

DSD 611 Cloud Based Systems and Support- Assessment 1

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| Module Code | DSD 611 | Module Title | | Cloud Based Systems and Support | |
| Level | 6 | Credit Value of Module | | 15 | |
| Assessment Task | Report | | | | |
| Assessment No | 1 | Total marks | 30 | Weighting | 30% |
| Type of Submission | Written submission | | | | |
| Method of Submission | Cloud Campus | | | | |
| Due Date | XXXXXX | | | | |
| Learning Outcomes addressed | | | | | |
| Learning outcomes: PLO: 1 Select and apply key concepts of Cloud computing including Cloud Infrastructure and Cloud Architecture | | | | | |
| Passing Criteria | | | | | |
| Module - DSD 611 Cloud Based Systems and Support | | | | | |
| Total Marks: 30 Total Weighting: 30% | | | | | |
| A+ | 90-100% | C+ | 60-64% | | |
| A | 85-89% | C | 55-59% | | |
| A- | 80-84% | C- | 50-54% PASS MARK | | |
| B+ | 75-79% | D+ | 45-49% | | |
| B | 70-74% | D | 40-44% | | |
| B- | 65-69% | D- | 0-39% | | |
| Resubmission or Reassessment Requirements | | | | | |
| If a student's performance fails to meet any of the requirements in the marking schedule, the student may be given an opportunity to resubmit or be reassessed. | | | | | |
| Resubmission: If it is apparent (before or during marking) that evidence is incomplete, either by omission or error, the assessor may direct the student’s attention to the areas of breach, in general terms, and invite him/her to resubmit the work with the identified areas corrected. Only one resubmission opportunity may be given. | | | | | |
| Reassessment: If, after valid processing has been applied, a student is still judged not to have reached the standard required, the student may be offered a further assessment opportunity. A new date will be agreed upon, at the assessor’s discretion. Only one reassessment opportunity may be given. | | | | | |
| Assessment brief and instructions | | | | | |

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Instruction for the assessment

1. This assessment is worth 30% of the total marks for the course.
2. The assessment must be delivered individually.
3. Your submission **must** include references (APA 7 format) if referring to the source material. **Failure to do so will have consequences as per the student handbook, "Academic cheating" section.**
4. You must fill out and submit the ATC Vision College cover sheet.

Assessment Conditions

This is a resource-based assessment. This means that you may have access to any relevant resources to assist you. This could include your learning materials, information on the Internet, and so on. However, all work must be your own with no assistance from any other person.

Assessment Task

In this assessment, you are required to recommend a suitable cloud computing solution to meet the company's business requirements.

Your recommendation should be in the range of *Cloud Computing concepts* (On-Demand Self Service, Broad Network Access, Resource Pooling, Rapid Elasticity, and Measured Service), *Cloud Service models* (IaaS, PaaS, and SaaS) and *Cloud Deployment models* (Public, Private, Hybrid, Community, and Multi-cloud,). You may recommend a combination of features in your solution.

Digital Effects Company

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| Company Background | <p>After provisioning its own supercomputing power for decades, Kiwi Digital is wanting to retire most of its IT infrastructure and head for the cloud.</p> <p>The studio's datacentre cluster regularly made the Top 500 list of global supercomputers until fading when their Digital's 5000 HP servers cluster disappeared off the list in 2018.</p> |
| Business Problem / Description | <ol style="list-style-type: none">1. Developers use a wide range of animation and compositing software to integrate computer-generated imagery with live-action footage. This imagery generates a massive volume of video and image files that put a strain on their existing IT resources and requires load balancing efforts to keep production facilities operating at peak capacity. At peak production, they only render 50-100 TB of data overnight which means they need more processing power that can scale flexibly and dependably with their needs. Bandwidth was also an issue, both in terms of costs, but also the volume of data and latency.2. Kiwi Digital want a cloud provider to take the Intellectual Property and rendering and production technology it developed over the last 20 to 30 years to put it in the hands of designers around the world. How to run their own software in the cloud and let clients access Intellectual property.3. They want to develop a new visual effects (VFX) workflow, including a set of technologies for developers to support the studio's global expansion, and expand their New Zealand operations.4. Kiwi Digital wants to spread its workloads more efficiently around the world, to its staff by utilizing different hardware platforms freeing up talent and resources to continue to create visual effects and gain the flexibility to render VFX scenes remotely wherever it's creative staff is based. It must be safe and secure. |

