Digital & Technology Solutions

Degree Apprenticeship

Cloud Solutions & Architectures

Level 5

20 credits

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| --- | --- |
| Written by: | Karol Kosinski |
| Checked by: | Francis Braithwaite |
| Programme Leader Approval: |  |
| UoR Approval: |  |
| Approved for: | Single / Multiple Use |
| Review (Multiple Use): | 12 months from creation |

# **Assessment Brief**

This assessment brief provides details of the overall assessment for your module. Where a module has multiple components, these are listed below. It will provide outline details of the examination and specific instructions for any coursework elements. [Section 1](#_Section_1_Module_1) provides the detail of the assessment and [Section 2](#_Section_2_General_1) provides general guidance to support your assessment.

Component: Coursework Assignment (100%)

Description: 3000-word report

The mark will be awarded based on an overall judgement of the work. An overall mark of at least 40% must be achieved to pass the module.

# **Submission details**

|  |  |  |
| --- | --- | --- |
| **Component** | **Date** | **Time** |
| Assignment | Friday of Week 20 – Details on VLE submission point | 14:00 |

# **Module Learning Outcome Assessment Matrix**

|  |  |
| --- | --- |
| **Learning Outcome** | **Coursework** |
| Illustrate the core principles and concepts of cloud computing infrastructure technologies. | 🗸 |
| Analyse the role and function of cloud computing in supporting operational goals and business processes, across a range of scenarios. | 🗸 |
| Illustrate the strategies employed to orchestrate designs for the implementation of cloud and hybrid infrastructures. | 🗸 |
| Critically examine a range of risks associated with employing cloud solutions and architectures | 🗸 |

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# **Section 1: Assessment Brief**

# **Assignment brief**

Total Marks: 100

Word count: The overall word count is 3000 words excluding title page, contents list, abstract, references and appendices. It is suggested this amount is divided in proportion to the weightings of the questions within the marking rubric.

All submissions **must** have a completed cover sheet (see Appendix A) attached to your submission.

# **Assignment context**

This assignment allows you to show how you can meet each of the module’s learning outcomes. The goal of the assessment is to provide you with a platform where you can evaluate your understanding of cloud computing solutions and architectures and their role in supporting operational goals and business processes. You will be required to illustrate the core principles and concepts of cloud computing, analyse its role in supporting operational goals, illustrate strategies for implementing cloud and hybrid infrastructures, and critically examine the risks associated with employing cloud computing.

Please note that unless you have a prior arrangement in place this assignment should be conducted on your own organisation. All deviations from this must be agreed with the module leader in writing before proceeding.

This assessment is worth 100% of your overall mark for this module.

## **Task 1: The core principles and concepts and cloud computing infrastructure technologies (15%)**

In this task you should:

* define and explain the fundamental principles and concepts of cloud computing.
* describe the various models and deployment types of cloud computing.
* discuss the key characteristics and benefits of cloud computing infrastructure technologies.
* provide examples and use cases to illustrate the application of cloud computing in your organisation (unless discussed otherwise with your tutor).

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## **Task 2: The role and function of cloud computing in supporting operational goals and business processes (30%)**

In this task you should:

* analyse the impact of cloud computing on operational goals and business processes within your organisation (unless discussed otherwise with your tutor).
* explore the role of cloud computing in enhancing scalability, flexibility, and cost-efficiency.
* evaluate the benefits and challenges of migrating business processes to the cloud.
* provide case studies or examples to illustrate the successful implementation of cloud computing in real-world scenarios. Focus on your organisation unless discussed otherwise with your tutor.

## **Task 3: The strategies employed to orchestrate designs for the implementation of Cloud and Hybrid Infrastructures (15%)**

In this task you should:

* explain the concept of cloud orchestration and its importance in designing cloud and hybrid Infrastructures.
* discuss the strategies and best practices for implementing Cloud and Hybrid Infrastructures. Reflect upon own organisation unless discussed otherwise with your tutor.
* analyse the considerations for selecting the appropriate cloud service provider (CSP) and designing the infrastructure architecture, reflect upon your own organisation (or organisation of choice if agreed with tutor).
* illustrate the steps involved in the migration process from traditional infrastructure to cloud or hybrid infrastructures.

