

Status of FAMoS

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Outline

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- ❖ *Source of information of FAMoS*
- ❖ *FAMoS database*
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- ❖ *Several statistics provided by FAMoS*
- ❖ *FAMoS as discoverer of accesses to nonexistent files.*
- ❖ *FAMoS performance on different flavors of Linux*

File Access Monitoring Service -FAMoS

FAMoS is to monitor the following attributes of the accesses to the files.

Attribute	Description
File name	The <i>LFN</i> of the file
SE name	Name of SE from where the file was accessed
User name	Name of user by whom the file was accessed
Access Time	Time and date when the file was accessed
Access result	Successful, failed

The monitoring of the accesses to the files are performed not only on the level of the files themselves, but also on the level of their (meaningful) combinations: **Categories**, containing the same types of files.

<Period>_AOD

.../Period/.../ESDs/.../AOD*/...
.../Period/.../AliAOD*.root

<Period>_ESD

.../<Period>/.../ESDs/... (except AOD category)
.../<Period>/.../*ESD*.root
galice*.root
Kinematics*.root
pyxsec*.root
TrackRefs*.root

Access information is provided from the log files of AliEn **API** and **Authen** services.

Processed logs of API and Authen services

	2013									2014								
	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May				
<i>pcapiserv01</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
<i>pcapiserv02</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
<i>pcapiserv04</i>	+	+	+	+	+	+	+	+	+	-	-	-	-	-				
<i>pcapiserv05</i>	+	+	+	+	+	+	+	+	+	-	-	-	-	-				
<i>pcapiserv06</i>	<i>No information</i>											-	-	-				
<i>pcapiserv07</i>	+	+	+	+	+	+	+	+	+	-	-	-	-	-				
<i>pcapiserv09</i>	+	+	+	+	+	+	+	+	+	-	-	-	-	-				
<i>pcapiserv10</i>	+	+	+	+	+	+	+	+	+	-	-	-	-	-				
<i>pcapiserv11</i>	+	+	+	+	+	+	+	+	+	+	+	+	-	-				
<i>pcapiserv12</i>	+	+	+	+	+	+	+	+	+	+	+	+	+	+				
<i>aliendb1</i>	<i>No information (FAMoS was deployed on the Authen servers in the middle of August)</i>																	
<i>aliendb3</i>																		
<i>aliendb4</i>						+	+	+	+	-	-	-	-	-	-	-	-	-
<i>aliendb5</i>																		
<i>aliendb7</i>																		

FAMoS database

A MySQL database
“**accesses**”

- For permanent keeping of the information on the accesses (**~13 million per day**) to the *files* and *categories* in a daily granularity.

files = 747 MB

- Volume of the **1 day** information on the accesses to the

categories = 80 kB

- Volume of the **1 month** information on the accesses to the

files = 22.3 GB

categories = 2.4 MB

- Current volume of the database = **251 GB**

FAMoS web interface

FAMoS web Interface presents several types of statistics on the accesses to the categories in the form of bar charts and tables.

<http://aligrd6.yerphi.am/famos/>



Home » Categories

Categories

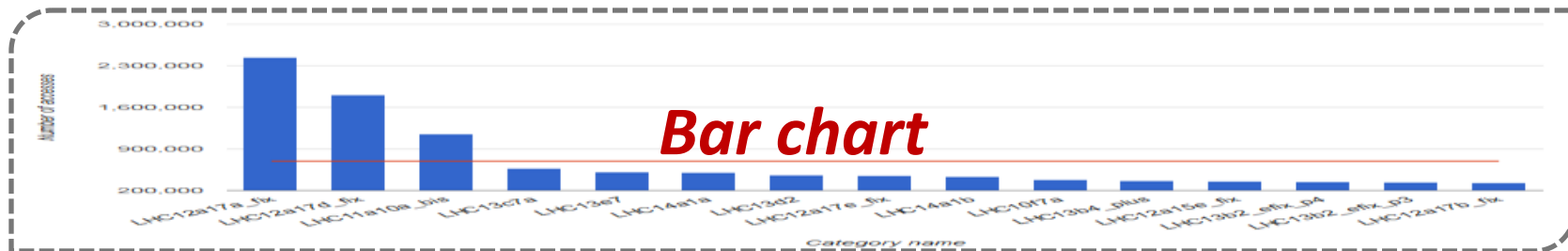
Monitoring time period: From: 2013-04-01 To: 2014-06-24

