
CDPP	3	3	0	0	0	0	0	0	0	<a href="#">View List</a>
CDS SIMBAD	1	1	0	0	0	0	0	0	0	<a href="#">View List</a>
CDS Vizier	24433	24433	0	0	0	0	0	0	0	<a href="#">View List</a>
CEFCA	26	26	0	0	0	0	0	0	0	<a href="#">View List</a>
CESAM	3	3	0	0	0	0	0	0	0	<a href="#">View List</a>

Most Recent Validation Results for: CADC								
<sup>i</sup>	<sup>i</sup> Shortname	<sup>i</sup> IVOA Identifier	<sup>i</sup> Status	<sup>i</sup> Time ▲	<sup>i</sup> Service URL	Run Test	<sup>i</sup> Type	<sup>i</sup> Query Information
	Description	Registry Entry	Last Test Status	Start Time of Test	Base URL of Service		DAL Service Type	Right Ascension, Declination Search Radius
1	null	ivo://cadc.nrc.ca/registry	<span>Fail</span>	2022/10/02 03:19:03	URL	<span>Test</span>	RegistryHarvest	RA=0.0000&DEC=0.0000&SIZE=00
2	null	ivo://cadc.nrc.ca/registry	<span>Pass</span>	2022/10/02 03:17:53	URL	<span>Test</span>	RegistryHarvest	RA=0.0000&DEC=0.0000&SIZE=00
3	YouCat	ivo://cadc.nrc.ca/youcat	<span>Fail</span>	2022/09/30 02:40:14	URL	<span>Test</span>	TAP	
4	null	ivo://cadc.nrc.ca/sia	<span>Fail</span>	2022/09/25 02:55:52	URL	<span>Test</span>	SIA	POS=0.0000,0.0000&SIZE=00
5	null	ivo://cadc.nrc.ca/argus	<span>Pass</span>	2022/09/16 02:52:27	URL	<span>Test</span>	TAP	
6	null	ivo://cadc.nrc.ca/sia	<span>Fail</span>	2022/09/12 02:46:01	URL	<span>Test</span>	SIAV2	POS=0.0000,0.0000&SIZE=00

# Infrastructure Services: validation results by center

Last Updated (UTC): 2022-10-04T13:00:11

Center <sup>i</sup>	Active Services	Total Validated	Not Validated	Pass Rate % <sup>i</sup>	Passed	Skipped	Deprecated	Failed	Aborted	Error Types per Center <sup>i</sup>
3CRSnapshots	1	1	0	0	0	0	0	1	0	<a href="#">View List</a>
ARCHES	2	2	0	0	0	0	0	2	0	<a href="#">View List</a>
ARVO	1	1	0	0	0	0	0	1	0	<a href="#">View List</a>
ASTRON	23	23	0	56.5	13	0	0	10	0	<a href="#">View List</a>
ASU	16	16	0	0	0	0	0	0	0	<a href="#">View List</a>
Astronet	30	30	0	0	0	0	0	0	0	<a href="#">View List</a>
BIRA	2	2	0	0	0	0	0	0	0	<a href="#">View List</a>
BSDC	8	8	0	0	0	0	0	0	0	<a href="#">View List</a>
BYU ArVO	4	4	0	0	0	0	0	0	0	<a href="#">View List</a>
CADC <sup>i</sup>	6	6	0	0	0	0	0	0	0	<a href="#">View List</a>
CDPP	3	3	0	0	0	0	0	0	0	<a href="#">View List</a>
CDS SIMBAD	1	1	0	0	0	0	0	0	0	<a href="#">View List</a>
CDS VizieR	24433	24433	0	0	0	0	0	0	0	<a href="#">View List</a>
CEFCa	26	26	0	0	0	0	0	0	0	<a href="#">View List</a>
CESAM	3	3	0	0	0	0	0	0	0	<a href="#">View List</a>

