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# grid production system

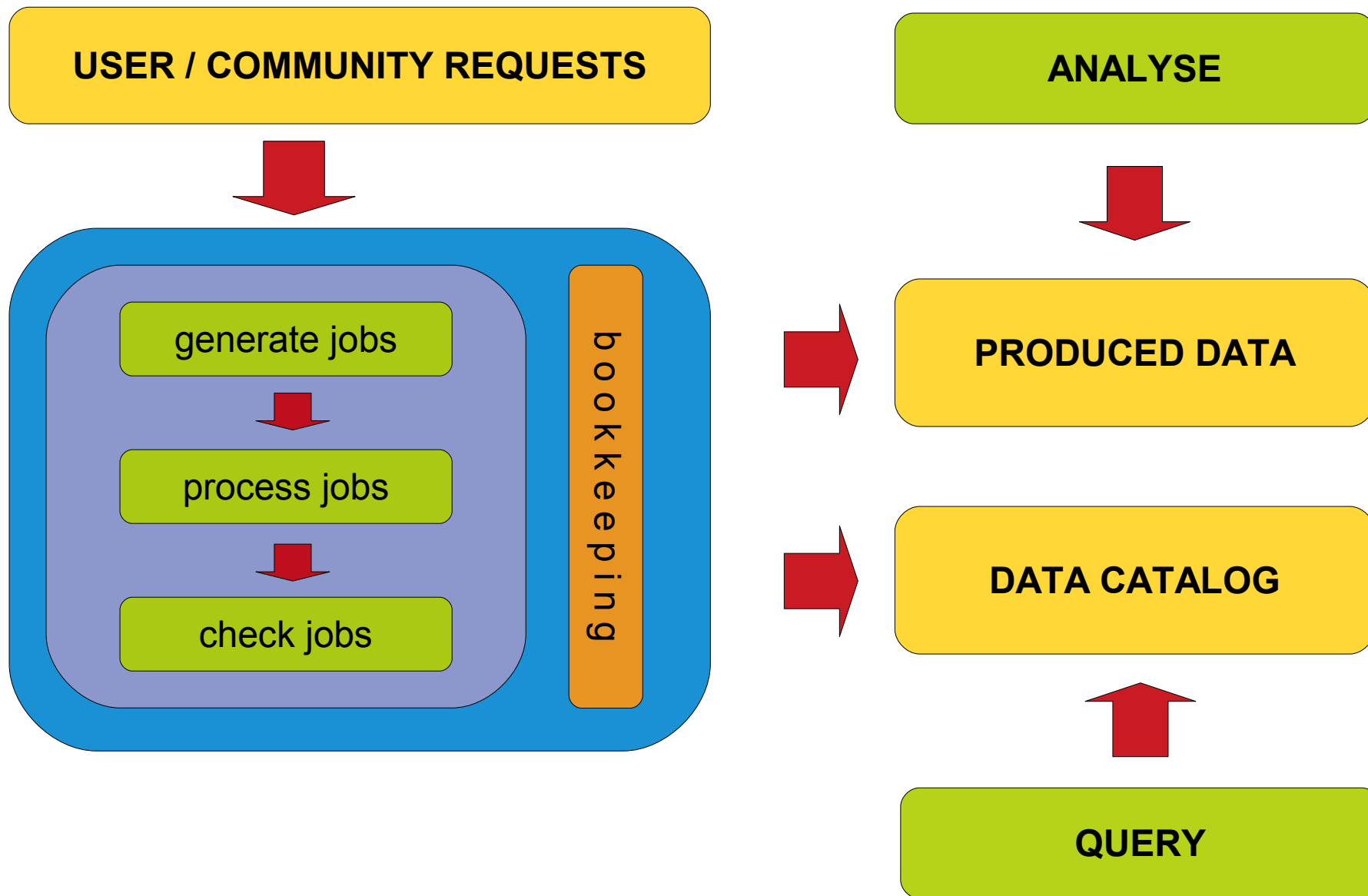
**Jan Engels**

Desy, 5th June 2010

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# System overview



# Current implementation

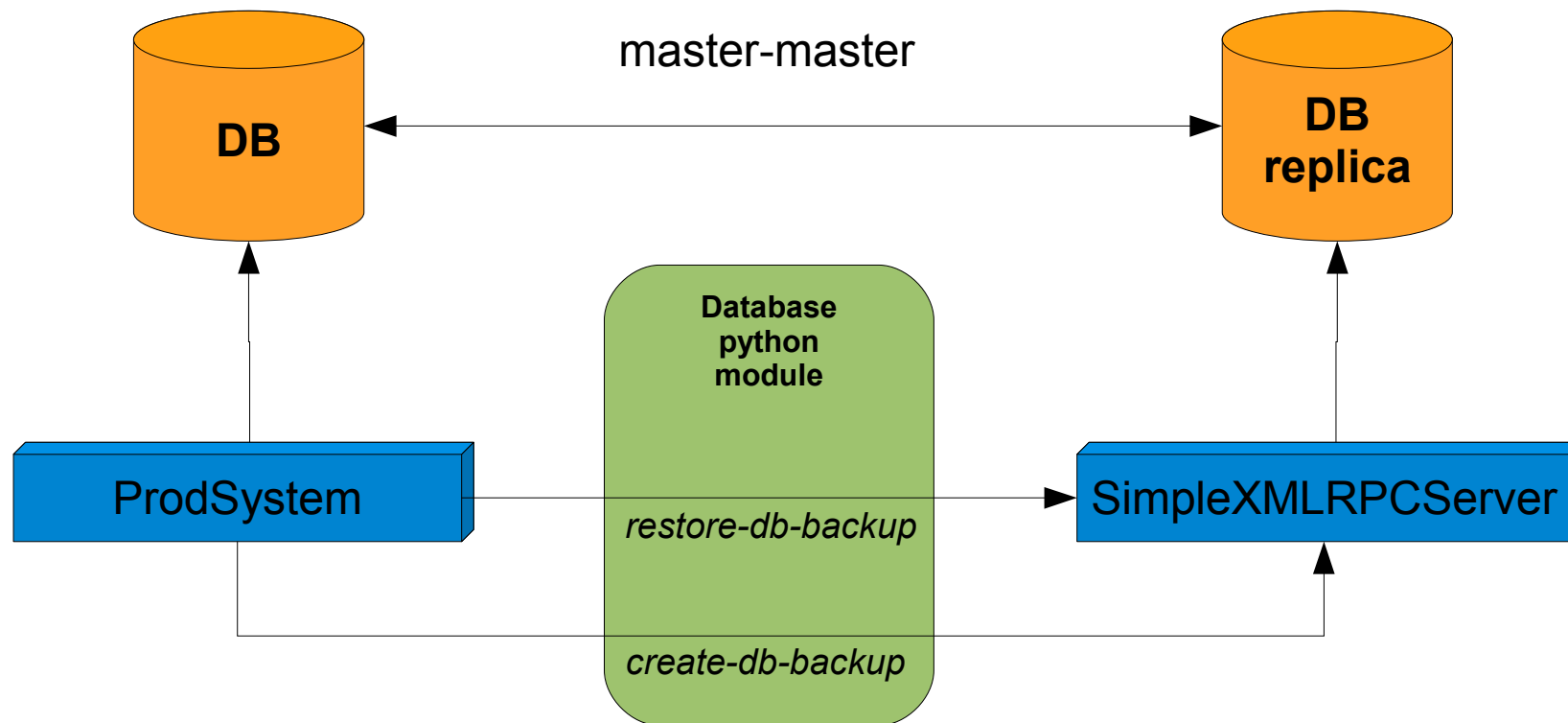
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- Central DB used for bookkeeping also serves as Data-Catalog
- Production managed by multi-threaded Python-daemon
- Ganga used as job-submission interface
- DB backup provided by master-master replication scenario



# New: DB Replication



master-master replication setup based on:  
“LCTPC Conditions Database Handbook” (R. Diener)

- Test production for TPC End-Plate studies (30.000 events):
  - Initial configuration for now provided by command line scripts (web interface planned)
  - Request tracker provided by database:

```
mysql> select * from gevents;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| gen_id | process | generator | energy | luminosity | cross_section | pol_ep | pol_em | producer | cut | root_name | total_events |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | uds | Pythia | 91 | 0 | 0 | 0 | 0 | Camb_SM | null | uds91 | 10000 |
| 3 | uds | Pythia | 200 | 0 | 0 | 0 | 0 | Camb_SM | null | uds200 | 10000 |
| 5 | uds | Pythia | 500 | 0 | 0 | 0 | 0 | Camb_SM | null | uds500 | 10000 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
3 rows in set (0.00 sec)
```

```
mysql> select * from req_tracker_sim;
