

DAST: SHIFTER PERSPECTIVE

ALDEN STRADLING

5 DECEMBER 2014



TIME SURE FLIES

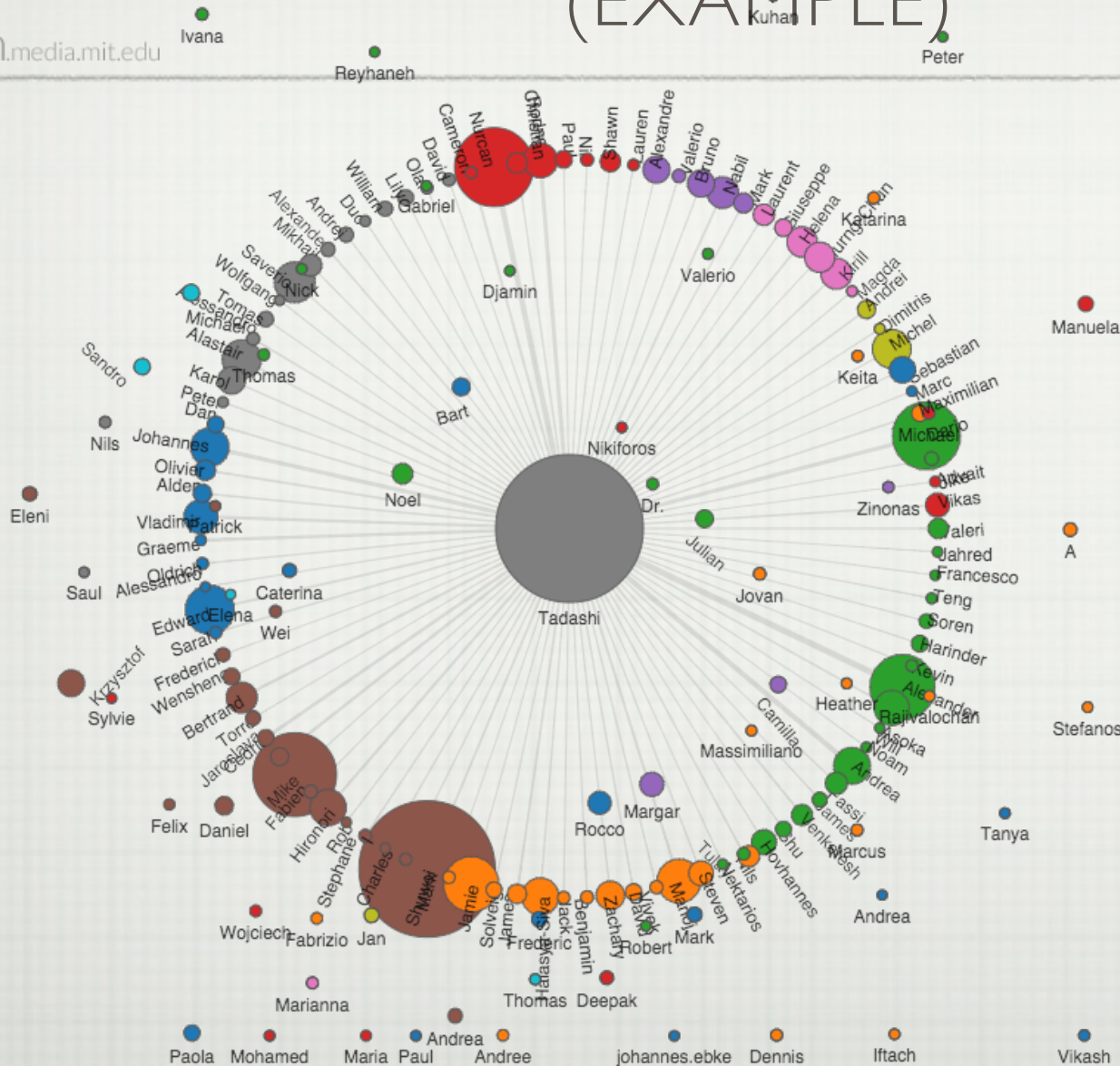
- Six years, as of September. I am now officially the longest-lived DAST shifter.
- There have been ~30 shifters during the 6+ years of DAST
- Lots of experience, lots and lots of mission-critical work
 - A salute to all these, my past and present comrades in arms
- Entering a new and **complicated** era
 - Run 2! In a couple of months!
 - DAST will be needed more than ever.
 - Prodsys 2
 - Rucio
 - BigPandaMon
 - JEDI