## **Task 4: The range of risks associated with employing Cloud Computing (30%)**

In this task you should:

* identify and explain the potential risks and security concerns associated with cloud computing. Reflect upon your own organisation unless discussed otherwise with your tutor.
* evaluate the measures and strategies for mitigating the identified risks.
* discuss the legal and regulatory considerations related to data privacy and compliance in cloud computing.
* analyse real-world cases of security breaches or data leaks in the cloud and the lessons learned from them. Use your own organisation unless discussed otherwise with your tutor.

## **Academic convention (10%)**

Up to 10 marks can be awarded for the entire task for the overall

structure, strength of argument, referencing and use of language

including the use of the Roehampton Harvard Referencing Style. For

an excellent performance, your work will be based on several good

qualities and relevant resources. These resources need to be referenced using the Harvard referencing style.

# **Section 2: General Guidance**

## **Assignment guidelines**

1. Use appropriate academic sources, such as textbooks, scholarly articles, and industry reports, to support your arguments and analysis.
2. Ensure your essay is well-structured, with an introduction, body paragraphs, and a conclusion.
3. Demonstrate critical thinking and a comprehensive understanding of the subject matter.
4. Provide relevant examples and case studies to support your analysis.
5. Use proper referencing and citation following the Harvard referencing style.

## **Submission instructions**

* Submit your essay as a Word document or PDF file through the Canvas LMS system.
* Ensure that your submission includes your student ID, module code, and assessment title.

## **Assessment criteria**

Your assignment report should be academic and 3000 words in length, and contain the following:

* Cover page (see Appendix A).
* Table of contents.
* An introduction, stating the purpose and scope of the report.
* Tasks 1–4.
* An overall conclusion.
* References.
* Appendices.

There should be a good understanding of critique techniques.

Reference and citation of your sources, or any material that you use in your solution, using the Harvard referencing system.

Discuss any limitations or assumptions made.