Most Recent Validation Results for: CADC

Shortname <sup>i</sup>	IVOA Identifier <sup>i</sup>	Status <sup>i</sup>	Time <sup>i</sup> ▲	Service URL <sup>i</sup>	Run Test	Type <sup>i</sup>	Query Information <sup>i</sup>
Description	Registry Entry	Last Test Status	Start Time of Test	Base URL of Service		DAL Service Type	Right Ascension, Declination Search Radius
1 null	ivo://cadc.nrc.ca/registry	<span>Fail</span>	2022/10/02 03:19:03	URL	<span>Test</span>	RegistryHarvest	RA=0.0000&DEC=0.0000&SF00
2 null	ivo://cadc.nrc.ca/registry	<span>Pass</span>	2022/10/02 03:17:53	URL	<span>Test</span>	RegistryHarvest	RA=0.0000&DEC=0.0000&SF00
3 YouCat	ivo://cadc.nrc.ca/youcat	<span>Fail</span>	2022/09/30 02:40:14	URL	<span>Test</span>	TAP	
4 null	ivo://cadc.nrc.ca/sia	<span>Fail</span>	2022/09/25 02:55:52	URL	<span>Test</span>	SIA	POS=0.0000,0.0000&SIZE=0
5 null	ivo://cadc.nrc.ca/argus	<span>Pass</span>	2022/09/16 02:52:27	URL	<span>Test</span>	TAP	
6 null	ivo://cadc.nrc.ca/sia	<span>Fail</span>	2022/09/12 02:46:01	URL	<span>Test</span>	SIAV2	POS=0.0000,0.0000&SIZE=0

Subtestid	Error
ID of the Subtest	Error Message
	Test of Registry Service Using Oval BASE OAI-PMH Validator
OAI.63507	ERROR: Identify response well-formed but invalid: Element '{http://www.ivoa.net/xml/RegistryInterface/v1.0}Resource', attribute '{http://www.w3.org/2001/XMLSchema-instance}type': The QName value '{http://www.ivoa.net/xml/VORegistry/v1.0}Registry' of the xsi:type attribute does not resolve to a type



# Infrastructure Services: validation

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View Results By Center  
View Results By Type

View Most Recent Test Results  
View Most Recent Test Stats

Query by identifier or string. Any identifiers containing this string will be matched

Last Validation Occurred	2023/11/08 04:19:06 ET
Next Scheduled Validation	2023/11/09 06:00:00 ET
Services Tested Daily <sup>i</sup>	1000

Do you need to test a service URL? (Cone, SIA, SSA, and TAP services only)

Examples:  
http://dc.zah.uni-heidelberg.de/rave/q/cone/scs.xml? (Cone)  
http://voparis-srv.obspm.fr/srv/ssa-hess\_spectrum.php? (SSA)  
http://casjobs.sdss.org/vo/DR3SIAP/SIAP.asmx/getSiapInfo?&FORMAT=image/fits&BANDPASS=g& (SIAP)  
https://heasarc.gsfc.nasa.gov/xamin/vo/tap (TAP)

URL:

DAL Type:  RA:  Dec:  SR:

\*The Cone and SIA validators were originally provided by NCSA and are currently maintained by the HEASARC  
\*The SSA Validator is provided and supported by VO Paris  
\*The TAP Validator is 'taplint'. It is provided and maintained by UK Bristol.

VO Validation Statistics

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The screenshot shows the VO Validation Statistics website. At the top, there are four buttons: 'View Results By Center', 'View Results By Type', 'View Most Recent Test Results', and 'View Most Recent Test Stats'. Below these is a search box with the text 'Query by identifier or string. Any identifiers containing this string will be matched'. A table displays validation statistics: 'Last Validation Occurred' (2023/11/08 04:19:06 ET), 'Next Scheduled Validation' (2023/11/09 06:00:00 ET), and 'Services Tested Daily' (1000). Below the table, there is a section for testing service URLs, with examples for Cone, SSA, and SIAP. A red box highlights the 'JURL:' input field and the 'DAL Type: Cone', 'RA: 0', 'Dec: 0', 'SR: .01' fields, along with 'Submit' and 'Reset' buttons. At the bottom, there are three footnotes about the validators and a link to 'VO Validation Statistics'.

