



CLASS ROOM - 2



KII5003

**SYSTEM
MAINTENANCE**

**KINGSFORD
INTERNATIONAL
INSTITUTE**

ASSESSMENT 1

Student Instructions

Before you commence your Assessment, ensure that you have good knowledge of the subject, have thoroughly read your Learner workbook, and clearly understand the Assessment requirements and the expectations of the Assessor.

You may be required to demonstrate knowledge and skills which may be difficult for the Assessor to witness. If so, an Evidence Record is supplied which will allow the knowledge or skill to be verified by at least one third party, and preferably two or more. These witnesses would usually be current or recent supervisors or your Assessor.

Explanations are given for each Task. If you have any questions, consult with your Assessor.

The assessment tasks may be answered using your workplace, the simulated business or a mixture of both as instructed by your Assessor.

Assessment Conditions

All assessment in this subject/units must be completed in the class under the supervision of your facilitator. Once completed the assessments are to be uploaded on LMS (www.KIIONline.edu.au/moodle) in individual student profile for marking.

- All assessments questions ("sections" and "subsections") must be attempted accurately.
- All questions must be answered in an appropriate manner as per the requirements.
- Follow the Assessor's instructions to complete the assessments.

Assessment Grading

Individual assessments are to be marked as "Satisfactory" or "Not Yet satisfactory". The final outcome of this subject/unit is to be recorded in "Unit outcome Record" as "competent" (C) or "Not Yet Competent" (NYC) and/or in LMS. In order to be competent in a given unit of competency the student must satisfactorily complete all assessment tasks and. If more than one unit of competency are clustered to form a subject, the students are still required to attempt all assessments

ASSESSMENT COVERSHEET

Unit:	
Course Name:	
Assessment Tool:	Assessment 1

Student must fill this section:

Student Name:	
Student ID:	
Privacy Release Clause:	"I give my permission for my assessment material to be used in the auditing, assessment validation & moderation Process"
Authenticity Declaration:	"I declare that: <ul style="list-style-type: none"> • The material I have submitted is my own work; • I have kept a copy of all relevant notes and reference material that I used in the production of my work; • I have given references for all sources of information that are not my own, including the words, ideas and images of others."
Student signature:	Date:

Assessment Completion Status

Attempt	Satisfactory	Non-Satisfactory	Date	Assessor's Signature
Initial attempt	<input type="checkbox"/>	<input type="checkbox"/>		
2 nd attempt/Re-assessment	<input type="checkbox"/>	<input type="checkbox"/>		

Feedback to student:

Information for Student:

- All work is to be entirely of the Student.

General Information for this assessment:

- Read the instructions for each question very carefully.
- Be sure to PRINT your FULL name & LAST name in every place that is provided.
- Short questions must be answered in the spaces provided or follow the word limits as instructed.
- For those activities requesting extra evidence such as: research reports, ESSAY reports, etc. The student must attach its own work formatted in double space, Arial 12 pts.
- All assessment tasks must be addressed correctly in order to obtain a competence for the unit of competency.
- If the Student doesn't understand the assessment, they can request help from the assessor to interpret the assessment.
- All assessments must be submitted online. Login to www.kiionline.edu.au and follow the subject link to submit your assessments. Note that the hard copy of the assessments will not be accepted.

Re-assessment of Result& Academic Appeal procedures:

If a student is not happy with his/ her results, that student may appeal against their grade via a written letter, clearly stating the grounds of appeal to the Operations Manager. This should be submitted after completion of the subject and within fourteen days of commencement of the new term.

Re-assessment Process:

- An appeal in writing is made to the Operations Manager providing reasons for re-assessment /appeal.
- Operations Manager will delegate another faculty member to review the assessment.
- The student will be advised of the review result done by another assessor.
- If the student is still not satisfied and further challenges the decision, then a review panel is formed comprising the lecturer/trainer in charge and the Operations Manager OR if need be an external assessor.
- The Institute will advise the student within 14 days from the submission date of the appeal. The decision of the panel will be deemed to be final.
- If the student is still not satisfied with the result, the he / she has the right to seek independent advice or follow external mediation option with nominated mediation agency.
- Any student who fails a compulsory subject or appeals unsuccessfully will be required to re-enrol in that subject.

The cost of reassessment will be borne by the Institute. The external assessor will base his/her judgement based on principles of assessment. These principles require assessment to be reliable, fair, practical and valid.