Username: aliproduct

Show: Most accessed Least accessed | Only ESDs Only AODs

Number of showed entries: 15

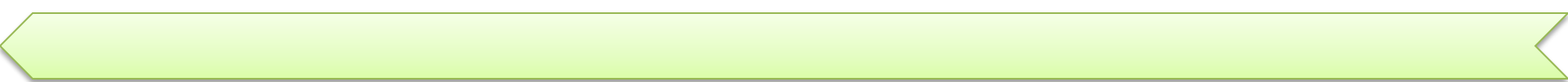
Show result



Detailed table

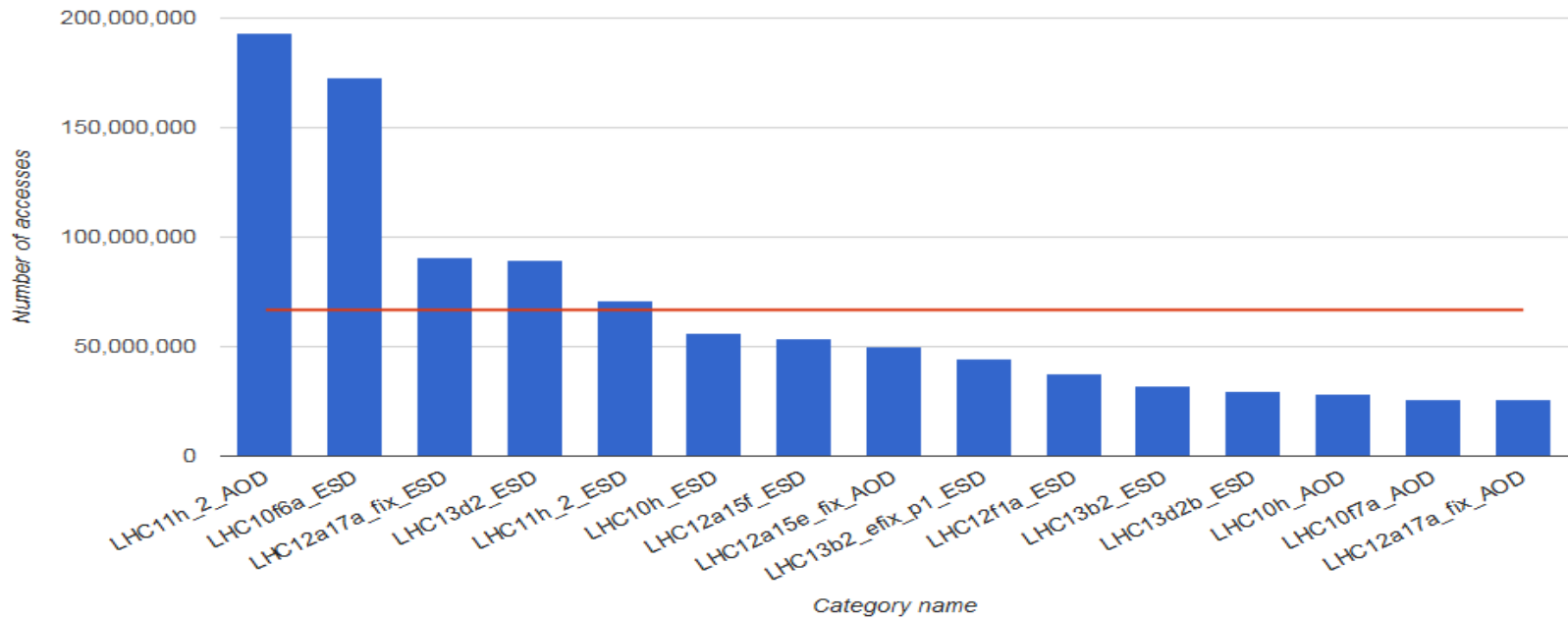
categoryName

	categoryName		nbAccesses
1	LHC12a17a_fix	6	2435517
2	LHC12a17d_fix		1810937

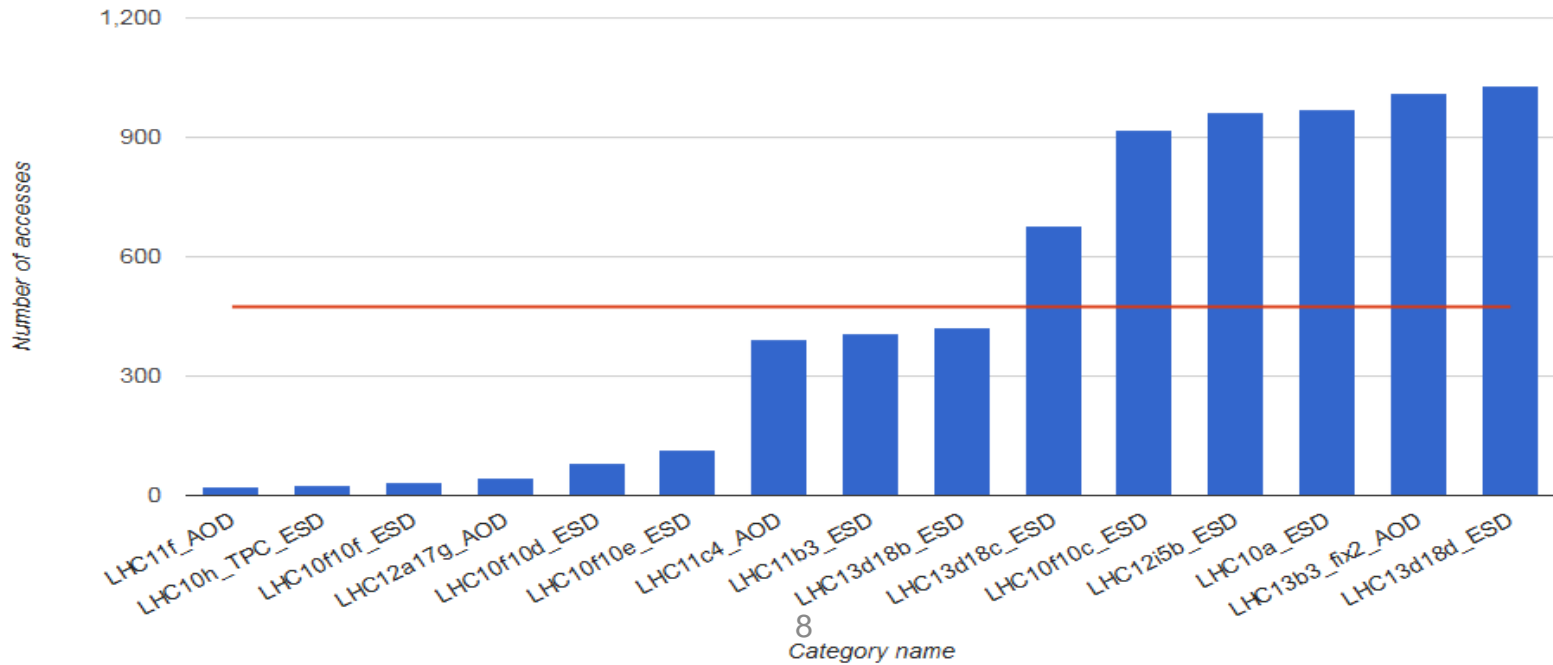