Last Validation Occurred	2023/11/08 04:19:06 ET
Next Scheduled Validation	2023/11/09 06:00:00 ET
Services Tested Daily	1000

Do you need to test a service URL? (Cone, SIA, SSA, and TAP services only)  
Examples:  
http://dc.zah.uni-heidelberg.de/rave/q/cone/scs.xml? (Cone)  
http://voparis-srv.obspm.fr/srv/ssa-hess\_spectrum.php? (SSA)  
http://casjobs.sdss.org/vo/DR3SIAP/SIAP.asmx/getSiapInfo?&FORMAT=image/fits&BANDPASS=g& (SIAP)  
https://heasarc.gsfc.nasa.gov/xamin/vo/tap (TAP)

JURL:

DAL Type: Cone RA: 0 Dec: 0 SR: .01

Submit Reset

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[VO Validation Statistics](#)

Enter your service URL to test it.

Who is using this?

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View Most Recent Test Stats

Query by identifier or string. Any identifiers containing this string will be matched

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Services Tested Daily <sup>i</sup>	1000

Do you need to test a service URL? (Cone, SIA, SSA, and TAP services only)

Examples:  
http://dc.zah.uni-heidelberg.de/rave/q/cone/scs.xml? (Cone)  
http://voparis-srv.obspm.fr/srv/ssa-hess\_spectrum.php? (SSA)  
http://casjobs.sdss.org/vo/DR3SIAP/SIAP.asmx/getSiapInfo?&FORMAT=image/fits&BANDPASS=g& (SIAP)  
https://heasarc.gsfc.nasa.gov/xamin/vo/tap (TAP)

URL:

DAL Type: Cone ▾ RA:  Dec:  SR:

Submit Reset

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VO Validation Statistics

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- OVAL, a 3rd party validator, to validate Registry services.

- Home page shows

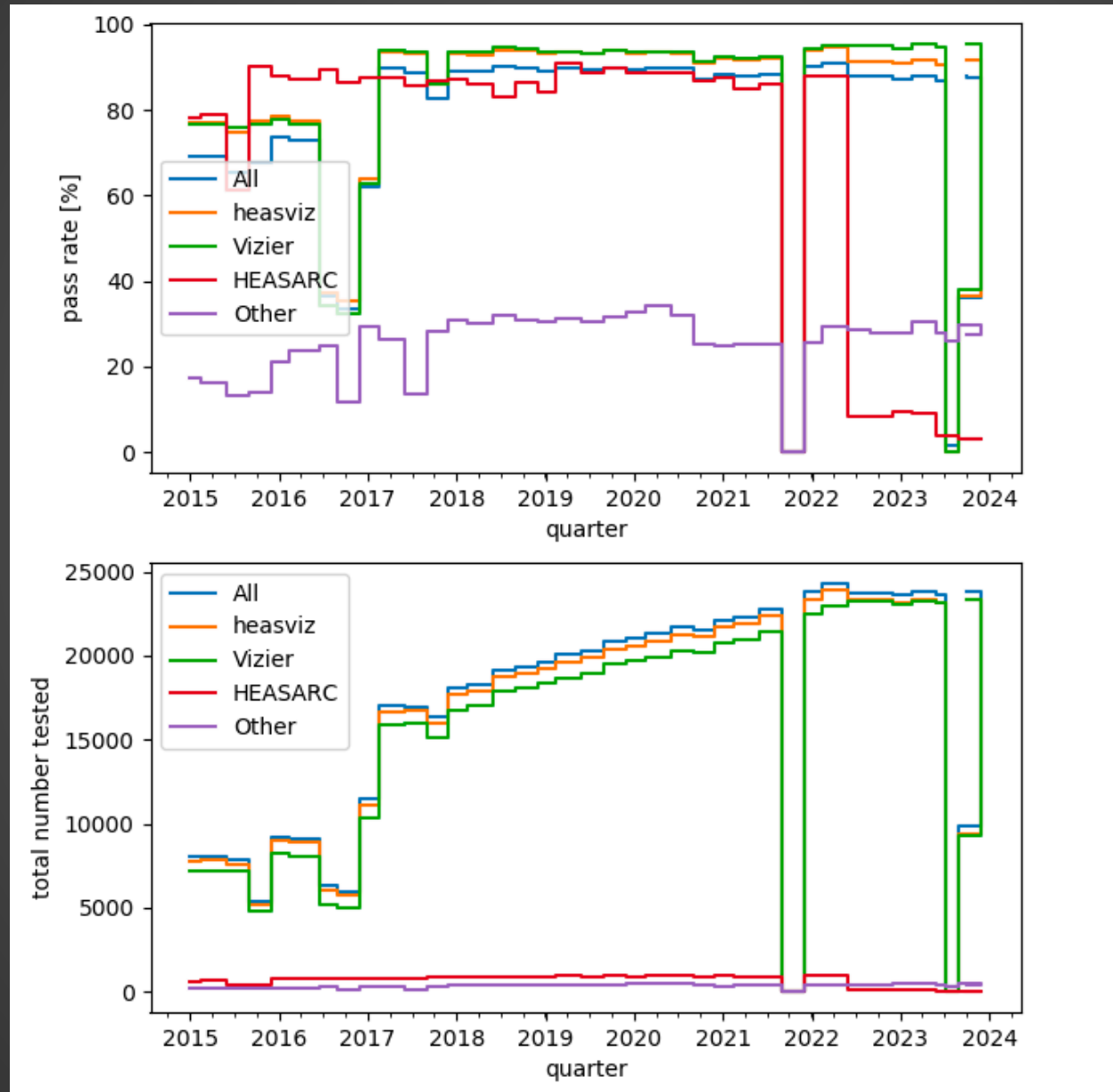
- the pass rate for the VO as a whole
- a search box so that users can get the current validation status of individual services at their site.
- buttons to see the validation results by 'center' or by 'type'
- a button is provided to validate the service in real-time

