Reading Quiz #7 and #8

Grid Computing

May 21, 2014

Name: _____

Answers in English or Portuguese. Be synthetic. Answers should not exceed boxes. Do not copy long portions of text. Prefer diagrams to long phrases.

1. What is a Metascheduler?

2. What is a grid *performance model*?

3. What are the functions of systems such as NWS, Hawkeye or Ganglia?

4. In Table 1, what is the difference between a *homogeneous* and a *heterogeneous* scheduling algorithm?

5. Discuss about the four different approaches for dynamic load balancing mentioned in page 9. Do you think of other approaches?

6. What are the differences between the scheduling strategies: Min-min, Max-min and MCT? In which situations these strategies are better applied?

7. Show an example of a task graph and apply the DSC (Dominant Sequence Clustering) algorithm.

8. Show an example of a set of tasks and a set of processors and apply the TPCC algorithm.

9. How does task scheduling strategies differ from data scheduling strategies?

10. How do prediction models work in order to produce a good schedule of tasks and resources?

11. How would you implement a scheduling strategy for combining both task and data scheduling?

12. What are the advantages (or disadvantages) of using scheduling stratgies based on Quadratic Self-Scheduling (QSS), Exponential Self-Scheduling (ESS) and Root Self- Scheduling (RSS)?

(If the space below is used for answering, please identify the question you are answering.)