

DAST News and User Feedback

Nurcan Ozturk

University of Texas at Arlington

ATLAS Software and Computing Workshop

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Outline



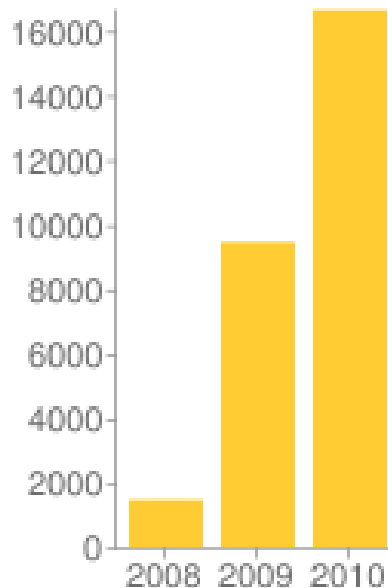
- Some statistics on the usage of DAST help list
- Manpower and shift coverage in OTP
- User feedback and ten most posted question types
- Examples of common problems
- Issues with user file access pattern
- Summary and looking ahead

Some statistics – Usage in DAST help list (1)

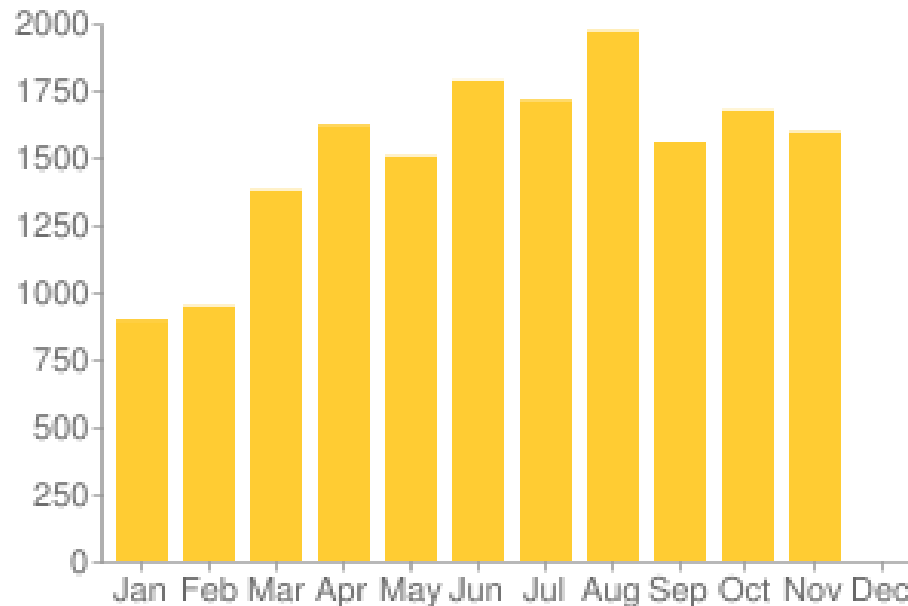


Based on 5979 threads (27567 messages) between October 27 2008 and November 29 2010.

Year



Month by month for



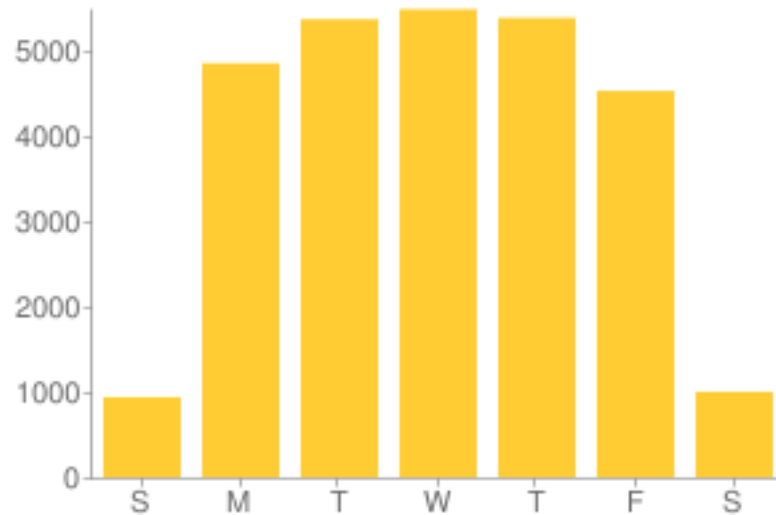
- DAST help list became even more active in 2010 (as expected).
- Usage keeps up after data taking.