## **Assignment rubric**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Criteria** | **80 -100%** | **70 - 79%** | **60 - 69%** | **50 - 59%** | **40- 49%** | **0 - 39%** |
| **Task 1: The core principles and concepts and Cloud Computing Infrastructure Technologies (15%)** | The learner has provided an outstanding examination and understanding of the core principles, concepts and benefits of cloud computing. | The learner has provided an excellent examination and understanding of the core principles, concepts and benefits of cloud computing. | The learner has provided a very good examination and understanding of the core principles, concepts and benefits of cloud computing. | The learner has provided a good evaluation and understanding of the core principles, concepts and benefits of cloud computing. | The learner has provided a basic knowledge of the core principles, concepts and benefits of cloud computing. | The learner has provided very limited or no evaluation of the core principles, concepts and benefits of cloud computing. |
|
| **Marks** | **12 to 15** | **11** | **9 to 10** | **8** | **6 to 7** | **0 to 5** |
| **Task 2: The role and function of Cloud Computing in supporting operational goals and business processes (30%)** | The learner has provided an outstanding examination and understanding of the impact of cloud computing on organisational goals and business processes, and the benefits and challenges of migrating business processes to the cloud. | The learner has provided an excellent examination and understanding of the impact of cloud computing on organisational goals and business processes, and the benefits and challenges of migrating business processes to the cloud. | The learner has provided a very good examination and understanding of the impact of cloud computing on organisational goals and business processes, and the benefits and challenges of migrating business processes to the cloud. | The learner has provided a good examination and understanding of the impact of cloud computing on organisational goals and business processes, and the benefits and challenges of migrating business processes to the cloud. | The learner has provided a basic examination of the impact of cloud computing on organisational goals and business processes, and the benefits and challenges of migrating business processes to the cloud. | The learner has provided very limited or no examination of the impact of cloud computing on organisational goals and business processes, and the benefits and challenges of migrating business processes to the cloud. |
| **Marks** | **24 to 30** | **21 to 23** | **18 to 20** | **15 to 17** | **12 to 14** | **0 to 11** |
| **Task 3: The strategies employed to orchestrate designs for the implementation of Cloud and Hybrid Infrastructures (15%)** | The learner has provided an outstanding understanding to explain cloud orchestration, the strategies for implementing cloud and hybrid infrastructures, and considerations for selecting the appropriate cloud service provider. | The learner has provided an excellent understanding to explain cloud orchestration, the strategies for implementing cloud and hybrid infrastructures, and considerations for selecting the appropriate cloud service provider. | The learner has provided a very good understanding to explain cloud orchestration, the strategies for implementing cloud and hybrid infrastructures, and considerations for selecting the appropriate cloud service provider. | The learner has provided a good understanding to explain cloud orchestration, the strategies for implementing cloud and hybrid infrastructures, and considerations for selecting the appropriate cloud service provider. | The learner has provided basic knowledge understanding to explain cloud orchestration, the strategies for implementing cloud and hybrid infrastructures, and considerations for selecting the appropriate cloud service provider. | The learner has provided very limited or no understanding to explain cloud orchestration, the strategies for implementing cloud and hybrid infrastructures, and considerations for selecting the appropriate cloud service provider. |
| **Marks** | **12 to 15** | **11** | **9 to 10** | **8** | **6 to 7** | **0 to 5** |
| **Task 4: The range of risks associated with employing Cloud Computing (30%)** | The learner has provided an outstanding examination and understanding of the range of risks, security and compliance concerns associated with cloud computing. | The learner has provided an excellent examination and understanding of the range of risks, security and compliance concerns associated with cloud computing. | The learner has provided a very good examination and understanding of the range of risks, security and compliance concerns associated with cloud computing. | The learner has provided a good examination and understanding of the range of risks, security and compliance concerns associated with cloud computing. | The learner has provided basic knowledge and examination of the range of risks, security and compliance concerns associated with cloud computing. | The learner has provided very limited or no examination of the range of risks, security and compliance concerns associated with cloud computing. |
| **Marks** | **24 to 30** | **21 to 23** | **18 to 20** | **15 to 17** | **12 to 14** | **0 to 11** |
| **Academic Convention**  **10%** | Outstanding, well-presented report that contains all key elements. Wide range of relevant literature is used critically to inform argument, balanced discussion and/or inform problem-solving. Consistently accurate and assured use of academic conventions. | Excellent, well-presented report that contains all or most key elements. Critical engagement with appropriate reading. Research-informed literature integrated into the work. Good use of academic conventions. Consistently accurate use of academic conventions | Very good, very well presented report that contains all or most key elements. Knowledge of literature beyond core text(s). Literature used accurately but descriptively. Academic skills generally sound. Good use of academic conventions | Good report presentation with some key elements. Some evidence of reading, with superficial linking to given text(s) Some academic conventions evident and largely consistent, but with some weaknesses. | Basic report presentation with some key elements. Evidence of little reading appropriate for the level of study, and/or indiscriminate use of sources. Academic conventions used weakly | Little or none of the key elements of report presentation shown. Little or no evidence of academic reading. Views are unsupported and non- authoritative. Academic conventions largely ignored. |
| **Marks** | **8 to 10** | **7** | **6** | **5** | **4** | **0 to 3** |

# **Appendix A**

**ASSIGNMENT COVER SHEET**

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| --- | --- | --- |
| **Student’s name** | (First name) | (Last name) |
| **Module name** | Cloud Solutions and Architectures | |
| **Title of assignment** |  | |
| **Complete Word Count in my assignment** |  | |
| **Date submitted** |  | |

All work must be submitted by the due date. If an extension of time to submit work is required, a [Mitigating Circumstances Extension Form](https://canvas.qa.com/courses/1041/files/660514?module_item_id=143660) must be submitted.

If an extension has been approved, please give the new submission date:

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| --- |
| IMPORTANT: THIS STATEMENT MUST BE READ AND SIGNED  **Academic Integrity Statement**  Academic integrity and honesty are fundamental to the academic work you produce at the University of Roehampton. You are expected to complete coursework which is your own and which is referenced appropriately. The university has in place measures to detect academic dishonesty in all its forms. If you are found to be cheating or attempting to gain an unfair advantage over other students in any way, this is considered academic misconduct and you will be penalised accordingly.   ​  **I declare that the work I am submitting is my own work, is properly referenced and has not been submitted elsewhere.** |
| **Learner signature (full name):**  **Date:** |