Several statistics provided by FAMoS

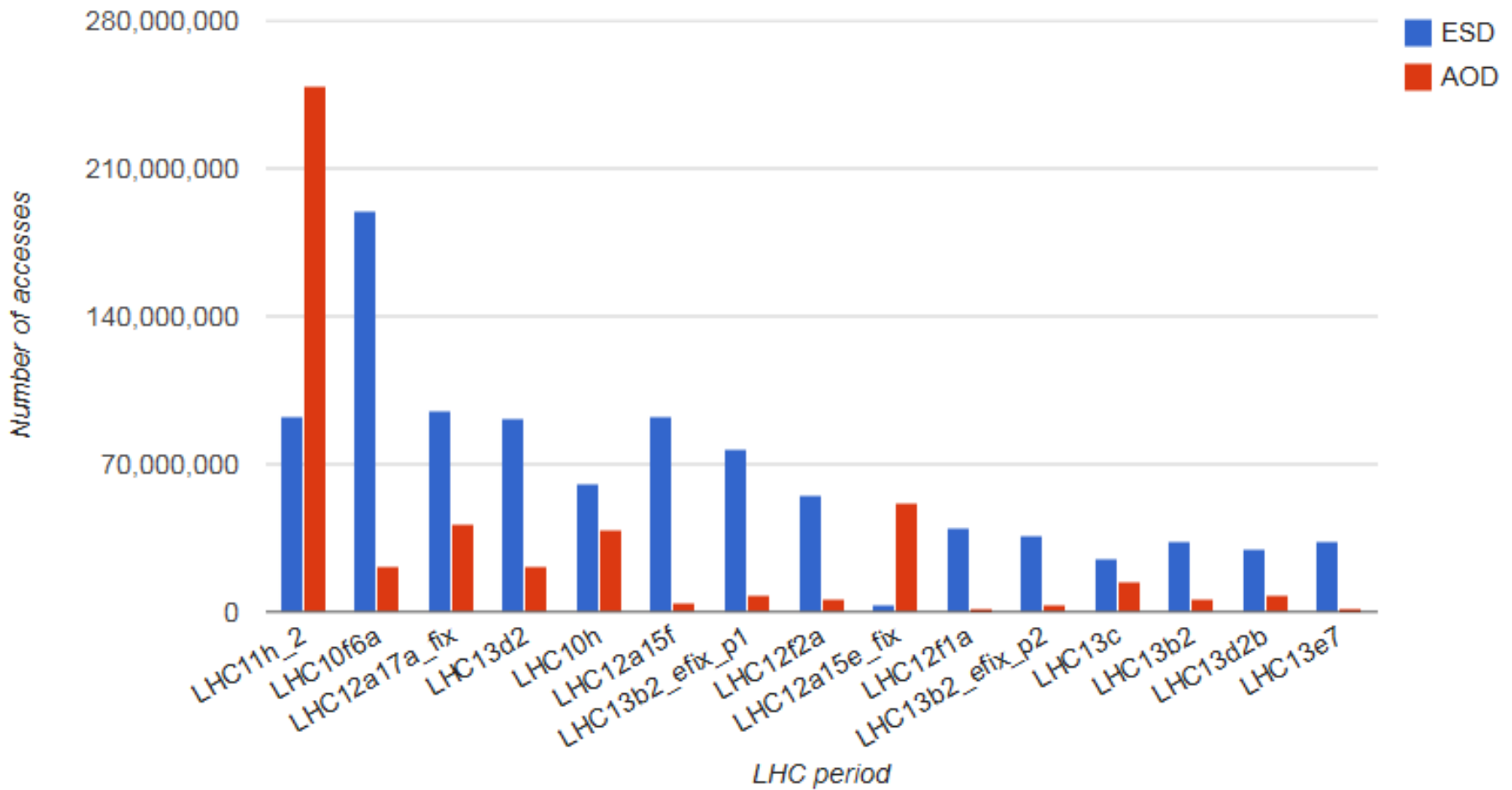
15 most accessed categories accessed during 2013-04-01 - 2013-12-31



