

Assessment Brief



Subject Code and Name	DEV1004 - DevOps
Assessment Number	2
Assessment Title	Case Study & Proposal
Assessment Type	Individual Report
Words, Size or Duration	1 PDF file written submission
Subject Learning Outcomes	SLO1, SLO2, SLO4
Submission Date / Time	Due by 11:55pm AEST Sunday end of Module 3.
Weighting	35%

Assessment Purpose

Before spending time and resources on a project, it's crucial to understand what technologies a product should be built with and why. This applies to all parts of a software project, including devops.

To solidify your knowledge of modern software development concepts and show your understanding of devops technologies and software architectures, you should be able to appropriately suggest suitable software, services or development techniques to facilitate devops practices in an application.

Assessment Task / Item

For this assessment, you must submit a PDF file with content that meets the requirements to showcase your skills as a software developer.

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Assessment Instructions

Given the provided case study, write a proposal in report format to implement a new DevOps practice. Your proposal should focus on the benefits to the case study organisation, and include:

1. Containerisation
2. Cloud services
3. Continuous integration/continuous delivery (CI/CD)

Report requirements

1. Explain the core concepts of:
 - cloud computing
 - containerisation
2. Identify and explain the devops elements and technologies that:
 - are currently used by the case study organisation, including their containerisation, cloud services & continuous integration/continuous delivery (CI/CD) stack.
 - not used but should be as per your proposal and suggestions.
3. Identify and explain the business functions and impacts that:
 - the current implementation or lack of implementation of devops has on the case study organisation.
 - the proposal and suggested changes would bring to the case study organisation.
4. Create an application architecture diagram (AAD) that depicts your proposed suggestions
 - Write an explanation of the AAD that justifies each change and explains the components of the diagram

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Submission

All work must be submitted via Canvas, in the assignments section appropriate to this brief. Please ensure the above mentioned submission date and/or time are adhered to, or penalties may apply.

When submitting your work, please save your files using the naming convention below.

[Student_ID]_[Surname]_[First Name]_[SubjectCode]_[Assessment_#].pdf

E.g.: **1234_Singh_Visha_PRG1002_Assessment_01.pdf**

For more information on late submission, please see the **Assessment Policy**.

Academic Integrity

The integrity of the assessment process is fundamental for ensuring appropriate evaluation at AIT. All work submitted should be your own, and where additional resources are used, they must be referenced according to the Harvard style. Additionally, TurnItIn is available in the LMS to test plagiarism in your writing.

For more information on academic integrity, please see the **Academic Integrity** and **Academic Integrity Penalties Policies**.

Appeals

Fair application of the assessment rubric, rules and guidelines should be administered for each assessment. If you feel an evaluation requires further consideration, you may be entitled to an appeal.

For more information on your right to an appeal, please see the **Assessment Appeals Procedure and Policy**.

Policies

For access to the policies mentioned above and related to education at AIT, please see the footer of the AIT website, and follow the link named **Education Policies and Procedures**.