The screenshot shows the VO Validation Statistics web interface. At the top, there are four buttons: 'View Results By Center', 'View Results By Type', 'View Most Recent Test Results', and 'View Most Recent Test Stats'. Below these is a search prompt: 'Query by identifier or string. Any identifiers containing this string will be matched', followed by an empty search input box. A table displays validation statistics:

Last Validation Occurred	2023/11/08 04:19:06 ET
Next Scheduled Validation	2023/11/09 06:00:00 ET
Services Tested Daily	1000

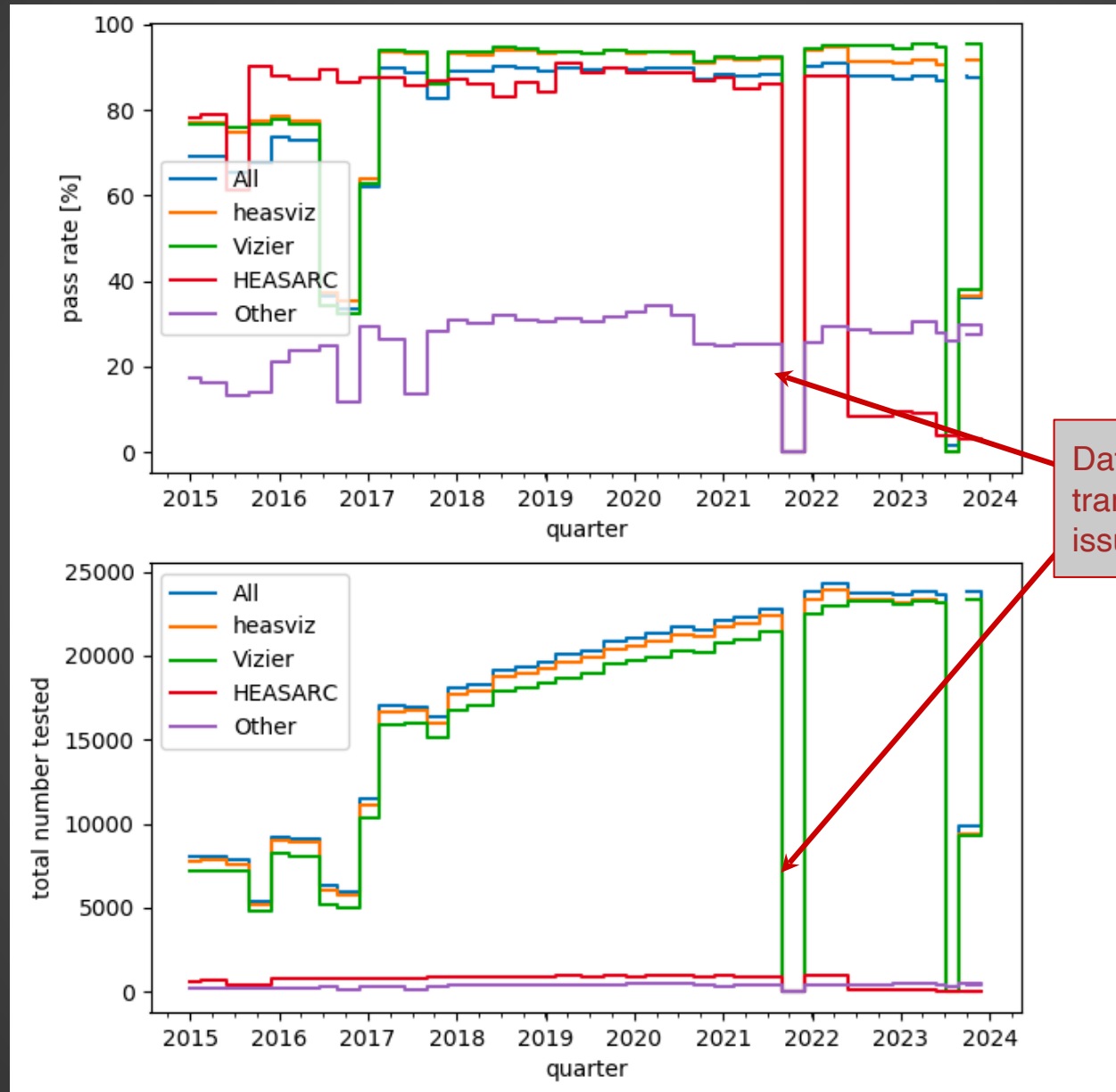
Below the table, a yellow box contains the text: 'Do you need to test a service URL? (Cone, SIA, SSA, and TAP services only)'. It lists examples of service URLs for Cone, SSA, SIAP, and TAP. Below this is a 'URL:' label followed by an input field. Further down, there are dropdown and input fields for 'DAL Type' (set to 'Cone'), 'RA' (0), 'Dec' (0), and 'SR' (.01). 'Submit' and 'Reset' buttons are located below these fields. At the bottom, a yellow box contains three footnotes explaining the origin of the validators. A red box highlights the 'VO Validation Statistics' link at the bottom right.