DAYS AND WAYS

- Bill has told you **HOW** a shifter functions.
 - My goal is to tell you **WHY**
- Developers work a lot better (we have found) when they can code
 - Coding and support are often difficult to do simultaneously
- A growing analysis community will generate growing traffic
 - The vast majority will be basic!
 - Answering the same question over... and over... and over...
 - A large segment of the subtle problems will be peripheral
 - The failure came from the site or the middleware, etc
 - The remainder will be actual bugs for the developer!
- DAST protects the Developers and Serves the Users (sounds like TRON)

BOTHERING DEVELOPERS (EXAMPLE)

immersion.media.mit.edu



Tadashi Maeno

First email: 6.1 years ago

Last email: 26.1 minutes ago

Sent (private): 596 (48)

Received (private): 907 (34)

Interaction volume

The bar chart displays the interaction volume over time, with the x-axis labeled from Oct 08 to Oct 13. The y-axis represents the number of interactions, ranging from 0 to 80. The chart shows a relatively low and steady volume of interactions until late 2012, followed by a significant spike in activity starting in early 2013, peaking at over 80 interactions in late October 2013.



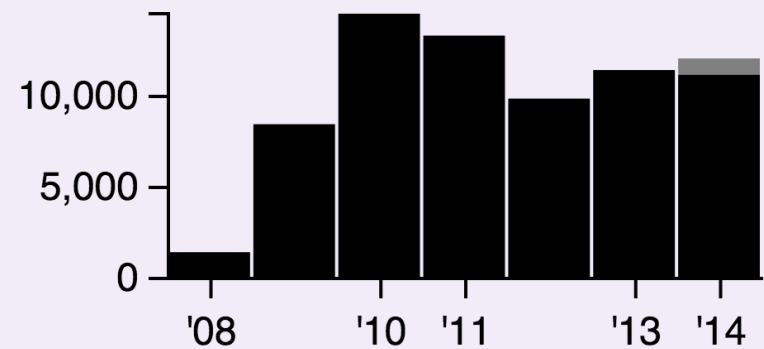
HOW HAVE THINGS CHANGED?

- Not that much!**
- Basic changes (refinements, really):
 - Less watching over sites and queues
 - No more clearing/answering Savannah tickets
- Same basic tools:
 - Gmail ticketing interface (since October 2008!)
 - Categories and coordination since 2010
 - PanDA monitor (now BigPandaMon)
- It's a stable, working system! (taken a bit for granted)
 - Given basic, adequate manpower**

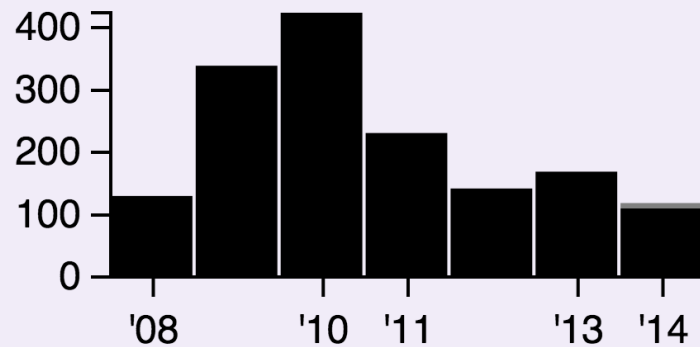
HOW MUCH TRAFFIC?

- From 1,032 users, we have exchanged 89,448 email since Oct. 2008 (more than 10,000 a year!)
- Steady average of a couple of relevant emails per working hour

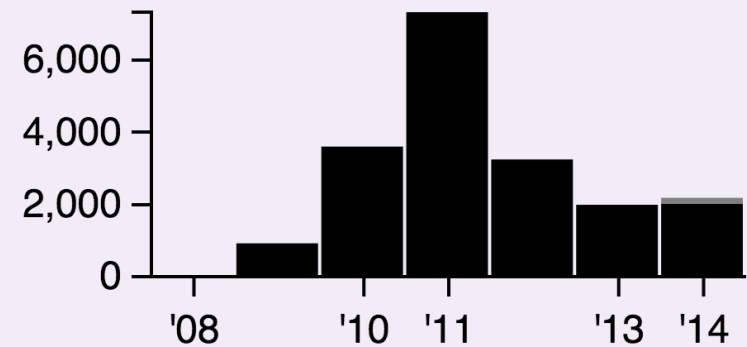
Emails Received



New Collaborators



Emails Sent



HOW DOES ACTUAL SHIFTER LOAD VARY?

- Subjective!
 - Beginner shifters are overwhelmed for the first couple of weeks
 - Receives additional support from coordinators and other shifters
 - More experienced shifters... depends on factors
 - Transitions happening?
 - Conference season/results?
 - Usually fairly easy...
 - Unless something major breaks
- Subtle bugs... handled by the developers and site admins
 - That's the real workload

WHAT'S IN IT FOR ME?

