CC Exercises

Exercise 1: Total Number of Points [114] (114P)

1. Task: Definitions

1.) Define the terms “Utility Computing“ and “Web Resource“ in one or at most two sentences. [7] (7P)

2.) Which features has Cloud Computing (CC) inherited from Utility Computing? [18]-[7] (10 P)

3.) Which two questions must be asked in the beginning in order to categorize CC coarsely? [20]-[18] (2P)

4.) How would you define CSP in two sentences? [25]-[20] (5 P)

5.) a) What is thin provisioning and b) How is that possible? [29]-[25] (4 P)

6.) Define what CC via a CSP means. [34]-[29] (5 P)

7.) What are the three special access offers from some CSPs? [37]-[34] (3P)

8.) What are the general (common) advantages of CC? [41]-[37] (4P)

9.) What are the general (common) disadvantages of CC? [46]-[41] (5P)

10.) What are advantages of CC via CSP? [55]-[46] (9P)

11.) Describe the necessary steps needed for successful VM Migration [58]-[55] (3P)

12.) What are disadvantages of CC via CSP? [63]-[58] (5P)

13.) Define Cloud OS in one or at most two sentences [65]-[63] (2P)

14.) What are the 5 main benefits of own Cloud OS that Cloud Admins can profit from during Cloud setup and installation phase? Describe them [75]-[65] (10P)

15.) What are the main disadvantages of employing own Cloud OS [80]-[75] (5P)

16.) Define the three most important CC technologies created to serve users and maximise profit for CSP [83]-[80] (3P)

17.) List Linux Namespace components and briefly describe their purpose [97]-[83] (14P)
18.) What are the main advantages of LXC in comparison with VMs [99]-[97] (2P)

19.) What are the main aspects of virtualisation that have to be fulfilled?[104]-[99] (5P)

20.) Define in two sentences what a VM is. [107]-[104] (3P)

21.) a) Describe over-commitment in virtualisation. b) Draw a block diagram of 3 VMs with Ubuntu as a guest OS on a single host PC. Hint: the Host configuration is: 500GB HDD, 8GB RAM, Cent OS as host OS and 2 dual-core CPUs (4 cores in total). There is no over-commitment. [114]-[107] (8P)