

Private Cloud Architecture (PCA)

Individual CA1 (25% of Final Grade)

Release Date: Monday 03/10/2022

Submission Date: Saturday 30/10/2022 (Deadline is 22:00)

Lecturer: Dariusz Terefenko

Scenario:

You have been hired as an IT Consultant to produce a detailed report on the suitability of one out of three major Cloud Service Providers (CSPs) for the purpose of a potential hybrid cloud deployment, in comparison to private cloud solution.

The main reason for this is to consolidate the costs of servers such as: Domain Controller (DCSVR), Web Server (WebSVR), Database Server (DBSVR) and App Server (AppSVR) as well as the ability to work remotely and collaborate as team anywhere in the world for all the staff members.

Potential Cloud Service Providers:

Student can select any CSP to build the prototype as this entirely depends on the skills and research required to create hybrid infrastructure deployment between on-prem and CSP.

Current Infrastructure (2 Physical Servers):

1. DCSVR – Windows Server 2022 Datacenter.
 - 1.1. WebSVR – Windows Server 2022 Datacenter as guest on DCSRV Hyper-V host.
2. DBSVR – Windows Server 2022 Datacenter.
 - 2.1. AppSVR – Windows Server 2022 Datacenter as guest on DBSRV Hyper-V host.

Tasks:

Produce a comparison report of one CSP offering for hybrid cloud deployment in comparison to a private cloud infrastructure deployment. You must evaluate each product under a set of criteria which might include, but not limited to:

- Costs
- Security and Access
- Scalability and Availability
- Reporting and Monitoring
- Backups

This report shouldn't be a configuration guide, but it should be detailed enough to show that the systems were interacted with. Nor is this solely a research report; it should be a hands-on report detailing your interaction and findings rather than just a marketing of CSP offerings.

Student are required to use available CSPs to compare and contrast private cloud vs hybrid cloud deployment options.

Since this report will be produced to the business via online delivery (email or remote meeting), it's also required to produce a presentation with key findings containing language for non-technical personnel stating the key facts and benefits within each research domain.

Deliverables:

Paper must be written in your own words and conform to Harvard referencing standard.

<https://www.tudublin.ie/library/cc/library-support/student-support/online-library-tutorials/referencing-styles-video-guides/>

Assignment must be uploaded directly to the Moodle Assignment activity. The similarity report will be generated by Urkund, and a score awarded. Student can then review it and revise their work if necessary. However, the same filename when submitting the revised version for the second time to the same assignment must be used.

The paper maximum word count should 3000 words (Word format) uploaded onto Moodle, presentation preferable in form of PowerPoint (maximum 6-10 slides). Put word count on the title page for the Report.

PowerPoint slides will not be presented in class due to tight time constraints, however they do count to the overall assignment grade (10% of total mark).

You may use an appendix that does not contribute to word count but use it sparingly. (An appendix contains supplementary material that is not an essential part of the text itself, but which may be helpful in providing a more comprehensive understanding of the research problem or it is information that is too cumbersome to be included in the body of the paper.)

Late submissions will be penalised with 10% deduction per day.