# Infrastructure Services: validation history



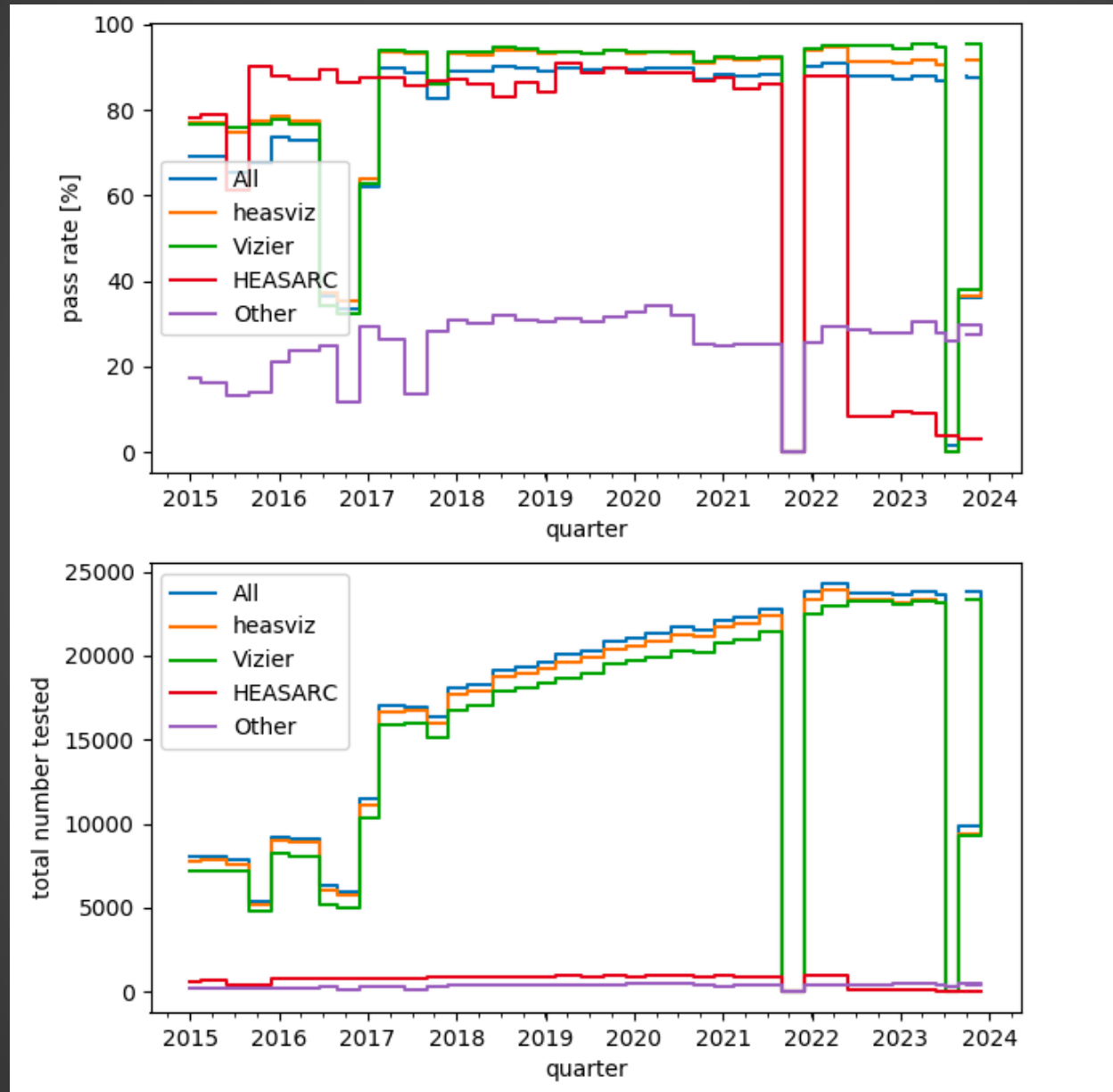


# Infrastructure Services: validation history

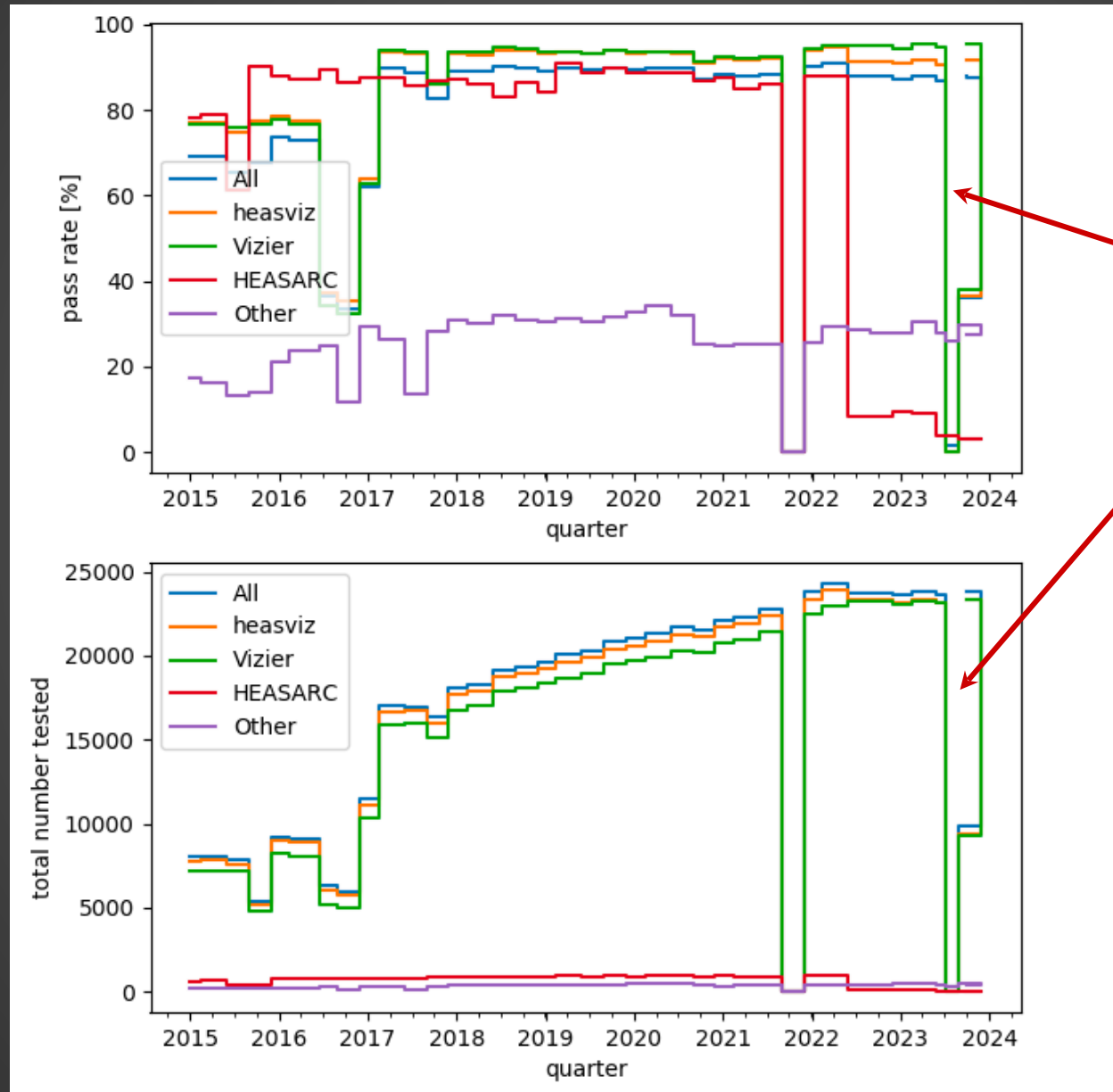


Database transition issue

# Infrastructure Services: validation history



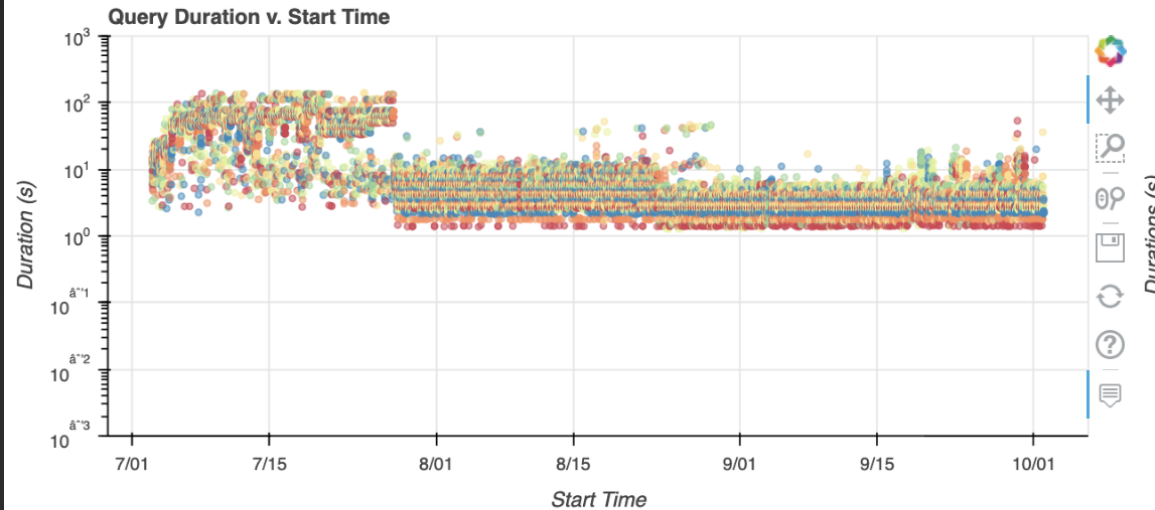
# Infrastructure Services: validation history