- OTP Credit!
 - For those that qualify, this is the cheapest OTP credit you can get, in travel, time and effort.
 - Most groups these days need at least a little more money and a lot more OTP (or vice-versa?)
- Training!
 - We take experienced analysis users and they become experts in Grid operation and analysis debugging. They see all the errors.
 - Interpersonal interactions and patience. (<https://twiki.cern.ch/twiki/bin/view/AtlasComputing/BeginningDASTShifterGuide>)
- Connections!
 - Let's illustrate that...

IT'S WHO YOU KNOW

- As you sort out the problems of analysis users, you build relationships with key players in Grid and offline software development and deployment.
- Your job is to learn who does what and pass appropriate problems to the person most able to deal with them!
 - So your interactions are frequent and helpful
- As you sort out the problems of members of the collaboration, you expand your sphere beyond the group
- You become a visible and public figure in the collaboration
 - If you are a good shifter, you will also accumulate a fair amount of goodwill
 - Exceptional shifters and circumstances have been recognized for their contributions

WHAT'S THE GROUP CULTURE?

- What kind of shifters do we strive to be?
 - We are **patient** (as Bill mentioned) — professional, genial and gentle.
 - We dig to the bottom of the problems
 - We work together to cover the needs of the collaboration, even when it's hard
 - We **teach each other** and **share information** as situations emerge
 - We have **short** and **useful** weekly meetings
 - We **absorb** and **dissipate** the frustration that accumulates when things are going wrong

USER INTERACTIONS

The screenshot shows a Gmail inbox interface. At the top, there's a navigation bar with the Google logo, a search bar, and the user's email address 'atlasdast@gmail.com'. Below this, a yellow notification banner states 'The conversation has been marked as unread. Undo'. The main area displays a list of 29 emails. Each email entry includes a checkbox, a star icon, the sender's name, a status tag (e.g., 'Assigned To/EU1'), category tags, a subject line, a snippet of the email body, and the time received. The left sidebar shows the 'COMPOSE' button and a list of folders including 'Inbox (3)', 'Important', 'Sent Mail', 'Drafts (1)', and 'Assigned To' with sub-folders like 'DDM', 'DQ2', 'EU Candidate', etc. The bottom of the page features a small 'ATLAS' logo on the left and 'UT ARLINGTON' on the right.