Some statistics – Usage in DAST help list (2)

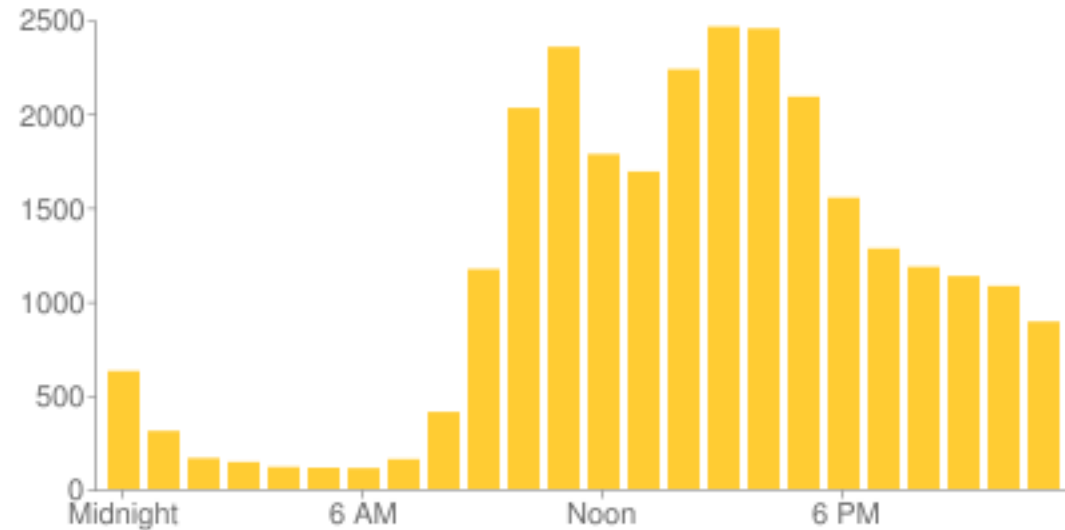


Based on 5979 threads (27567 messages) between October 27 2008 and November 29 2010.

Day of week



Time of day



- Weekdays are more active.
- Activity picks up in European time zone, then gradually decreases in American time zone.

Some statistics – Usage in DAST help list (3)



List distribution for 2010

Top lists

Top 10

List	Msg. Count	Total Size
hn-atlas-dist-analysis-help.cern.ch	12500	127.42M
hn-atlas-ddmoperations.cern.ch	1324	9.37M
hn-atlas-offlineswhelp.cern.ch	1239	14.21M
atlas-project-adc-operations- analysis-shifts.cern.ch	849	4.56M
atlas-dq2-support.cern.ch	244	2.61M
hn-atlas-physicsmetadata.cern.ch	134	4.02M
hn-atlas-pathelp.cern.ch	44	491.25K
hn-atlas-panda-pathena.cern.ch	21	155.06K
hn-atlas-dbops.cern.ch	5	53.36K
hn-atlas- releasekitproblem.cern.ch	1	7.51K

- DAST receives messages from other e-groups too (subscribed to these e-groups to be able to post to them to escalate issues). DAST mainly responds to the first two in the list above.

DAST shift organization in OTP



- DAST shifts are **Class-2 shifts (off-site)**
- Three time zones:
 - European, 8-16 hours
 - American, 16-24 hours
 - Asia-Pacific, 0-8 hours
- Three level of shifts in each time zone:
 - 1st level, trained shifter, shift credit 100%, 7days/week
 - 2nd level, expert shifter, shift credit 50%, 7days/week
 - Trainee level, trainee shifter, shift credit 50%, 7 days/week
- Shift organization, credit 25%
- **Note: Currently no shifts in Asia-Pacific time zones and no weekend shifts. Some shifters respond during weekend. No complains from users on response time.**

Manpower



EU time zone

NA time zone

AP time zone

-
Daniel van der Ster

Mark Slater

Hurng-Chun Lee

Bjorn Samset

Christian Kummer

Maria Shiyakova

Jaroslava Schovancova

Manoj Jha

Elena Oliver Garcia

Karl Harrison

Frederic Brochu

Daniel Geerts

Carl Gwilliam

Mohamed Goughri

Borge Gjelsten

Katarina Pajchel

Eric Lancon, **Mattias Ellert**

Nurcan Ozturk (now in EU time zone)

Alden Stradling

Sergey Panitkin

Bill Edson

Wensheng Deng

Shuwei Ye

Nils Krumnack

Woo Chun Park

Jack Crashaw

Venkat Kaushik

Kamile Yagci

Jake Searcy

Akira Shibata

no coverage

DAST is a small team.
Difficult to find experienced
people to join DAST.

blue: previous member

red: trainee

green: candidate

Shift coverage in OTP – 1st level shifter



- Shifter (DAST 1st Level Shifter) ❌

Title +

Recognition ▾

Capped At 8h

Shift Format ▾

Percentage (Set the percentage to 0% to remove shifts)

