Mini-Projects

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Performance Evaluation Mini-Project

Goal = Practice skills of performance analyst

Typically based on a project of your own
(group of 1 or 2 students)

- Current or past, done outside this course
- May also be based on one or several published papers
- May also address a methodology issue (rather than case study)

Technical work: size of 2 homeworks

Presentation is important
Check-List for Mini-Project

1. What is your goal? What are the main issues? Which ones require a detailed performance analysis?
2. What are: the load and the metrics?
3. What are the factors? Are there nuisance factors?
4. What is the solution method used by you or the paper?
5. Use the scientific method to draw conclusions in an iterative way.
6. If required, do more numerical analyses or experiments.
7. Which performance patterns did you encounter?
8. Give your results with confidence intervals if appropriate.
9. Present your work in a slide show.
Intermediate Defence

Early in the project, obtain feedback, during a private defence, on
- Your goals
- Your technical approach
- Your presentation skills

Obtain a slot (see moodle) on May 8 or 15

Prepare a slide show (7 slides max, target speaking time 10 mn)
Public Defence

Two colleagues are your *audience*; they must summarize what they understood.
You are audience for one other group, drawn randomly during session.
Both roles are graded.
May 21, 22, 28 or 29.
Archive

Put all other documents (e.g. papers, source codes, matlab scripts) in a zip file on Moodle so we can reproduce your findings.
Dos and Donts

Do: prepare a first slide show for private defence and listen to feedback received
Don’t: spend too much time re-doing all simulations
Don’t believe everything that is written in the literature
Do: make graphics that are
  ★ Economical
  ★ True
What’s wrong with this graphic?

Made with data from: Cost- and Energy-Aware Load Distribution Across Data Centers

Kien Le†, Ricardo Bianchini†, Margaret Martonosi†, and Thu D. Nguyen†
†Rutgers University  †Princeton University
Better Graphics

Y scale starts at 0
Previous representation was not true
Perhaps Even Better Graphics

Baseline and Green DC are non-dominated. Representation is more economical.