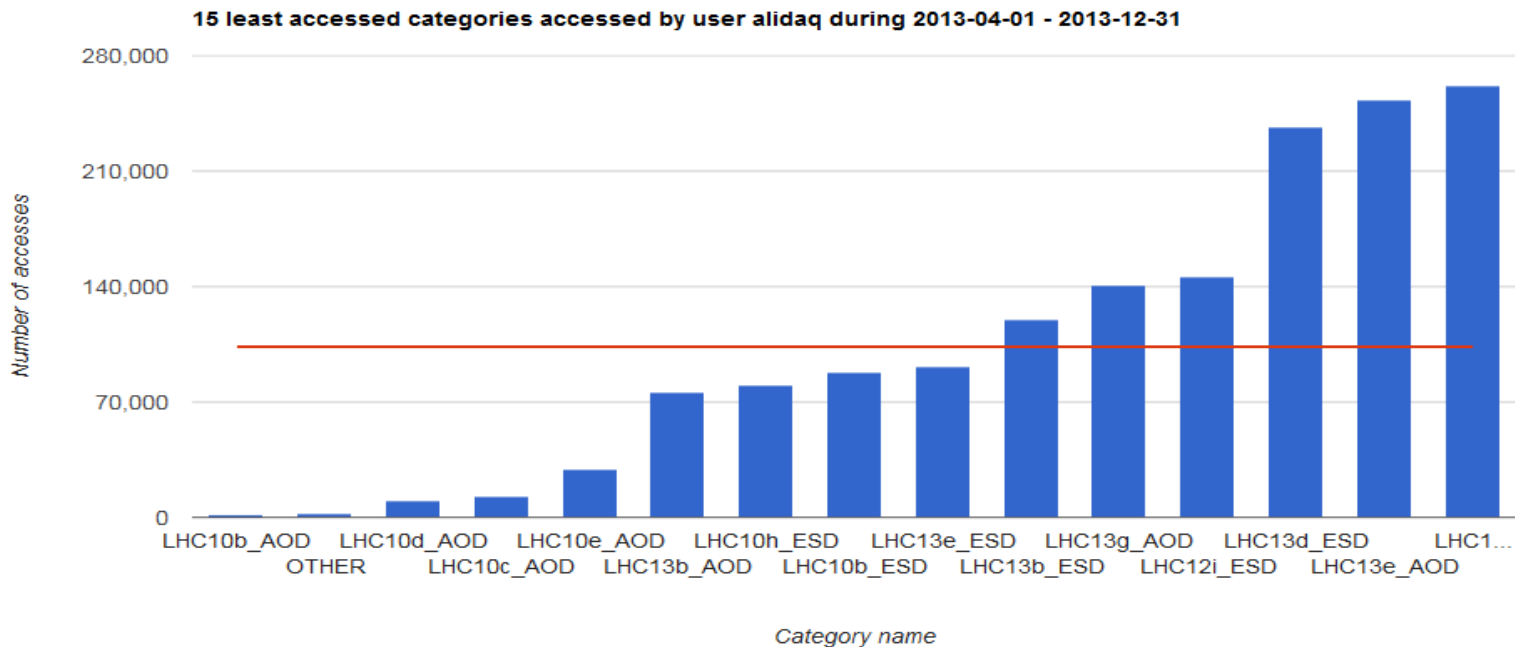
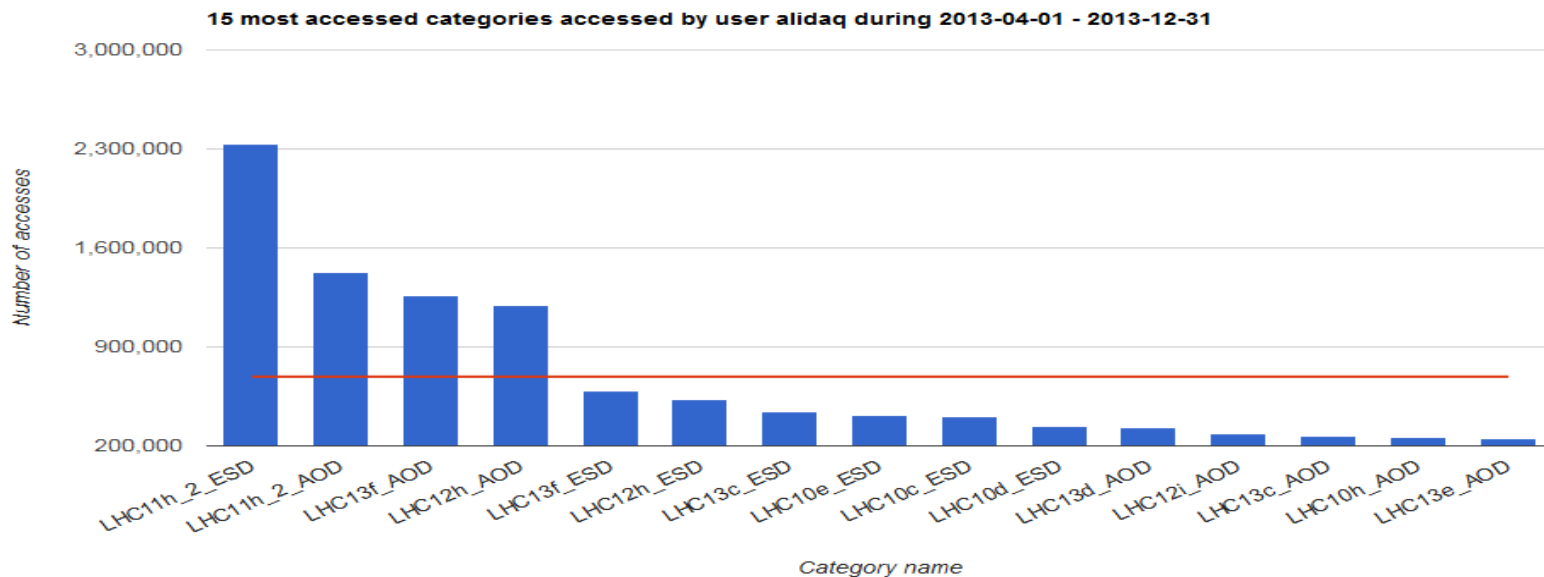
15 least accessed categories accessed during 2013-04-01 - 2013-12-31