Add Shift

From	To	Description
❌ 8 ▾	16 ▾	European shift
❌ 16 ▾	24 ▾	American shift
❌ 0 ▾	8 ▾	Asia Pacific shift

Aug 10 ▾ 4 ▾

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aug 10	8-16 European shift	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
	16-24 American shift	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
	0-8 Asia Pacific...	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Sep 10	8-16 European shift	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
	16-24 American shift	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
	0-8 Asia Pacific...	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Oct 10	8-16 European shift	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
	16-24 American shift	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
	0-8 Asia Pacific...	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
Nov 10	8-16 European shift	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
	16-24 American shift	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		
	0-8 Asia Pacific...	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		

Good 1st level shift coverage (in EU and NA time zones during weekdays).

Shift coverage in OTP – 2nd level shifter



Title

Recognition

Capped At 8h

Shift Format

Percentage (Set the percentage to 0% to remove shifts)

Add Shift

From	To	Description
<input type="text" value="8"/>	<input type="text" value="16"/>	European shift
<input type="text" value="16"/>	<input type="text" value="24"/>	American shift
<input type="text" value="0"/>	<input type="text" value="8"/>	Asia Pacific shift

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aug 10	8-16 European shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	16-24 American shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	0-8 Asia Pacific...	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
Sep 10	8-16 European shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	16-24 American shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	0-8 Asia Pacific...	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
Oct 10	8-16 European shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	16-24 American shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	0-8 Asia Pacific...	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
Nov 10	8-16 European shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	16-24 American shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	0-8 Asia Pacific...	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		

2nd level shifts are mostly covered, but not all.

Shift coverage in OTP – trainee shifter



- Shifter (DAST Trainee Shift) ✖

Title +

Recognition

Capped At 8h

Shift Format

Percentage (Set the percentage to 0% to remove shifts)

Add Shift

From	To	Description
✖ 8	16	European shift
✖ 16	24	American shift
✖ 0	8	Asia Pacific shift

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aug 10	8-16 European shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	16-24 American shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	
	0-8 Asia Pacific...	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
Sep 10	8-16 European shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	16-24 American shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	0-8 Asia Pacific...	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
Oct 10	8-16 European shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	16-24 American shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	0-8 Asia Pacific...	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
Nov 10	8-16 European shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	16-24 American shift	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		
	0-8 Asia Pacific...	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50		

We have had some trainees. Not at the level of needed.

