

ICTSAS436 - Evaluate ICT system status

UNIT

Student Assessment

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| ICTSAS436 - Evaluate ICT system status | | Created: | 05/11/2020 |
| Student Assessment Guide (SAG) | | | |
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# Assessment

## Assessment Overview:

This assessment task has been designed for you to demonstrate the skills required to identify and evaluate emerging technologies and practices to enhance organisational goals.

You will be assessed on your ability to:

1. Prepare the inventory system and server for evaluation
2. Complete a system evaluation while the server is live
3. Report on the outcomes of the evaluation

You will also be assessed on the foundation skills embedded in this assessment, including:

* **Reading -** Analyses and evaluates technical and non-technical information and numerical data from a range of sources to assist with fault finding and troubleshooting problems
* **Writing** - Prepares material using clear and accurate language and numerical data to convey explicit information, requirements, and recommendations
* **Oral Communication** - Articulates information and strategies using effective communication techniques and industry standard technical language intended for audience and environment
* **Numeracy** - Uses mathematical equations to calculate and compare numerical data to determine required actions and for preparing technical reports
* **Teamwork** - Selects and uses required conventions and protocols when communicating with client and others in a range of work contexts
* **Problem solving** - Uses formal analytical thinking techniques for identifying issues and generating solutions
* **Self-management** - Takes responsibility for planning, sequencing and prioritising tasks and own workload for efficiency and effective outcomes
* **Technology** - Uses main features and functions of digital tools to complete work tasks

Carefully read through the scenario and requirements below and complete the task according to the instructions. Suppose your performance in this task is deemed unsatisfactory. In that case, your assessor will provide you with feedback and an action plan, including areas to focus on to improve your skills/knowledge to perform the task. Once you have had the opportunity to practice these skills, you can arrange to be re-assessed in this task.

Your submission must:

* Be completed independently, other than where external input is required, i.e. gathering feedback.
* Be in three parts or show that you have followed the process provided in each task
* Include all information and workings, i.e. feedback and how you have incorporated it into the final report.

Important information before you start:

1. Download the assessment resources list in each task and review them carefully.
2. Carefully read through the scenario and requirements and complete the task according to the instructions.
3. Have internet access to connect to the virtual lab.

**Let’s get started…**

## Scenario

Your employer, Accove Pty Ltd is a Small to Medium Enterprise based in Brisbane specialising in widget application production and IT support services.

You work as a systems administrator within Accove and have been assigned the following helpdesk ticket.

|  |  |  |  |
| --- | --- | --- | --- |
| **Ticket #1657** | | | |
| Subject | System Update/health check | Client | AAS (Australian Astronomy Services) |
| Priority | Medium | | |
| Request | Hi helpdesk,  One of our servers runs an application used by the team which tracks satellite movement and is essential for our research.  Could you please organise someone to log into the server and perform the updates?  Note: the server cannot be rebooted or the application restarted during the update as we require constant access to the server with other applications.  Updates required on PreviSat:   * All TLE groups and TLE Files * Application Version Update   While the updates are being carried out could the tech also check the performance of the server, we are experiencing intermittent slowdowns throughout the day which may be server related?  We would be happy to look at modifying the system if required to enhance performance. | | |
| Internal Note |  | | |
| Manager | * Scope: 1: Server hardware and OS 2: PreviSat software and hardware resources.   This is a virtual server running on AWS (Amazon Web Services) and can be accessed via the virtual lab (StudySpot) using a web browser.  Prior to **running any updates,** please complete a server status check using Microsoft Performance Monitor (PerfMon) using the counters which will provide the best performance results.  Keep a track of the server metrics before and after the application updates which will be used to determine any systemic issues.  This is a live server, and it is important that updates are carried out with this in mind.  Regards,  Charmaine Suarez  Technical Services Manager | | |

In preparation for completing this assessment review, the following documents in the ‘Document Library’ on your StudySpot portal:

* Accove Information Technology Policy.pdf
* Accove Security Policy.pdf
* Accove Customer service policy.pdf
* PreviSat user manual.pdf

Task 1 Prepare for ICT system evaluation

Connect to the client server using the instructions provided by your manager (in the scenario). At this stage do not run the PreviSat system (Satellite tracking software). Review Server Manager to gain a better understanding of the environment.

Launch the available lab in StudySpot in the assessment section (as per the image below) and wait for it to build your environment (5min). Once the Virtual lab is online, launch the server and begin your work.



Take a screenshot of the Local Server screen within server manager, insert the screenshot in the box below.

|  |
| --- |
| Screenshot Local Server: |
|  |
| Trainer Use Only |
| Satisfactory  Not Yet Satisfactory  Date: Click here to enter a date.  Trainer Feedback: |
| Click here to enter text. |

Now that you are familiar with the environment you need to evaluate the operating system, and the PreviSat system. You also need to check the capacity of the system using capacity tools to check if the system is performing as per its capacity.

You will be performing updates on the PreviSat system while the system is running. You will need to plan the change of status and evaluate the status of the system. You also need to develop the evaluation plan for the ICT system and determine any required resources.

After developing the plan, you also need to send an alert message to the users about the evaluation of the ICT system and highlight the resources which are required to evaluate the ICT system.