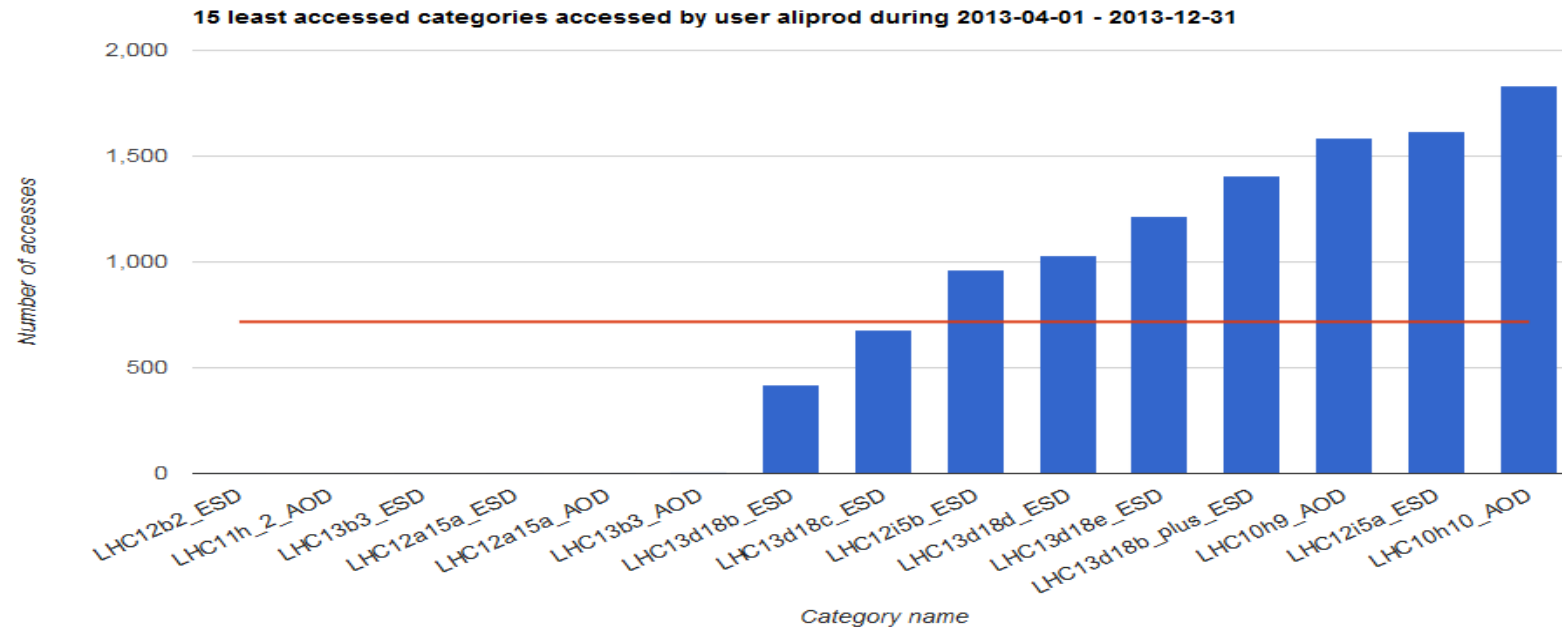
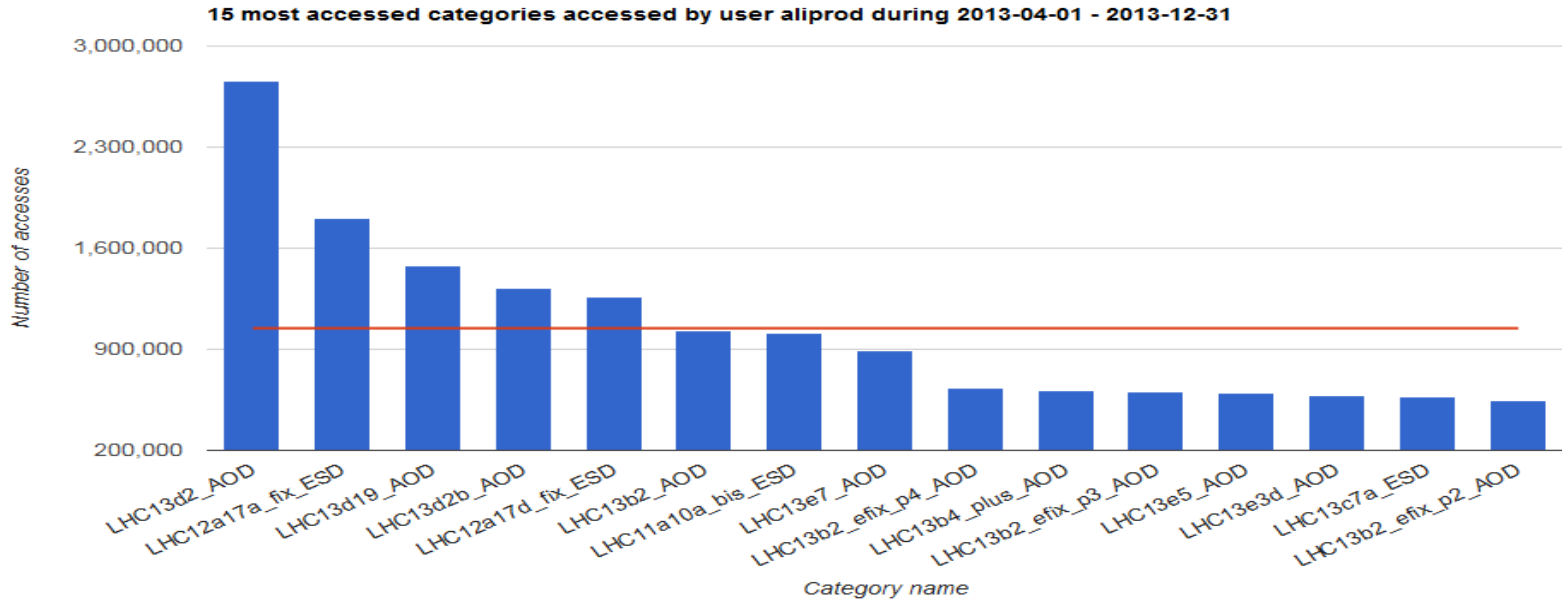
**15 most accessed periods whose ESDs and AODs were accessed during
2013-04-01 - 2014-06-24**