Website: <https://www.ait.edu.au>

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Assessment Rubric

Task Descriptor	(HD) High Distinction (85-100%)	(D) Distinction (75-84%)	(C) Credit (65-74%)	(P) Pass (50-64%)	(F) Fail (0-49%)
<i>IDENTIFIES devops elements & technologies used by a business or organisation</i> 10% SLO 1	Correctly IDENTIFIES five (5) or more devops elements or technologies used by a business or organisation.	Correctly IDENTIFIES four (4) or more devops elements or technologies used by a business or organisation.	Correctly IDENTIFIES three (3) or more devops elements or technologies used by a business or organisation.	Correctly IDENTIFIES two (2) or more devops elements or technologies used by a business or organisation.	Does NOT identify any devops elements or technologies used by a business or organisation, or only identifies one (1).
<i>EXPLAINS devops elements & technologies used by a business or organisation</i> 15% SLO 1	EXTENSIVE explanation of NUMEROUS devops elements & technologies used by a business or organisation.	MODERATELY-DETAILED explanation of NUMEROUS devops elements & technologies used by a business or organisation.	EXTENSIVE explanation of ONE devops elements & technologies used by a business or organisation.	MODERATELY-DETAILED explanation of ONE devops elements & technologies used by a business or organisation.	Fails to explain any devops elements or technologies used by a business or organisation.
<i>IDENTIFIES devops business functions & impacts relevant to a business or organisation</i> 10% SLO 1	Correctly IDENTIFIES five (5) or more devops business functions & impacts relevant to a business or organisation.	Correctly IDENTIFIES four (4) or more devops business functions & impacts relevant to a business or organisation.	Correctly IDENTIFIES three (3) or more devops business functions & impacts relevant to a business or organisation.	Correctly IDENTIFIES two (2) or more devops business functions & impacts relevant to a business or organisation.	Does NOT identify any devops business functions & impacts relevant to a business or organisation, or only identifies one (1).
<i>EXPLAINS devops business functions & impacts relevant to a business or organisation</i> 15% SLO 1	EXTENSIVE explanation of NUMEROUS devops business functions & impacts relevant to a business or organisation.	MODERATELY-DETAILED explanation of NUMEROUS devops business functions & impacts relevant to a business or organisation.	EXTENSIVE explanation of ONE devops business function or impact relevant to a business or organisation.	MODERATELY-DETAILED explanation of ONE devops business function or impact relevant to a business or organisation.	Fails to explain any devops business functions & impacts relevant to a business or organisation.
<i>EXPLAINS core concepts & applications of cloud computing</i> 10% SLO 2	EXTENSIVE explanation of NUMEROUS core concepts and NUMEROUS applications of cloud computing.	MODERATELY-DETAILED explanation of NUMEROUS core concepts and NUMEROUS applications of cloud computing.	EXTENSIVE explanation of AT LEAST ONE core concepts and AT LEAST ONE applications of cloud computing.	MODERATELY-DETAILED explanation of AT LEAST ONE core concepts and AT LEAST ONE applications of cloud computing.	Fails to explain any core concepts & applications of cloud computing.
<i>EXPLAINS core concepts & applications of containerisation</i> 10% SLO 2	EXTENSIVE explanation of NUMEROUS core concepts and NUMEROUS applications of containerisation.	MODERATELY-DETAILED explanation of NUMEROUS core concepts and NUMEROUS applications of containerisation.	EXTENSIVE explanation of AT LEAST ONE core concepts and AT LEAST ONE applications of containerisation.	MODERATELY-DETAILED explanation of AT LEAST ONE core concepts and AT LEAST ONE applications of containerisation.	Fails to explain any core concepts & applications of containerisation.

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<p><i>DEVELOPS an application architecture diagram that depicts appropriate improvements to the cloud architecture of a provided application or case study</i></p> <p>15% SLO 4</p>	MULTIPLE application architecture diagrams provided, representing MULTIPLE appropriate improvements to a cloud application's architecture with MULTIPLE cloud architecture patterns.	MULTIPLE application architecture diagrams provided, representing MULTIPLE appropriate improvements to a cloud application's architecture.	ONE application architecture diagram provided, representing MULTIPLE appropriate improvements to a cloud application's architecture.	ONE application architecture diagram provided, representing ONE appropriate improvement to a cloud application's architecture.	Diagram either not provided or not depicting any or much relevant appropriate data about the application's architecture.
<p><i>EXPLAINS appropriate improvements to the cloud architecture of a provided application or case study</i></p> <p>15% SLO 4</p>	EXTENSIVE explanation of ALL improvements of a cloud application architecture diagram & how the components of that architecture interact with each other.	MODERATELY-DETAILED explanation of ALL improvements of a cloud application architecture diagram & how the components of that architecture interact with each other.	EXTENSIVE explanation of SOME improvements of a cloud application architecture diagram & how the components of that architecture interact with each other.	MODERATELY-DETAILED explanation of SOME improvements of a cloud application architecture diagram & how the components of that architecture interact with each other.	Explanation provided is either completely incorrect, not containing relevant details, or not provided at all.