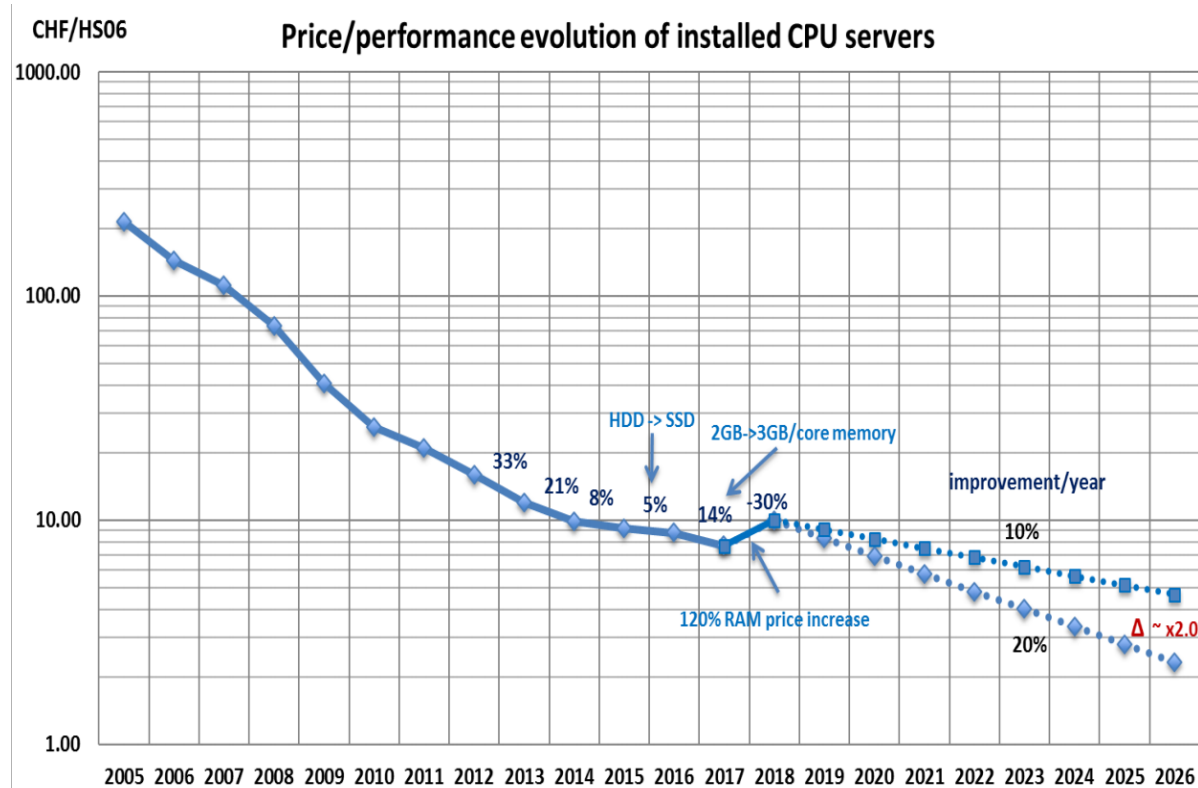




Welcome to the first E4/NVIDIA Hackathon

Felice, Maria

CPU trends

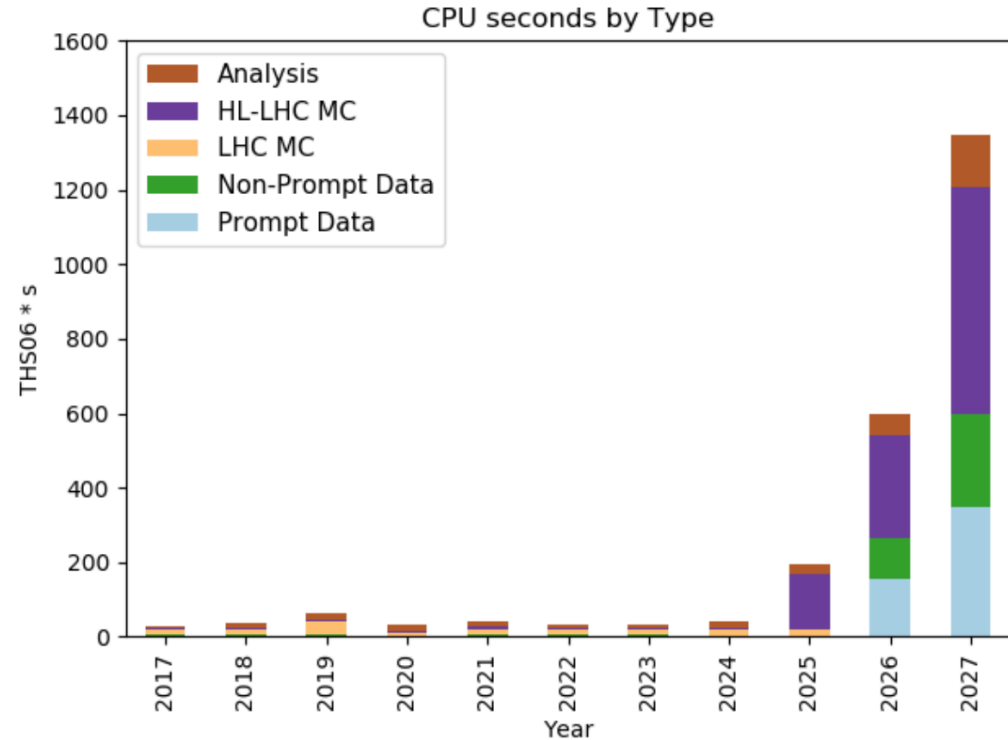


- Optimistic factor 4x in performance of CPUs by 2026
- More realistic factor 2x

Offline computing



- Performance demand will increase substantially at HL-LHC
- 30x more CPU performance
Mainly driven by:
 - Monte Carlo simulation and reconstruction
 - Reconstruction of data
- 1.4 PHS06*s = 4 million of today cores running on average



A new approach is needed



We are in trouble and what we are officially doing is not enough

- Achieving economically sustainable online and offline event reconstruction requires change
- Good opportunity to start a software revolution
 - Heterogeneous Computing
 - Machine Learning

Idea Square



- Idea Square
 - Thanks to the Idea Square team for making this possible!
- Different rooms to work in depending on working-groups size
- Coffee is free, but never have coffee alone!
- Lunches and coffee are included, let us know if you wish to join us, as we're going to prepare them ourselves ;-)
 - A different group will help us cleaning the kitchen after each lunch
- Please don't take food or coffee out of the kitchen
- You use something in the kitchen, wash it

Format - Scrums



Every day a different member of each group will present exactly two slides:

- 1) description of previous problem and how your team solved it
- 2) description of the next problem and how you'll try to solve it

Mattermost



Join:

- https://mattermost.web.cern.ch/signup_user_complete/?id=tochafc5abfjzd44ganxs3wrjw

NVIDIA Team

- Miguel Martinez
- Andreas Hehn
- Vishal Mehta

