

Belle II Computing

riunione Belle II - referees

F. Bianchi

2015/03/30

Resources Increment at ReCaS

- Napoli:
 - SE: 400 TB
 - Job slots: 1568 for Belle II, 768 with high priority for Belle II
- Cosenza:
 - Job slots: 1024 accessible to Belle II

new Organization

Database on Distributed Computing

M. Bracko (Ljubljana), L. Wood (PNNL)
under the software coordinator

Computing Coordinator T. Hara (KEK)

person who knows well the status of
+ distributed computing
+ belle II offline software
and who can communicate
+ distributed computing architecture
+ software coordinator
+ physics coordinator

Politics

Infrastructure

Infrastructure

Operation

Training

T.Hara

Distributed Computing Architecture I. Ueda (ICEPP/KEK)

Network M. Schram (PNNL)

Data Processing ?

Training/Tutorial ?

Resource
Communication
Negotiation
MoU
local budget

Production system H. Miyake (KEK)

Distributed Data Management M. Schram V. Bansal (PNNL)

Monitor K. Hayasaka Y. Kato (Nagoya)

core services DIRAC/AMGA
etc.@ KEK
metadata performance

Communication w/
network providers
establishment of
faster, stable Network

Raw data (re)process
KEK (On-Offline, Tier0)
other raw data center

MC production
schedule, feature

Central Skim production
procedure, schedule

Distributed User Analysis
(index, xrrotd, uDST)

Offline software deployment

grid tutorial
shift training
manual
instruction

person who knows
well the status of
+ distributed
computing
+ belle II offline
software

support from each computing sites, network providers, DIRAC developers, AMGA team

Stima Risorse Presentata al BPAC

- Nelle due slides successive ci sono i punti salienti
- Le presentazioni complete sono su:

<http://kds.kek.jp/conferenceTimeTable.py?confId=17495#20150209>

MC/Skim Challenge

Physics run starts from Oct. 2018

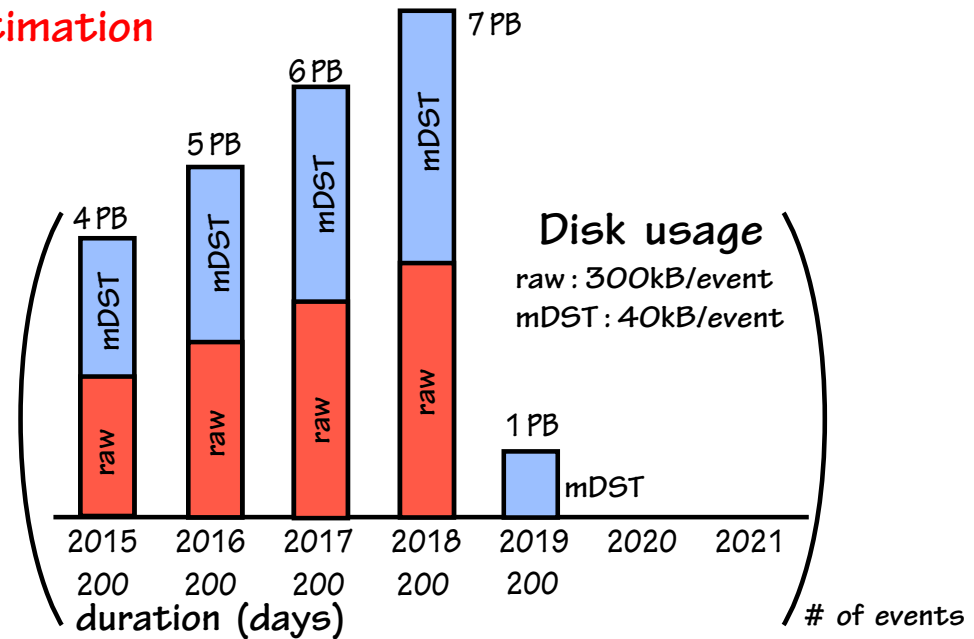
→ consequently, MC/skim challenge period was extended

→ focus on the short-term resource estimation

CPU

$$\frac{\text{MC prod/rec power (90 HS*sec/event)}}{\text{duration for process}}$$

×



Challenge period

Calendar Year	2015	2016	2017	2018	2019	2020	2021
Events	2.587E+10	3.2339E+10	3.881E+10	4.527E+10	2.749E+10	0	0
CPU [kHepSPEC]	133.25	166.56	199.87	233.18	141.57	0.00	0.00