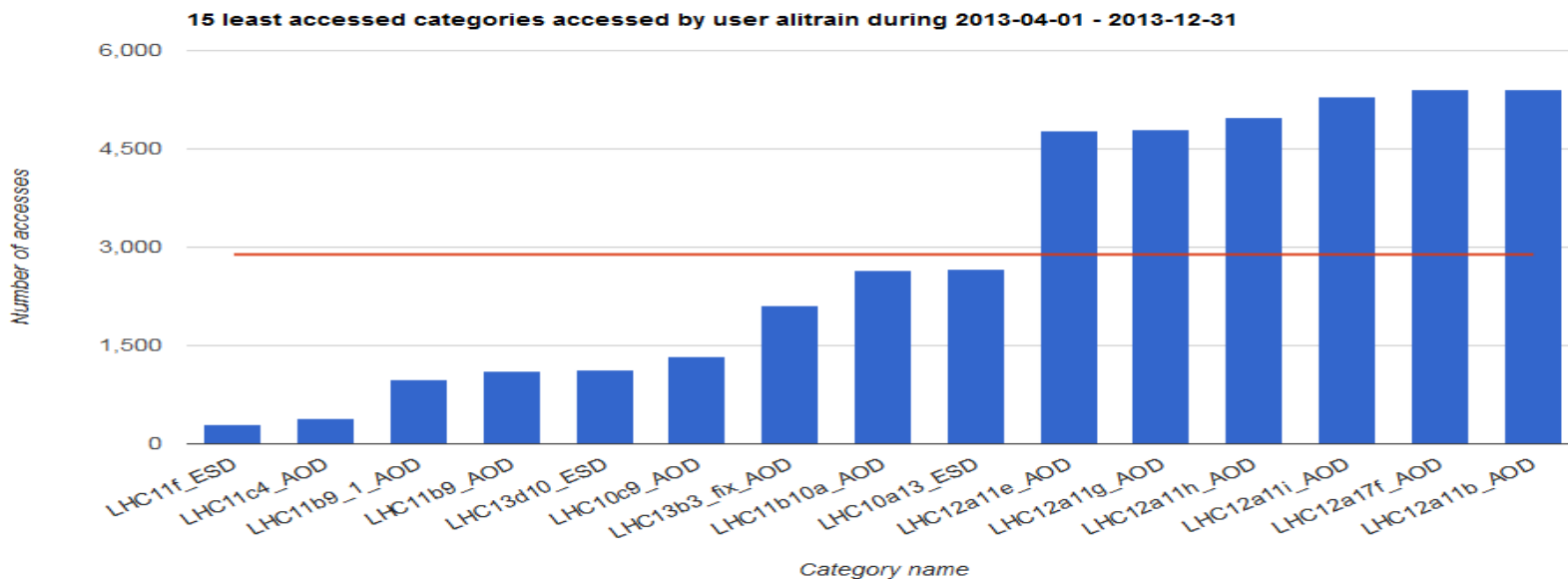
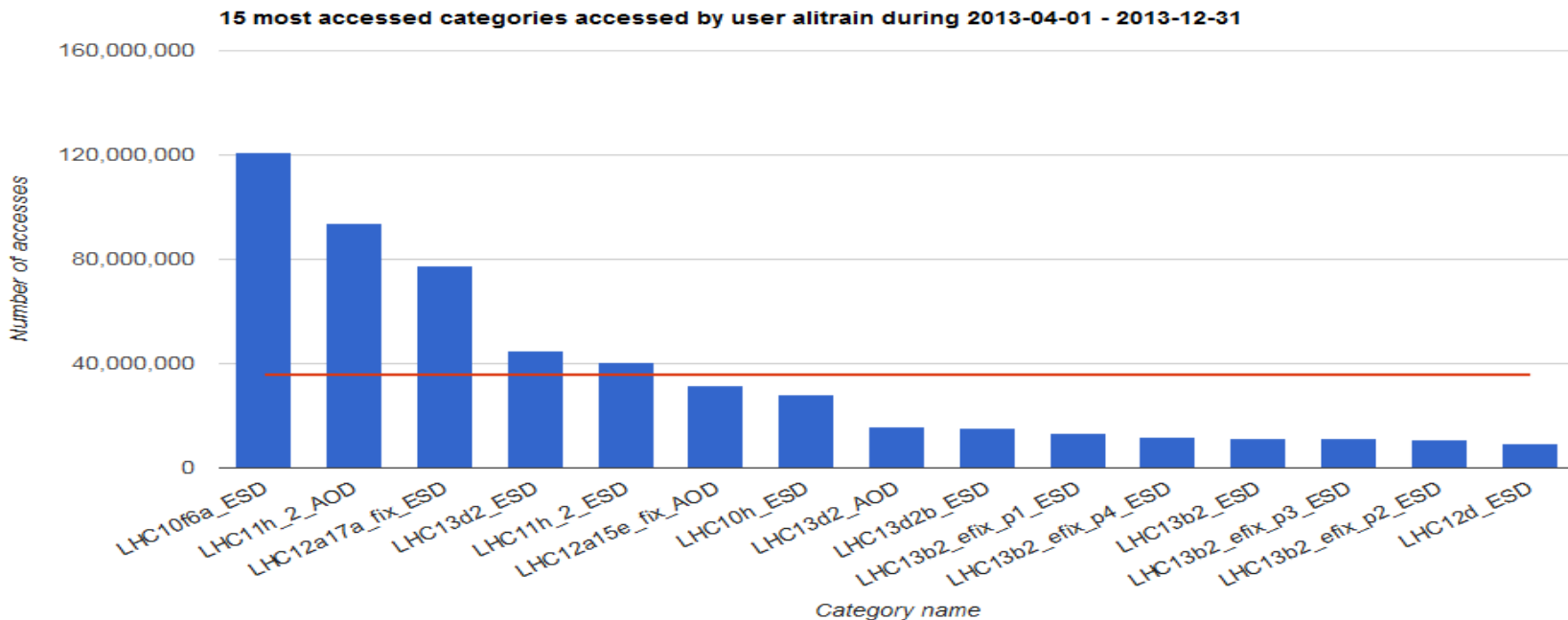
15 most accessed categories accessed by *alidaq* during April-Dec. of 2013



