

# The NASA Astrophysics Data System: New Architecture and User Interface

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ADS Users Group Meeting  
January 17, 2017



# Overview

- Search
- Microservices
- API
- User Interface

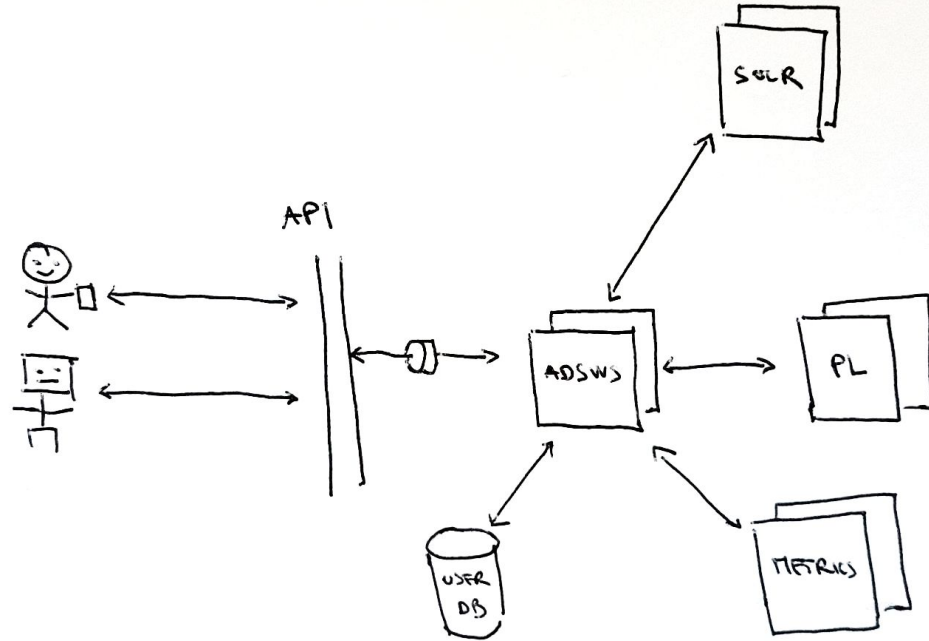
# Search

- Cornerstone of the new ADS services
- ADS Classic vs SOLR search
  - Size vs speed vs functionality
- Solved problems
- Un(re)solved challenges

# Microservices

- Architecture overview
  - Monolithic vs domain-oriented
  - Local vs distributed
- Challenges
  - Reliability (user expectations)
  - Complexity (cost)
- Future

# Microservices cont.



# API

- If it works everything is great, when it doesn't ...
- Industry standards
  - HTTP, JSON, OAuth (permissions/privileges)
- What we learned
  - #users
  - #requests
- What is more important?
  - User interface
  - New services (spinoffs)
  - Robots, crawlers

# User Interface

- Architecture and few why's
- Was it meant to be pretty?
  - We have to work hard to stay focused NOT on the picture
  - UX vs strictly functional
- Statistics/adoption
- Future opportunities

QUICK FIELD: Author First Author Abstract Year Fulltext All Search Terms

Advanced author:"girgis" [X] [Q]

Your search returned 666 results

sort: Date desc

AUTHORS

- Girgis, S 514
- Akchurin, N 510
- Alves, G 510
- Andreev, V 510
- Andreev, Y 510

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COLLECTIONS

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Show abstracts

1	2016PhRvD..94k2005K	2016/12			
Studies of inclusive four-jet production with two b-tagged jets in proton-proton collisions at 7 TeV					
Khachatryan, V.; Sirunyan, A. M.; Tumasyan, A. and 2255 more					
2	2016PhRvD..94k2004K	2016/12	cited: 2		
Search for long-lived charged particles in proton-proton collisions at $\sqrt{s}=13$ TeV					
Khachatryan, V.; Sirunyan, A. M.; Tumasyan, A. and 2260 more					
3	2016PhLB..763..280K	2016/12			
Measurement of the ZZ production cross section and $Z \rightarrow t\bar{t}t\bar{t}$ branching fraction in pp					

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Years Citations Reads

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# User Interface

- Architecture and few why's
- Was it meant to be pretty?
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Overview

Sessions vs. Select a metric

Hourly Day Week Month

Jan 10, 2016 - Jan 10, 2017: Sessions

Jan 8, 2015 - Jan 9, 2016: Sessions

10,000

5,000



April 2016

July 2016

October 2016

January 2017

Sessions

434.62%

264,423 vs 49,460

Users

360.75%

78,442 vs 17,025

Pageviews

480.08%

3,593,126 vs 619,421

Pages / Session

8.50%

13.59 vs 12.52

Avg. Session Duration

-17.43%

00:05:48 vs 00:07:02

Bounce Rate

-97.88%

0.20% vs 9.47%

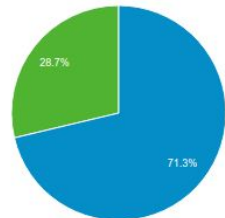
% New Sessions

-16.37%

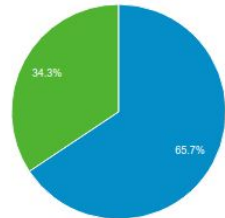
28.68% vs 34.29%

Returning Visitor New Visitor

Jan 10, 2016 - Jan 10, 2017



Jan 8, 2015 - Jan 9, 2016



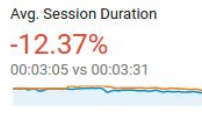
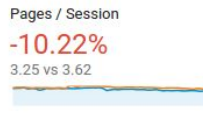
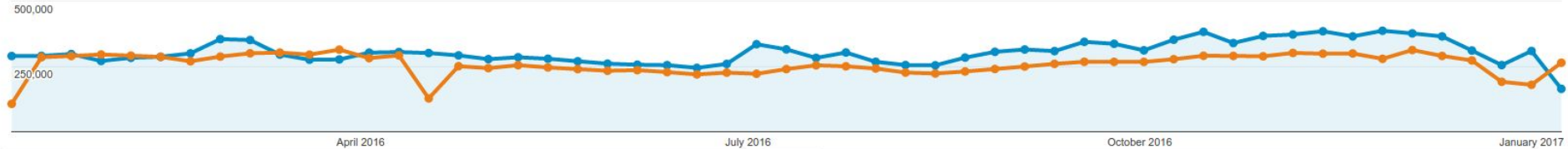
Overview

Sessions vs. Select a metric

Hourly Day Week Month

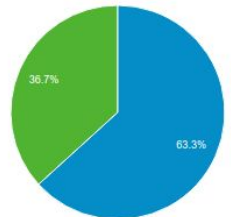
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