Academic Appeals

- If you are dissatisfied with the outcome of the re-evaluation process, you have a right to appeal through academic appeals handling protocol.
- To appeal a decision, the person is required to complete the KII- Request for Appeal of a Decision form with all other supporting documents, if any. This form is available via our website. The completed Request for Appeal form is to be submitted to the Student Support Officer either in hard copy or electronically via the following contact details:
Student Support Officer, Kingsford International Institute (KII), Level 6, 128-136 Chalmers St, Surry Hills, NSW 2010, Email: admin@kii.edu.au
- The notice of appeal should be in writing addressed to the Operations Manager and submitted within seven days of notification of the outcome of the re-evaluation process.
- If the appeal is not lodged in the specified time, the result will stand and you must re-enrol in the unit.
- In emergency circumstances, such as in cases of serious illness or injury, you must forward a medical certificate in support of a deferred appeal. The notice of appeal must be made within three working days of the concluding date shown on the medical certificate.
- The decision of Operations Manager will be final.
- Student would then have the right to pursue the claim through an independent external body as detailed in the students' complaint / grievance policy.

"I understand all the above rules and guidelines for the assessment"

Full Name

Signature

Date (dd/mm/yyyy)

Assessment 1 – Parts A & B

Student instructions:

Before you commence working on assessment 1, read the case study “Kingsford Technologies” at least two – three times. Ensure that you completely understand the case study, however if you are having issues then contact your facilitator. You have also been provided with two separate SLAs to complete this task .

Performance required

- complete all of the questions and tasks listed in the Assessment
- meet all the requirements listed in this assessment
- your responses to the questions and tasks must be relevant, accurate and specific
- submit your completed Assessment in LMS (www.kiionline.edu.au) within the set timeframes
- your work must be in your own words
- where you use an external source of information, you must provide citation.

Please be aware that your Assessor is here to provide you with the necessary support throughout the assessment process. If you have questions, then contact them for guidance.

PART A– Review service standards

Word limit: 100 words approx.

Task 1

As part of the company's strategic vision, Kingsford Technologies (KT) would like to achieve the goal of complying with the SLA and ensure that Kingsford Technologies (**KT**) meet the service standards (delivery of maintenance services) as stated in the **current** SLA. KT also realises that there is an intense competition in IT sector. To address the service gaps KT has hired an IT consultant to write an SLA to accommodate the vision and the strategic direction of the company.

IT director wants to ensure that the new SLA has potential to cover the existing service gaps. The IT director has now assigned this job to the Sydney based call centre to **review** the SLAs (**current** and the **proposed** SLAs). Assuming that you are working for Sydney based call centre, you are required to review the **current** SLA with the **proposed** SLA provided by the "IT consultant" and identify the changes. Your job is to review and compare the **two** SLAs provided, and prepare a short report to the IT Director. Your report should consist of the following:

- 1.1. Describe the key features of the **client business domain** of Kingsford Technologies. Refer to case study and research external resources to get a broader understanding of **client business domain**
- 1.2. Evaluate the current help desk (service desk) practices performed by **KT** held (hint: refer to identification, logging, categorisation, prioritisation, diagnosis and closure aspects).
- 1.3. Identify and outline the changes made in the **proposed** version of the SLA. Identify at least 3 changes made in the **proposed** SLA
- 1.4. How the changes will impact the existing customers of **KT**

Task 2

Word limit: 100 words approx.

Kingsford Technologies capture all customer requests manually into a system which then generates a report of "Incident reporting and restoration process". The report is then presented to the review team presided by the

IT director in a weekly meeting. The director of the IT services noticed that there are several gaps in services recorded which needs immediate attention.

You are now provided an "incident reporting and restoration" report which contains the incidents ("faults") reported by the customers in last two weeks and the actions taken to address the issues.

Compare the "Incident reporting (fault reporting) and restoration performance" with the conditions stated in the SLA to ensure that it meets all the requirement of the SLA as a part of quality assurance. You are required to identify areas of discrepancy under two categories: "Incident (fault) reporting" and "restoration performance". Perform the following tasks to complete this section:

- 2.1 Refer to the "**incident reporting and restoration performance**" report and compare the actual performance with the "**service assurance**" of the **current** SLA in place. You are required to calculate the variance if there is any.
- 2.2 Identify the areas of discrepancy where the gaps have been identified. Clearly indicate whether the discrepancy exists in "**fault reporting**" (incident reported by customers) or with the "**restoration process**". To complete this section, refer to **current** SLA and the actual "**restoration performance log**" provided.

Use the template provided to complete this task. Contact your trainer for **Student checklist template or refer to the "resources" folder in LMS** (www.kii.edu.au).

Part B – Review infrastructure

Word limit: 350 words

Instruction: Use the checklist to complete this part. (see “**Student checklist template**”, refer to the “**resources folder in LMS** (www.kii.edu.au)

TASK 3 Business challenge

From the review you conducted in the previous section, it was determined that the customer wanted a single point of contact support organisation that guaranteed problem ownership from initiation to resolution. It is now a general feeling among the company executives that KT does not have the required infrastructure to provide the right support to its customers. You have now been assigned to review the current infrastructure of the support team based in NSW and Victoria and complete the following tasks. Refer to the “current SLA” and the case study to address the tasks listed below.