15 most accessed categories accessed by *alipro*d during April-Dec. of 2013



15 most accessed categories accessed by *alitrain* during April-Dec. of 2013



FAMoS as discoverer of accesses to nonexistent files

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pyxsec.root files

With FAMoS we have noticed very frequent accesses to the **pyxsec.root** files which generally were not exist in the catalogue.

examples:

/alice/sim/LHC10f6a/125097/1485/pyxsec.root (owner: aliproduct)

/alice/data/2010/LHC10d/000126082/ESDs/pass2/10000126082051.630/pyxsec.root (owner: alidaq)

.resubmit files

As described by Latchezar:

These files are part of an old attempt to keep track of job resubmissions and the intermediate results. Then it has been abandoned.

But, accesses to this files are still continuing...

there are accesses as to nonexistent as well as to existent *.resubmit* files.

examples:

/alice/data/2012/LHC12e/000186385/pass1/12000186385043.22/AlESDs.root.resubmit (exists)

/alice/data/2012/LHC12f/000186857/pass1/12000186857027.40/AlESDs.root.resubmit1 (does not exist)

Why there are attempts to access the files which does not exist in catalogue?

Performance on FAMoS on different Linux flavors

OS:	SLC 5.6 x86_64
RAM	4 GB
CPU	4 core 2.5 GHz
File System type	ext3

Processing of 180000 rows (INSERT operation of MySQL) takes ~27.22 seconds

FAMoS performance is extremely slow on the Debian/Ubuntu server

OS:	Debian 7.5
RAM	126 GB
CPU	32 core , 2.4 GHz
File System type	ext4

Processing of 180000 (INSERT operation of MySQL) rows takes ~1178.92 seconds

Why? (Other database, other OS)



Thanks