DSD 611 Cloud Based Systems and Support- Assessment 1

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| | 5. Kiwi Digital want to utilise the vast processing power of Cloud Machine Learning tools to deliver projects faster and more cost-effectively, with continuous innovation and development. |
| Business Requirements (each requirement is associated with the above-mentioned problems respectively numbered) | <ol style="list-style-type: none">1. More processing power that can scale flexibly and dependably with their needs.2. Share and Market their IP to customers around the world3. Develop new technologies to support global expansion4. Spread workloads around the world to its staff5. Deliver projects faster and more cost-effectively with Cloud Machine Learning tools |

In your solution for **each** business requirement, you are to suggest the following

1. The applicable Cloud feature(s) with a brief description [2 Mark] (60-80 words)
2. The benefits that the company will gain from the feature(s) [2 Mark] (60-80 words)
3. The challenge/risk(s) of the feature(s) to the company [2 Mark] (60-80 words)

[30 marks Total – 6 marks per business requirements]

Submission

Upload a single Microsoft Word document to GitHub, Canvas or as indicated by your tutor, which includes the followings:

- A cover sheet
- Answers to all questions
- Reference list if any

MARKING RUBRIC

NOTES:

***Wordcount** is indicative only with no penalty for submitting over the suggested range.

***Sufficient** is defined as per the points below:

- a) The answer provided by the student is correct, logical and meets the requirements
- b) The answer is supported by relevant ideas and/or supporting details.
- c) Information is presented in a logical manner that is easily followed.
- d) There is minimal interruption to the work due to misspellings and/or grammatical errors.

***Insufficient** is defined as not meeting any of the points above (a, b, c, and d).

***Reasonable** is defined as meeting at least point a) above.

***Most** is defined as about 80% of all, **Some** is defined as about 50% of all, and **Few** is defined as about 20% of all

| Grade Distribution | | | | | Student Mark | Comments |
|--|---------------------------------------|--|---|---|--------------|----------|
| Business requirements [30 marks] | 0 | 1.5 | 3 | 6 | | |
| 1. More processing power that can scale flexibly and dependably with their needs. | The solution provided is insufficient | An applicable feature(s) is identified with a brief description. Either a relevant benefit(s) reasonable explained or a relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) reasonable explained. A relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) sufficiently explained. A relevant challenge or risk(s) sufficiently explained. | | |
| | 0 | 1.5 | 3 | 6 | | |

MARKING RUBRIC

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|---|---------------------------------------|--|---|---|--|--|
| 2. Share and Market their IP to customers around the world | The solution provided is insufficient | An applicable feature(s) is identified with a brief description. Either a relevant benefit(s) reasonable explained or a relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) reasonable explained. A relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) sufficiently explained. A relevant challenge or risk(s) sufficiently explained. | | |
| | 0 | 1.5 | 3 | 6 | | |
| 3. Develop new technologies to support global expansion | The solution provided is insufficient | An applicable feature(s) is identified with a brief description. Either a relevant benefit(s) reasonable explained or a relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) reasonable explained. A relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) sufficiently explained. A relevant challenge or risk(s) sufficiently explained. | | |
| | 0 | 1.5 | 3 | 6 | | |

MARKING RUBRIC

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|---|---------------------------------------|--|---|---|--|--|
| 4. Spread workloads around the world to its staff | The solution provided is insufficient | An applicable feature(s) is identified with a brief description. Either a relevant benefit(s) reasonable explained or a relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) reasonable explained. A relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) sufficiently explained. A relevant challenge or risk(s) sufficiently explained. | | |
| | 0 | 1.5 | 3 | 6 | | |
| 5. Deliver projects faster and more cost-effectively with Cloud Machine Learning tools | The solution provided is insufficient | An applicable feature(s) is identified with a brief description. Either a relevant benefit(s) reasonable explained or a relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) reasonable explained. A relevant challenge or risk(s) reasonable explained. | An applicable feature(s) is identified with a brief description. A relevant benefit(s) sufficiently explained. A relevant challenge or risk(s) sufficiently explained. | | |