

Chris Cargile	CSCI656	March 21, 2014	Ch.10 HW Questions
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This homework assignment (plus reading) required 1.75 h. Answering questions from the assigned section required .5 h

10.5.3) How are deployment and mobility related to and different from one another?

Deployment is a case of mobility in which software modules are mobilized prior to the system's run time. Mobility can be thought of as a means by which software modules can be continuously extracted, installed, or made executable on a specified host; while, deployment involves only an initial such process and may occur even during construction. Only beyond the initial cycles of construction or execution is mobility said to be the phase completing.

10.5.6) Which facets of a system should be modeled in order to solve the deployment problem?

Hardware architecture, network architecture, peripheral devices, system software, other application-level software and data resources are facets of the deployment problem that must be considered. In light of these considerations, solving the problem of deployment may involve certain subjective requirements posed such as QoS. In addition to the factors considered in advance of the initial execution, during this preliminary, deployment phase, the architects may wish to consider future implications, such as how to maintain the system in spite of forthcoming releases, forthcoming reconfigurations of hardware and software, and unintentionally prolonged use of the deployed system.

10.5.11) What is the difference between physical and logical mobility?

The nature of mobilization occurring can be effected in either of two ways: physical or logical, where physical mobility involves mobilizing the system geographically to accommodate utilization of the system. In other words the system as a whole (hardware included) may be moved to facilitate the mobilization in this scenario. Logical mobility, however, may involve transferring only the software parts of a system so that the system becomes transferred (ie: to a new host at the same geographical location).

10.6.1) Select one of the implemented Lunar Lander applications from Chapter 9 and deploy it on (a) a single host and then (b) at least two hosts. Discuss the issues you encountered.

a) I deployed Lunar Lander-PF on a single host, initially, with the configuration:

Windows 8.1, x64-based processor
Intel(R) Core(TM) i5-3230M CPU @ 2.60Ghz
Java(TM) SE Runtime Environment (build 1.7.0_45-b18)
Java HotSpot(TM) 64-Bit Server VM (build 24.45-b08, mixed mode)
(Eclipse Version: 4.3.1.v20130911-1000 with Subclipse)

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b) Next I installed on a 2nd host, running (X)ubuntu, with the following configuration:

OpenJDK Runtime Environment (IcedTea 2.4.4) (7u51-2.4.4-0ubuntu0.12.04.2)

OpenJDK Client VM (build 24.45-b08, mixed mode, sharing)

Description: Ubuntu 12.04.4 LTS

Codename: precise

Eclipse: (version not investigated, with Subclipse)

In Steps (a),(b), above, I used Eclipse to run the code after downloading/installing using the Subclipse plugin for Eclipse, and did not have any issues with that. The Xubuntu project creation and configuration (using the textbook's download-site URL) prompted me for additional user-provided response info compared to the Windows configuration, but worked equally well.

I next executed the program on each host from the command line using the textbook's command-line pipe-and-filter ('chained') execution command, and that command worked equally well on both platforms/environments.