SIT226 Cloud Automation Technologies

Pass Task 9.1P

Kubernetes in Review

Background

Throughout the trimester we have learned about Kubernetes, how it works, how to use it to run applications, and how the Kubernetes/cloud environment and the structure of the applications themselves interact to influence the performance of the application. In this task, you will summarise what you learned.

Get Prepared

This task requires you to demonstrate your ability to communicate <u>your knowledge</u> of Kubernetes to different audiences. As a creative task, no research or other investigation is required, and the text of your answers must be entirely in your own words, drawing upon what you have learned during the trimester. Any references are only to provide an acknowledgement of the sources of information, you may not paraphrase materials found in other sources.

Complete the Task
<u>*Page Limit*</u>*: 1 page of text formatted reasonably, e.g., 2cm margins, 11 or 12 point font, appropriate headings/spacing, etc.*

Prepare a document according to the following requirements:

1. Reflect on the content for this week. In ½-¾ page, identify the most important lessons/topics this week relevant to your future studies/career and explain why they are the most important. Note: Do not present/explain topics, you are explaining why the things you learned are important!
2. Provide one or more screenshots for each activity, demonstrating that you have completed the lab session this week and briefly explain what is shown in each screenshot (one or two short sentences each).
3. You encounter the head of a large Operations team who are responsible for several data centres. To date they have adopted virtual machines (not containers) and are currently managing their network and web services manually. They have heard of Kubernetes, however as they have limited funds and are currently struggling to keep up with problems and updates to the software they are responsible for, they have chosen not to focus on training or adopting Kubernetes at this time. In ¼-½ page, explain why they should consider making Kubernetes training and adoption a priority.
4. You encounter a software development project lead who works for the same organisation as the Operations team lead from Part 2. Thanks to your intervention, Kubernetes will soon be adopted by the Operations team, and the development lead is upset that they now need to schedule a full redevelopment of their network service/web application to take advantage of Kubernetes. In ¼-½ page, explain to them why they do not need to be concerned about the adoption of Kubernetes and the benefits they will receive without making any changes to their software.

Submit Your Task

Prepare your submission using the word processor of your choice and submit a PDF to OnTrack.

Taking it Further (Optional)

As this task is about communicating your existing knowledge there are no specific additional knowledge areas to explore. In attempting to complete this task you may identify areas where you are either lacking in knowledge or lacking in confidence, and you should take the opportunity to review and/or further develop your knowledge in these areas. Moreover, the topics addressed by this task are fundamental to understanding and working with Kubernetes, so you should be greatly concerned about any knowledge gaps you identify in completing this task.

Citations and Referencing

When completing any work, it is necessary to acknowledge the work of others that you have relied upon. For written assessment, we achieve this through the use of citations and references. Failing to correctly identify the work of others is known as plagiarism and is considered an issue of Academic Integrity.

If your submission to this task has involved the work of others, you must include citations and references where appropriate. Deakin provides a website that explains how to use citations and references, and includes explanations of various referencing styles:

https://www.deakin.edu.au/students/studying/study-support/referencing

You may select any style for your citations/references, however, you must be consistent in applying that style in this task (you can use other styles in other tasks if you wish).

Note that any bibliography/list of references is not included in page limits.