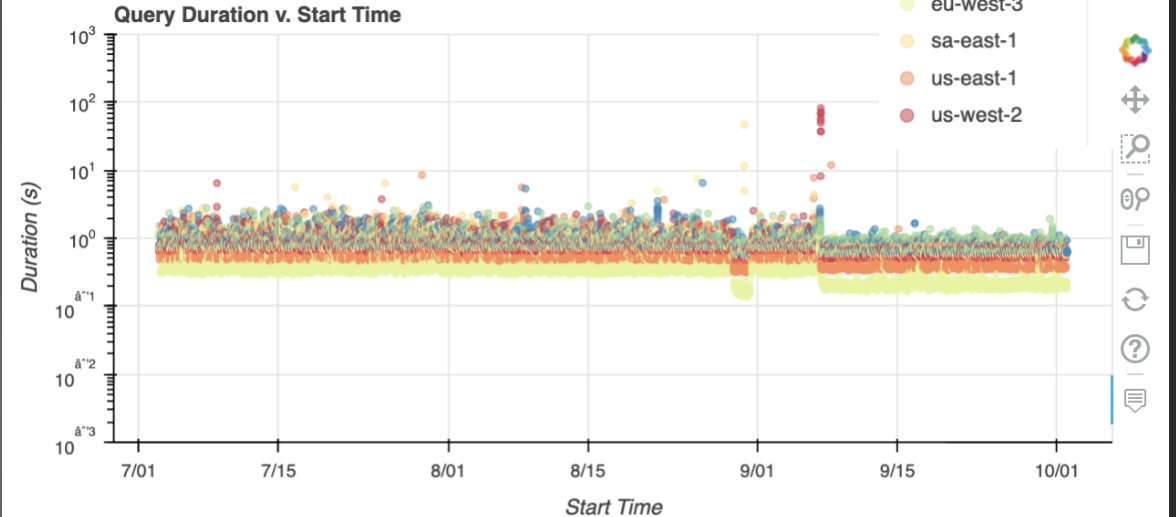
Registry communication issue

# Infrastructure Services: performance monitoring for NAVO

## IPAC\_2MASS tap



## CDS\_2MASS cone



- Can see effects such as service overloading (IPAC in July) followed by server configuration change to fix it.
- Has proved very useful for NAVO.
- Currently including one CDS service and one CXC service as well.
- (Tools by IRSA and MAST, deployed on AWS, web page hosted at HEASARC.)

# Resources

- NAVO site:
  - Home page: [https://heasarc.gsfc.nasa.gov/navo/summary/navo\\_intro.html](https://heasarc.gsfc.nasa.gov/navo/summary/navo_intro.html)
- Monitoring and Validation information under *Developers*
  - Uptiming monitoring: <https://heasarc.gsfc.nasa.gov/vo/monitor/bin/perl/vodb.pl>
  - Standards validation: <https://heasarc.gsfc.nasa.gov/vo/validation/bin/perl/index.html>
- Performance monitoring results:
  - Weekly performance data: <https://heasarc.gsfc.nasa.gov/vo/perfmon/weekly.html> (slow to load)
  - GitHub repo: <https://github.com/NASA-NAVO/servicemon>

Who is using this?