Requirements

- 3.1 Review the **current** service level infrastructure of Kingsford Technologies and identify the method/s of “internal support” is being currently provided to the users (clients).
- 3.2 Identify the “maintenance options” provided to the customers e.g. Online or onsite. If there is multi-lingual support (English, Japanese, Mandarin) available for the non-English speaking background?
- 3.3 Determine how Levels 1, 2 and 3 technical supports for customers are **currently** managed.
- 3.4 Review and briefly describe the **current service** infrastructure in use for providing user support.
- 3.5 Outline the **infrastructure discrepancies**, causing service “gaps” or service performance degradation. You are required to compare the **current** service infrastructure in place with the **expected** infrastructure mentioned in the **proposed SLA**.

Assessment 1 – Part C

Determine and implement solutions

Task 4

. Word limit: 350 words

IT director of the Kingsford Technologies is now keen on implementing a solution to issues identified in the previous sections (Part A and Part C). IT director wants the team, based in Sydney, to support customers throughout the country. The team is responsible for two key functions:

- a. Front desk (level 1 support) operators, most of whom speak at least three languages, receive all incoming service requests (by phone and web-based tools) and are tasked with identifying and resolving known issues
 - b. Back desk operators (level 2 support), some of whom are co-located with the customer at its Sydney headquarters, provide advanced technical support for issues that could not be resolved by the front desk operators (Level 2).
- When an issue requires third level software support, the issue will be escalated to level 3 service team.
 - Remote connection capabilities for customers to raise a ticket which then will be automatically allocated the concerned support level.

You were asked to design a Service Desk system for the company. In this scenario, you are to perform the following tasks:

- 4.1 In this section you are required to compare the service standards and infrastructure gaps that you identified in 2.2 (task 2) and 3.5 (task 5) in this assessment. Briefly explain the gaps identified in task 2.2 and 3.5 and ensure that it has been addressed in the proposed resolution.
- 4.2 Create an organisational chart highlighting the various roles and

functions making up the IT support team considering the volume of calls.

- 4.3 List the corresponding responsibilities required for each role. Clearly identify the support provided by each support level (i.e level 1, 2 and 3)
- 4.4 Write the typical Service Desk standard operating procedures for the proposed Help desk (service desk):
 - 4.4.1 Contacting the Service Desk (help desk)
 - 4.4.2 Creation of tickets
 - 4.4.3 Assigning priority levels
 - 4.4.4 Escalation procedures
 - 4.4.5 Service Desk reporting requirements.
- 4.5 Search the market for at least three (3) available software packages which can be used for remote diagnostics and incident monitoring. For example, OSTicket, ITop and TeamViewer. Identify the **features** and **functions** of each solution. The objective is to find the most cost-effective solution that fulfils all the required features. You are **also** required to do a **cost comparison** of at least three alternatives and recommend the best product suited for KT clients base.

Task 5

Word limit: 200 words approximately

Create an action plan for the **implementation** of your Service Desk (help desk) solution. Your change action plan must have the following elements:

- 5.1 The actions required to address the issue.
- 5.2 A schedule of actions to be implemented
- 5.3 The resources required in terms of IT infrastructure (what and when)
- 5.4 Briefly discuss capacity planning for level 1 support (i.e. number of employee's vs capacity to handle call volumes)
- 5.5 Measures to counter adverse consequences (for example, methods to handle client's resistance to change)
- 5.6 **Implement the solution:** You are required to design an "incident management process" for the proposed solution and undertake deployment activity of an **ITSM** solution (Provide screen shots of any practical work completed).

Assessment 1 – Part D

Time: 3 hours

Part D – Organise reviews

Task 6

Word limit: 200 words approx.

The IT director has also identified that currently Kingsford technologies do not have a regular review of the **incident resolution process** in place. Once the initial review has taken place, the process becomes a cycle of conducting the review of **incident resolution process**, documenting it and taking corrective actions.

Your task is to determine guidelines for regular reviews with stakeholders. In this task, you will need to identify the following:

- 6.1 The review interval (e.g. Weekly, fortnightly monthly, quarterly and annual)
- 6.2 Forms of review (e.g. physical meetings, phone calls or email messages)
- 6.3 Client review team formation and procedures. Provide organisation chart of level 1 support f and service escalation stand point.
- 6.4 The review parameters (e.g. review date, time, location, duration, technology and review scope (e.g. best practices identified))
- 6.5 Reporting procedures reporting the outcome of the review to all relevant stakeholders (e.g. minutes, etc.)

TASK 7

Word limit: 100 words approx.

IT director is now concerned about the effective implementation of the "reporting procedure" outlined in your response to Task 6 and ensure that reports is used in identifying and resolving **incidents**.

The following "business objectives" were outlined in the business documents in relation to the "reporting procedures".

