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APEL Deployment

We are changing the accounting system used in our infrastructure, from DGAS to APEL and the procedure is quite simple.

Each resource centre needs to install a new node (the APEL Publisher) which receives the accounting information sent from the CE(s) by the APEL parser. Then the APEL publisher sends the data to the EGI central database using the messaging infrastructure.

In the past months we tested two scenarios:

- the accounting data are sent directly to the central databse (canonic installation)
- the accounting data are sent to FAUST and to the EGI central database

and we chose the second one

Registration

you need to register the APEL publisher in the GOC-DB: the service endpoint name to add is **glite-APEL** and fill in also the certificate subject information. Changes in GOCDB can take up to 4 hours to make it to the message brokers. this is necessary to authorize the publisher host in using the broker network. Do not touch the **APEL** service endpoint instead, otherwise nagios won't monitor the accounting data publication.

(for reference https://wiki.egi.eu/wiki/MAN09_Accounting_data_publishing)

APEL Publisher Installation and Configuration

Follow the EMI3 generic installation guide   and the APEL one
https://twiki.cern.ch/twiki/pub/EMI/EMI3APELClient/APEL_Publisher_System_Administrator_Guide.pdf

- Example of client.cfg
- Example of sender.cfg

Use the production queue of the broker network:

```
# Queue to which SSM will send messages (use this)
destination: /queue/global.accounting.cpu.central
```

and comment out or delete the testing one

Sending the data to FAUST

In order to send the accounting data also to FAUST, after installing and configuring the APEL Publisher as explained in the section above, follow the instructions https://github.com/andreaguarise/ssm-dupl-send

this mean that instead of apelclient script, **you have to use the ssm-dupl-send.sh one**.

Among the important paramaters to set in the faust-sender.cfg there are the following ones:

```
host: dgas-broker.to.infn.it
port: 61613

use_ssl: false
```

```
destination: apel.input
```

Create with mkdir the directory:

```
/var/spool/faust/outgoing
```

IMPORTANT: for Tier1 and Tier2 it will be used a dedicated queue:

```
destination: apel.<SITE-NAME>.input
```

For instance, in the case of INFN-PISA, into file faust-sender.cfg it will be set:

```
destination: apel.INFN-PISA.input
```

- Example of faust-sender.cfg

IMPORTANT: Run the FAUST script only after having launched the parser one on the CEs

- Example of the cron:

```
cat /etc/cron.d/ssm-dupl-send
# Run APEL client once daily
05 01 * * * root /root/bin/ssm-dupl-send.sh
```

APEL Parser Installation and Configuration

Install and configure the APEL parser on each computing element of your resource centre.

Follow the EMI3 generic installation guide   and the APEL one
https://twiki.cern.ch/twiki/pub/EMI/EMI3APELClient/APEL_Parsers_System_Administrator_Guide.pdf

- Here an example of parser.cfg file

IMPORTANT: Send the accounting data starting from September, because the previous ones have been already sent by DGAS to APEL, otherwise the will be overwritten causing some inconsistencies. Configure the parser accordingly to make process the proper files (or move the old logs in another directory).

you can launch the apelparser script after the setting-up of the apelclient database

an example of the cron:

```
cat /etc/cron.d/apelparser
# Run APEL parser once daily
04 22 * * * root /usr/bin/apelparser
```

NOTE: the empty logfiles produce a CRITICAL error in the parsing operation:

```
2014-09-12 11:02:08,683 - apel.common.exceptions - CRITICAL - Unhandled exception raised!
2014-09-12 11:02:08,683 - apel.common.exceptions - CRITICAL - Please send a bug report with follo
2014-09-12 11:02:08,684 - apel.common.exceptions - CRITICAL - UnboundLocalError: local variable '
2014-09-12 11:02:08,684 - apel.common.exceptions - CRITICAL - parse_file [/usr/bin/apelparser 139
2014-09-12 11:02:08,684 - apel.common.exceptions - CRITICAL - scan_dir in /usr/bin/apelparser [18
2014-09-12 11:02:08,684 - apel.common.exceptions - CRITICAL - handle_parsing in /usr/bin/apelpars
2014-09-12 11:02:08,684 - apel.common.exceptions - CRITICAL - main in /usr/bin/apelparser [380]
2014-09-12 11:02:08,684 - apel.common.exceptions - CRITICAL - ? in /usr/bin/apelparser [392]
```

so check for these empty files and delete them.

Bug in APEL 1.2.1 - Apply the EMI-3 update 20

The EMI-3 update 20 released a fix of the APEL software for a bug in the parser which prevents it from working in the most common cases: it is unable to open uncompressed accounting logs for parsing.