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| gen_id | sim_id | username | ssw | ssw_ver | detector_model | physics_list | generated | processed | damaged |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 1 | 1 | steve | ilcsoft | v01-08-01 | ILD_00_noETD_TPCEP_0.30X0_100mm_z2350mm | LCPhys | 5000 | 5000 | 0 |
| 1 | 3 | steve | ilcsoft | v01-08-01 | ILD_00_noETD_TPCEP_0.30X0_200mm_z2350mm | LCPhys | 5000 | 5000 | 0 |
| 1 | 5 | steve | ilcsoft | v01-08-01 | ILD_00_noETD_TPCEP_0.30X0_200mm_z2450mm | LCPhys | 5000 | 5000 | 0 |
| 3 | 1 | steve | ilcsoft | v01-08-01 | ILD_00_noETD_TPCEP_0.30X0_100mm_z2350mm | LCPhys | 5000 | 5000 | 0 |
| 3 | 3 | steve | ilcsoft | v01-08-01 | ILD_00_noETD_TPCEP_0.30X0_200mm_z2350mm | LCPhys | 5000 | 5000 | 0 |
| 3 | 5 | steve | ilcsoft | v01-08-01 | ILD_00_noETD_TPCEP_0.30X0_200mm_z2450mm | LCPhys | 5000 | 5000 | 0 |
| 5 | 1 | steve | ilcsoft | v01-08-01 | ILD_00_noETD_TPCEP_0.30X0_100mm_z2350mm | LCPhys | 5000 | 5000 | 0 |
| 5 | 3 | steve | ilcsoft | v01-08-01 | ILD_00_noETD_TPCEP_0.30X0_200mm_z2350mm | LCPhys | 5000 | 5000 | 0 |
| 5 | 5 | steve | ilcsoft | v01-08-01 | ILD_00_noETD_TPCEP_0.30X0_200mm_z2450mm | LCPhys | 5000 | 5000 | 0 |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
9 rows in set (0.01 sec)
```

- **First test was successful :)**



- Production system ready
- Initial test was successful
- More testing needed (350 GeV ?)
- DB replication recently added for extra level of data redundancy
- Still missing: web interface
- Integration with DIRAC
  - To be discussed ...