- Report is generated in **daily** in order to monitor the service performance

- Reporting system is using quality measurements (appropriate matrices) such as resolution time, variance
- Queue reports (such as service level status and completion) must be included
- Abandon rate indicating how often the call dropped or terminated by customer while waiting for the representative.
- How often the representatives are available to take calls and how long they take to resolve
- Incident resolution timeline and appropriate details are recorded properly for performance measurement.

You are provided with a **report data set generated from (Oz ticket)**.

Based on the “business objectives” stated above you are required to verify that the “business objectives” of the reporting requirements are met efficiently. Identify and address any gaps in the report that may adversely affect the service standards.

Assessment 1 – Part E

Written answers

Instructions

Answer the following questions to demonstrate your knowledge and understanding of command line tools used to manage and troubleshoot networks.

Question 1

You typed **C:\>ping -n 2 -l 1450 131.107.8.1** and you got the following response. What does it mean?

Pinging 131.107.8.1 with 1450 bytes of data:

Reply from 131.107.8.1: bytes=1450 time<10ms TTL=32

Reply from 131.107.8.1: bytes=1450 time<10ms TTL=32

Ping statistics for 131.107.8.1:

Packets: Sent = 2, Received = 2, Lost = 0 (0% loss),

Approximate roundtrip times in milliseconds:

Minimum = 0ms, Maximum = 10ms, Average = 2ms

Your answer:

Question 2

A response of 'Destination host unreachable' means:

How are you going to troubleshoot this issue?

Question 3

A response of 'Request timed out' means:

How are you going to troubleshoot this issue?

Question 4

What does **ping -w 5000** mean?

Question 5

What does the ping 192.168.0.1 -l 5000 -n 100 command do?

Question 6

What command was typed with this output?

Windows IP Configuration

Ethernet adapter Local Area Connection:

Connection-specific DNS Suffix. :

Link-local IPv6 Address : fe80::9477:c944:e7dc:bb4f%14 Autoconfiguration

IP Address. : 172.16.0.24

Subnet Mask : 255.255.0.0

Default Gateway : 172.16.0.1

Question 7

What does the following command do?

```
netsh interface ip set address name="Local Area Connection" static  
192.168.0.100 255.255.255.0 192.168.0.1 1
```

Question 8

Type the command to get the output below.

```
Tracing route to microsoft [157.54.1.196]
over a maximum of 30 hops:

 0  172.16.87.35
 1  172.16.87.218
 2  192.168.52.1
 3  192.168.80.1
 4  157.54.247.14
 5  157.54.1.196

Computing statistics for 125 seconds...

Source to Here    This Node/Link

Hop  RTT      Lost/Sent = Pct  Lost/Sent = Pct  Address
0                               172.16.87.35
0/ 100 = 0%                               |

1   41ms    0/ 100 = 0%    0/ 100 = 0%  172.16.87.218
13/ 100 = 13%                               |

2   22ms   16/ 100 = 16%   3/ 100 = 3%  192.168.52.1
0/ 100 = 0%                               |

3   24ms   13/ 100 = 13%   0/ 100 = 0%  192.168.80.1
0/ 100 = 0%                               |

4   21ms   14/ 100 = 14%   1/ 100 = 1%  157.54.247.14
                                0/ 100 = 0%  |

5   24ms   13/ 100 = 13%   0/ 100 = 0%  157.54.1.196

Trace complete.
```

Question 9

Type the command to restart the DHCP server.

Question 10

Type the command to shut down a Linux machine immediately.

Assessment 1 PART F

Write a report

Prepare a simple report outlining/explaining the following topics.

1. The command line environment
2. Differences of the command line and graphical user interface (GUI) systems
3. List of available command line tools in:
 - a. DOS environment
 - b. Linux terminal
4. Various hardware tools and their functions including WHS requirements for each tool
5. Appropriate software tools for network security including functions for each tool
6. Areas of vulnerability (or areas of attack) in a network
 - a. Provide at least three (3) examples of *simple* types of attacks, their anatomy and methods to protect the network from those attacks.
 - b. Provide at least three (3) examples of *complex* types of attacks, their anatomy and methods to protect the network from those attacks.

Report requirements

1. Your report must have the following elements:
 - Title page (report title, your name, date submitted, due date, name of facilitator)
 - Table of contents

- Introduction, body and conclusion
 - List of references
 - Appendix (if any).
2. Research the specified topic using various sources e.g. books, magazines, journals or internet. (NOTE: Wikipedia not allowed)
 3. Write in the active form in a clear uncomplicated style.
 4. Ensure appropriate graphics are included.
 5. Document all copyright materials and produce permissions in a List of References.
 6. All text (excluding headings, captions, headers/footers and table text) in Normal style Arial 11 pt.
 7. Submit within designated timelines.

When you are confident that you have met all requirements for this assessment task, upload your file using LMS for marking.