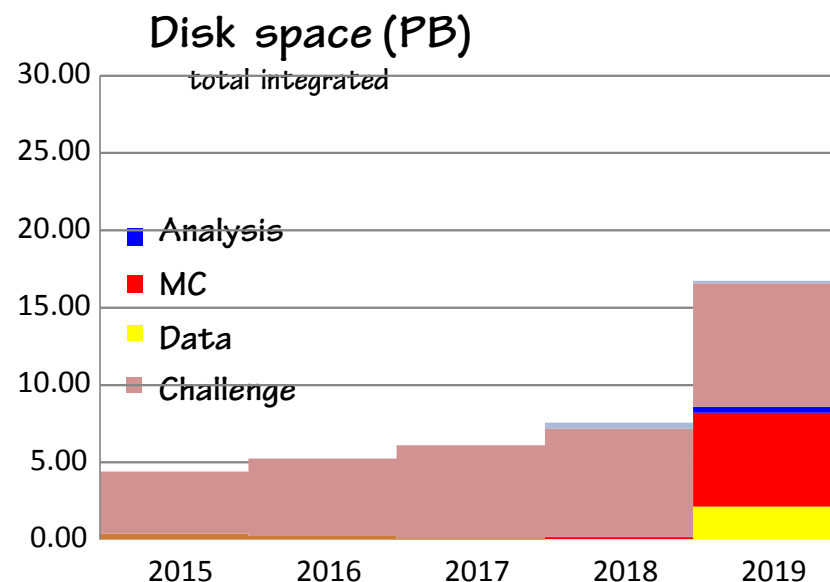
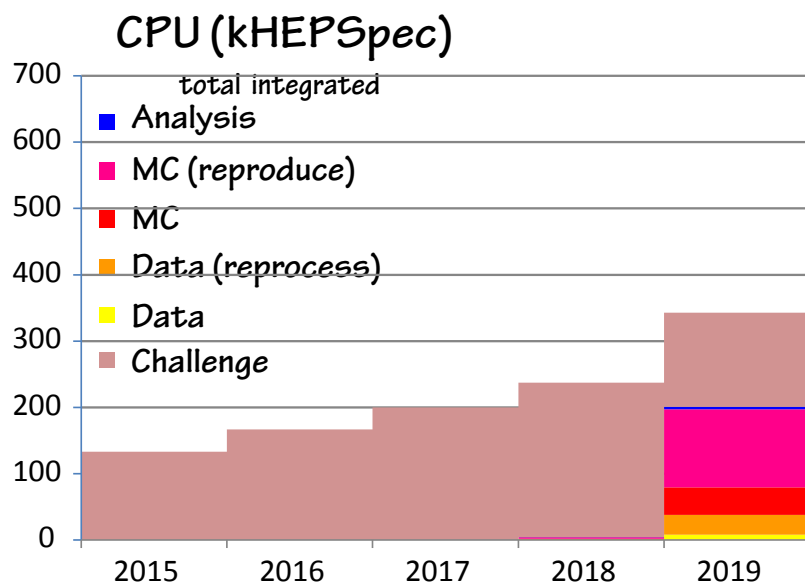
7PB data is kept in 2019 for study
(i.e. in total 8PB disk in 2019)

MC/Skim Challenge

Physics run starts from Oct. 2018

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Commenti BPAC

- Presentazione di T. Hara:
 - Nel 2016 vogliamo produrre 3.2×10^{10} eventi che richiedono 167 KHEPSpec per essere prodotti in 200 giorni e 5 PB di storage.
- Reviewers:
 - Motivare meglio la necessita' di produrre 3.2×10^{10} eventi
- Stiamo lavorando ad una risposta dettagliata
 - Al primo ordine un dataset MC di questa dimensione corrisponde ad una luminosita' di circa 5 ab^{-1} , 10% del dataset atteso per l'esperimento.

Software/Computing Workshop

- 11-15 Maggio, Hawaii
 - <http://kds.kek.jp/conferenceDisplay.py?confId=17040>
- Costo partecipazione : 3Keuro
- Al momento solo FB e' iscritto, sarebbe utile la partecipazione di altre 2-3 persone che non e' stata finanziata a settembre.