Sites with this problem will have version 1.2.1 installed and see many log messages like this:

```
2014-08-11 12:54:11,819 – parser – ERROR – Cannot open file
blahp.log-20140811: Not a gzipped file
```

in their parser log file - usually at /var/log/apel/parser.log.

Sites who have installed version 1.2.1 should upgrade to 1.2.2 immediately:
http://www.eu-emi.eu/releases/emi-3-monte-bianco/updates/-/asset_publisher/5Na8/content/update-20-12-09-2014-v-3

What about DGAS sensors?

Because the DGAS server problems occurred at the beginning of September, stop dgas sensors on your computing element(s).

Fast checks

When you launch the apelparser script for the first time, if there are no errors, it will be filled in the tables BlahdRecords e EventRecords (database "apelclient"), so check if they really contain the data.

Then with the execution of ssm-dupl-send.sh script on the publisher host, it will be done the join of those tables (filling in the JobRecords e VJobRecords ones), and the data will be sent to FAUST and to EGI, so you can perform the following check:

```
mysql> use apelclient

mysql> SELECT year(EndTime),Month(EndTime),InfrastructureDescription,count(*) FROM VJobRecords GR
+---------------+----------------+---------------------------+----------+
| year(EndTime) | Month(EndTime) | InfrastructureDescription | count(*) |
+---------------+----------------+---------------------------+----------+
|          2014 |              5 | APEL-CREAM-PBS            |     3747 |
|          2014 |              6 | APEL-CREAM-PBS            |     7243 |
|          2014 |              7 | APEL-CREAM-PBS            |     4852 |
|          2014 |              8 | APEL-CREAM-PBS            |     4770 |
|          2014 |              9 | APEL-CREAM-PBS            |     3882 |
+---------------+----------------+---------------------------+----------+
5 rows in set (0.13 sec)
```

STATUS

SITE NAME	TICKET	STATUS	INFO
BIOCOMP	17459	SOLVED	
CIRMMP	12	SOLVED	
CNR-ILC-PISA	17461	SOLVED	
CRS4	13	SOLVED	
FBF-Brescia-IT	14	SOLVED	
GARR-01-DIR	17464	SOLVED	
GILDA-INFN-CATANIA	27	SOLVED	
GILDA-SIRIUS	29	SOLVED	
GRISU-COMETA-INFN-CT	17465	SOLVED	
GRISU-UNINA	17466	SOLVED	
ICEAGE-CATANIA	28	SOLVED	
INAF-TS	17467	SOLVED	
INFN-BARI	15	IN PROGRESS	in attesa del primo lancio
INFN-BOLOGNA	17468	SOLVED	
INFN-BOLOGNA-T3	17469	SOLVED	
INFN-CATANIA	17449	SOLVED	
INFN-CNAF-LHCB	17470	SOLVED	
INFN-COSENZA	17471	SOLVED	
INFN-FERRARA	17472	SOLVED	
INFN-FRASCATI	17452	SOLVED	
INFN-GENOVA	17473	SOLVED	
INFN-LECCE	17474	SOLVED	
INFN-LNL-2	17450	SOLVED	
INFN-MILANO-ATLASC	16	IN PROGRESS	in attesa della prima pubblicazione
INFN-NAPOLI-ARGO	17477	SOLVED	
INFN-NAPOLI-ATLAS	17453	SOLVED	
INFN-NAPOLI-CMS	17478	SOLVED	
INFN-NAPOLI-PAMELA	17479	SOLVED	
INFN-PADOVA	17480	SOLVED	
INFN-PAVIA	17	OPEN	
INFN-PERUGIA	17483	SOLVED	
INFN-PISA	17454	SOLVED	
INFN-ROMA1	26	IN PROGRESS	manderà i dati assieme a INFN-ROMA1-VIRGO e INFN-ROMA1-CMS
INFN-ROMA1-CMS	17456	SOLVED	
INFN-ROMA1-VIRGO	17484	OPEN	
INFN-ROMA2	17485	SOLVED	
INFN-ROMA3	17486	SOLVED	
INFN-T1	17457	SOLVED	
INFN-TORINO	17458	SOLVED	
INFN-TRIESTE	17487	SOLVED	
RECAS-NAPOLI	17488	SOLVED	
SNS-PISA	17489	SOLVED	sito sospeso
TRIGRID-INFN-CATANIA	17490	SOLVED	
UNI-PERUGIA	38	SOLVED	

UNINA-EGEE	17492	SOLVED

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