Sender	Status	Category	Subject	Time	
James .. Tadashi .. (29)	Assigned To/EU1	Category/DDM Category/Rucio	Status/ACTIVE Status/CLOSING pandatools broken for user dataset!	11:51 am	
Spamtalope			Example: What's wrong with my job? - I don't know why, but the Grid is broken! I hate you all! Sincerely, Inexperienced	11:33 am	
Tatyana, me (4), Draft	Assigned To/EU1	Category/DaTRI	Status/ACTIVE doSetup failed with JEDITemporaryError - The error from your job is: f	11:32 am	
Thomas .. Hannah .. (10)	Assigned To/PAT		JERTool gets wrong collision energy from Metadata - Hi Steve, thanks a lot for your detailed answer	11:29 am	
Benjamin Brunt (2)	Assigned To/PAT		Seg faults in StreamAOD - Hello again, I should probably clarify that the file being used is taken from m	1:04 am	
Dimitrii Krasnopevtsev	Status/ACTIVE		max walltime error - Dear support team I faced with the following problem today. I sent my job to grid seve	Dec 4	
Yuto, Attila (3)	Assigned To/PAT		get branch of my own class RootCore - Dear Attila, Thank you for your reply. On 12/04/2014 03:44 PM,	Dec 4	
Yanyan Gao	Assigned To/PAT		problem in 19.1.4.3 AtlasDerivation release - Hi, I am having some building problems in running jobs wit	Dec 4	
Joao, me (3)	Assigned To/EU1	Category/JEDI Question	Status/ACTIVE stuck in registered? - good! Thanks! Joao. On 04/12/14 13:39, /	Dec 4	
J .. Mario, Alden (11)	Assigned To/DQ2	Status/ACTIVE	Recent dataset not found by dq2-ls/dq2-get - Indeed. JEDI creates datasets for each fil	Dec 4	
Javier, me (2)	Assigned To/EU1	Status/ACTIVE	Data Jobs - Hi Javier Please provide a link to the task in the PANDA monitor. It would b	Dec 4	
Michael, me (2)	Assigned To/EU1	Escalated .../Panda Expert	Status/ACTIVE Job stuck at 69% for 3 days - Hi Michael I am a bit puzzled by	Dec 4	
Christopher .. Laurent (8)	Assigned To/EU1	Categ.../User code problem	Status/ACTIVE Jobs in failed state even though log files look OK - Thanks fc	Dec 4	
Adam .. Alden, Zachary (9)	Assigned To/DQ2	Assigned To/EU1	Category/Rucio	Status/ACTIVE rucio problem - Hi, I'd also like to point out that it'd be	Dec 4
Francesco, me (3)	Assigned To/EU1	Category/JEDI Question	Status/ACTIVE pending job - Hi Mattias, thanks for the explanation! Anyhow the	Dec 4	
Andrea, me, Ilya (6)	Assigned To/NA1	Category/Site Problem	Escalated .../Site Manager	Status/ACTIVE RRC-KI-T1 site blacklisted - Hello Ilya,	Dec 4
Chao, me (2)	Assigned To/EU1	Status/ACTIVE	unknown crash on grid - Hi Chao. This task was scheduled to run at ANALY_TAIWAN_J	Dec 4	
Christian, me (6)	Assigned To/NA1	Category/DDM	Category/JEDI Brokerage	Status/ACTIVE Duplicated output - Hi Wensheng, Using the dc	Dec 4
Maarten, Andy (2)	Assigned To/SW	Status/ACTIVE	Incrementing EventNumber in Generate_trf with pathena? - On 03/12/14 17:44, Maarten	Dec 3	
Lily, me, Lily (4)	Assigned To/EU1	Escalated .../Panda Expert	Status/ACTIVE Intriguing and mysterious new pathena build errors - Hi Pand:	Dec 3	
Priscilla, me (2)	Assigned To/NA1	Status/ACTIVE	Status check failed at ANALY_GRIF-LAL, aborted jobs - Hi Priscilla, There were five ga	Dec 3	
Karol, me (3)	Assigned To/NA1	Category/DDM	Status/ACTIVE The requested URL /dq2/ws_dq2/rpc was not found on this server. - It s	Dec 3	
Valerio, me (3)	Assigned To/EU1	Category/XRootD	Status/ACTIVE help with job crash - Hi Mathias, thanks a lot for the tipp. According to	Dec 3	

USER INTERACTIONS

The screenshot shows a Gmail interface in a browser window. The address bar displays the URL <https://mail.google.com/mail/u/0/#search/spa/14a1a02dd9598482>. The search bar contains the text "spa". The email being viewed is titled "Example: What's wrong with my job?" and is from "Spamtalope <spamtalope@gmail.com>" sent at 11:33 AM (15 minutes ago). The email body contains the text: "I don't know why, but the Grid is broken! I hate you all! Sincerely, Inexperienced Grid user". The left sidebar shows the "COMPOSE" button and a list of folders including "Inbox (2)", "Important", "Sent Mail", "Drafts (1)", and "All Mail". Below these are "Assigned To" categories with checkboxes. At the bottom of the sidebar, there is a notification: "You are invisible. Go visible" and a "Search people..." field with a list of names including Daniel Hayden, Dominick Olivito, Fabrizio Salvatore, Josh Kunkle, Matthew Jackson, Noam Tal Hod, Simon Head, and Yasuyuki Okumura. The right sidebar shows a "Spamtalope" profile card with a "Join Google+" button and a "Show details" link. At the bottom of the email view, there is a storage status "1.13 GB (7%) of 15 GB used", a copyright notice "©2014 Google - Terms & Privacy", and an account activity notice "Last account activity: 0 minutes ago".

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USER INTERACTIONS

Example: What's wrong with my job? Assigned To/NA1 Category/User setup Status/WAITING

Spamtalope <spamtalope@gmail.com> 11:33 AM (15 minutes ago)

to me

I don't know why, but the Grid is broken!

I hate you all!

Sincerely,
Inexperienced Grid user

Atlas DAST <atlasdast@gmail.com> 11:50 AM (0 minutes ago)

to Spamtalope

Dear user,

I'm sympathetic.

To help you, I'll need some more information. Do you have a link to a failing job? What was the command you issued?

Please see the submission guidelines linked below for further information.

Cheers,
Alden

Click here to [Reply](#) or [Forward](#)

DEMO



SUMMARY

- DAST is a core part of the analysis effort and protects the development effort as well
- DAST shifters gain valuable technical knowledge and networking, and materially benefit their home groups **cost-effectively**
- DAST shifts are manageable, efficient, and optimized
- DAST needs semi-experienced grad students and beginning postdocs **immediately**
- Email us ASAP and you can start getting credit ASAP.
- Training time depends on experience and expertise
 - Customized and optimized