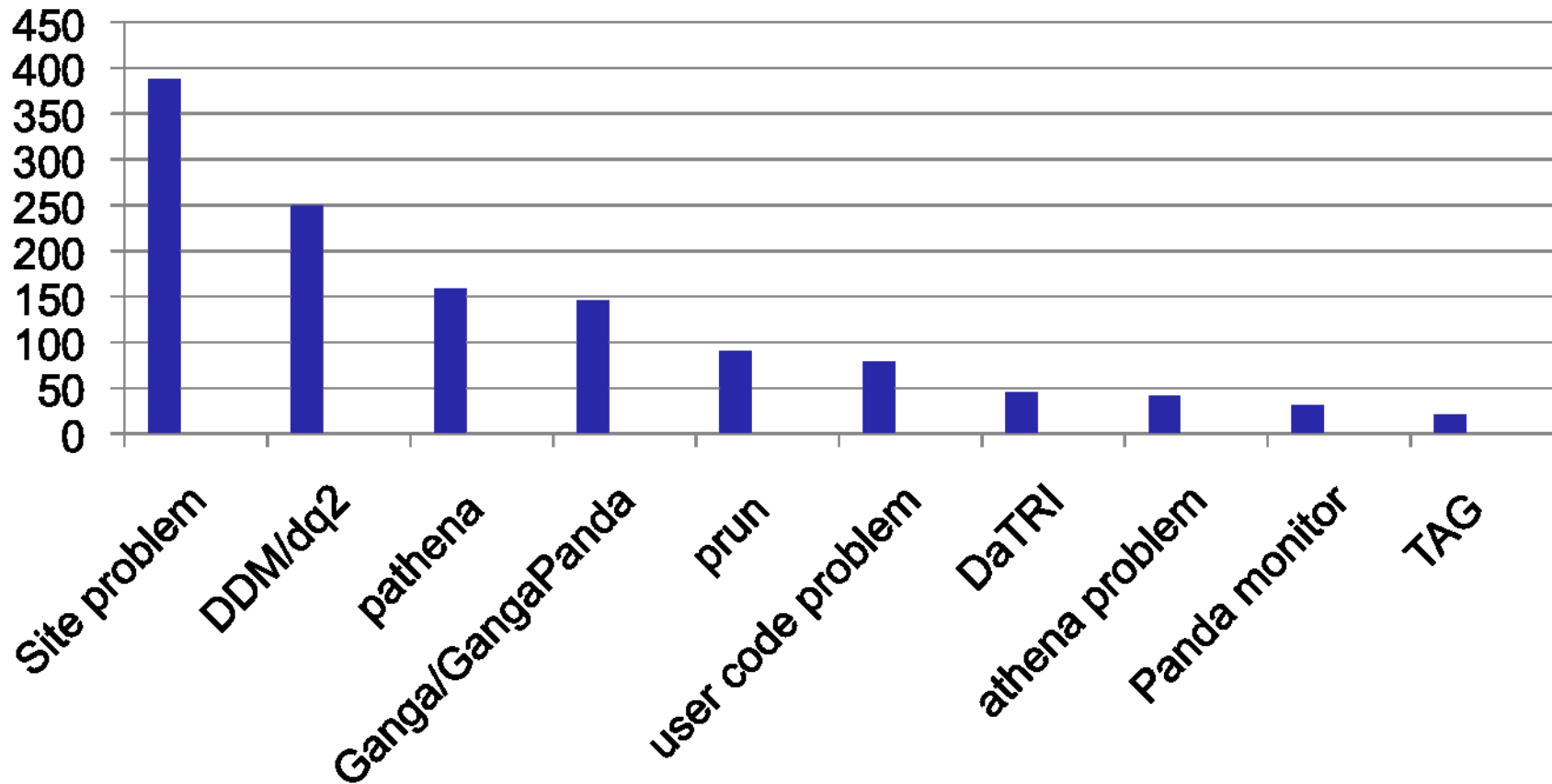
User feedback



Two comments from users in the help list this week:

- “The DAST support is really amazing! I'm impressed. Keep up the good work”
- “Firstly, running on the grid is great! I've managed to analyze about 110 million events in about a couple of days”

Breakdown of threads by question type- Ten most posted types



- Based on a random sample (after we started labelling threads).
- **Caveat:** Labelling threads is up to the shifter's judgement on the nature of the question. More than one label may have been used for the same thread, thus some double counting e.g. in "Site problem" category.

Examples of common problems (1)



- Site/release/cache issues:
 - Wrong updates concerning the analysis caches (for instance 15.6.13.1.1)
 - Broken AtlasLogin requirements at sites
 - Failed release installation processes
 - BDII consistency issues (BDII info used in job brokering)

- dq2-get problems
 - Grid cert problems for certain users at sites – not updated CA files
 - lcg_cp errors - retry works
 - Files are being staged to disks
 - Scheduled downtimes at sites
 - Load on storage systems

Examples of common problems (2)



- Data access problems:
 - Files with wrong checksums
 - SCRATCHDISK full (DAST receive an notification from DQ2 system now!)
 - Pilot errors with lsm-get failed: The pool hosts the input files was not available due to machine reboot
 - Site problems with not having the conditions data poolfile catalog up-to-date
- Stuck DaTRI replication requests
 - DDM team helps
 - Dataset not replicated to Tier1 of that Tier2 site. Problems at Tier1 get fixed
 - Output datasets not closed

Issues with user file access pattern



- User jobs splitted into many subjobs unnecessarily (seen at BNL mostly)
 - User complains about dq2-get taking a long time to download files
 - Sites are cautious about heavy load on storage servers
 - Looking at some such jobs at BNL:

user	gregor	mdavie	csandova	zmeng
jobsetID	2354	3909	639	3879
# subjobs	4999	2295	3884	1390
#input file/job	4 ESD	1 D3PD	1 ESD	1 ESD
average run time/job	3h	3' to 37'	13' to 3h	14' to 50'
average input file size	800 MB	200 MB (some 6 MB)	3 GB	3 GB
average output file size	60 KB	300-900 KB	200 MB	130 MB

Summary and Looking Ahead



- DA system is running well, proven to be a reliable system during heavy analysis periods (e.g. summer conferences).
- Users are happy with the support from DAST. Thanks to all involved.
- User feedback reported in the DA forum is extremely useful to debug DA issues.
- **In future for DAST:**
 - Improve documentation related to DA support (specially FAQ's).
 - Finding experienced people who can join DAST continues to be a challenging task. Need some new ideas here.
- **Hot topics being discussed with DA developers for better analysis job performances:**
 - Providing better data availability at sites (improvements with PD2P).
 - Eliminating site problems from user analysis (an auto-exclusion service in place).
 - Achieving better site/storage performances (data access issues).