Complete the following system evaluation and update template

|  |  |
| --- | --- |
| Evaluation Template: | |
| 1. Server Specifications  *(Review the server and enter the details for the specifications listed)* | * Server name: * CPU type and speed: * Total disk space: * Operating system version: |
| 1. PreviSat system details *(Review PreviSat website and other sources to complete the following)* | * Current Version: * Minimum system requirements: |
| 1. Details of capacity planning tools *(Outline the details of performance monitor, the tool requested by your manager)* |  |
| 1. Performance indicators using Performance Monitor *(Outline ten (10)* [*counters*](https://docs.microsoft.com/en-us/windows/win32/perfctrs/performance-counters-portal) *you will use to determine the performance of the system)* |  |
| 1. Resources required to carry out evaluation *(Outline any resources required to review and update the system)* |  |
| 1. Planning of change of status test *(outline how you will carry out the performance testing/updates)* |  |
| 1. List Accove company procedures that will be adhered to during the evaulation and update process |  |
| 1. User Impact (List potential impacts to users during |  |
| 1. User Alerts *(Outline methods that will be used to alert users of impacts during the evaulation and updates)* |  |
| 1. Evaluation/update plan | |
| * Software/System to be evaluated |  |
| * Date/s of evaluation/update |  |
| * Person completing evaluation/updates |  |
| * Time required to complete server evaluation |  |
| * Time required to complete updates |  |
| 1. Outline five (5) risks related to carrying out the evaluation/updates |  |
| 1. Outline mitigation strategies for each risk identified |  |
| 1. Client sign off *(Sign off to be completed after review by client manager)* | Manager name:  Manager signature:  Sign off date: |
| Trainer Use Only | |
| Satisfactory  Not Yet Satisfactory  Date: Click here to enter a date.  Trainer Feedback: | |
| Click here to enter text. | |

Task 2 Carry out ICT system evaluation

Your evaluation plan has been signed off and you are now ready to carry out the system evaluation and updates. Note: once you have

**2.1** Log in to the server (using the instructions in task 1) and open Performance Monitor (perfmon.exe). Take a screenshot of Performance Monitor running on the server in the box below.

|  |
| --- |
| Screenshot: |
|  |
| Trainer Use Only |
| Satisfactory  Not Yet Satisfactory  Date: Click here to enter a date.  Trainer Feedback: |
| Click here to enter text. |

**2.2** From within Performance Monitor, add the ten (10) counters you identified in step 4 of your evaluation document.

## When all counters have been added and the Performance Monitor screen has been fully populated take a screenshot of the results and enter it in the box below. Graphical user interface, text Description automatically generated

Note: leave Performance Monitor running for the next tasks.

|  |
| --- |
| Screenshot: |
|  |
| Trainer Use Only |
| Satisfactory  Not Yet Satisfactory  Date: Click here to enter a date.  Trainer Feedback: |
| Click here to enter text. |

**2.3** Analyse the results of your Performance Monitor test and outline your thoughts on the system status and reliability of the server. Refer specifically to the counters you have selected.

|  |
| --- |
| Results: |
|  |
| Trainer Use Only |
| Satisfactory  Not Yet Satisfactory  Date: Click here to enter a date.  Trainer Feedback: |
| Click here to enter text. |

**2.4** Now that you have captured critical information about the status of the system, you will need to update the PreviSat system as per the scenario. Refer to the user manual provided in StudySpot to understand the process of updating the system.   
Note: the server must remain live during the update process and change the status of the server, continue testing the performance of the server using Performance Monitor.   
Once you have finished the updates complete the following table:

|  |  |
| --- | --- |
| System Update: | |
| Outline the steps followed to update PreviSat |  |
| Take a screenshot/s of the completed updates in PreviSat (show that the system is up to date) |  |
| Run Performance Monitor after the PreviSat system has been updated and insert a screenshot of the results |  |
| Trainer Use Only | |
| Satisfactory  Not Yet Satisfactory  Date: Click here to enter a date.  Trainer Feedback: | |
| Click here to enter text. | |

Complete the following table to record your observations:

|  |  |
| --- | --- |
| Observations: | |
| Review the Performance Monitor results before and after the PreviSat update. Describe your findings. |  |
| 2.5 Describe any changes or effects to the system based on the evaluation and updates that have taken place. |  |
| 2.6 Was there any changes to the server which weren’t caused by the updates and evaluations you carried out? If so, describe those changes. |  |
| 2.7 Outline the process you would follow to escalate any issues that can’t be resolved. Escalate using this process if required. |  |
| 2.8 Based on your evaluation what recommendations would you make to the client to help improve any performance or system issues? |  |
| Trainer Use Only | |
| Satisfactory  Not Yet Satisfactory  Date: Click here to enter a date.  Trainer Feedback: | |
| Click here to enter text. | |

## Task 3 Report on ICT system evaluation

Now that you have completed the server evaluation and PreviSat updates you will need to create a client report and present recommendations to the client.

|  |  |
| --- | --- |
| Report: | |
| 3.1 Anomalies observed in ICT system status evaluation outside expected results |  |
| 3.2 Create a basic procedure for carrying out server evaluations using Performance Monitor  *(Use the steps you followed in the previous tasks, use screenshots where applicable)* |  |
| 3.3 Results of evaluation and PreviSat update | |
| Overall results of server evaluation |  |
| Overall results of updates to PreviSat system |  |
| Recommendations based on evaluation |  |
| Trainer Use Only | |
| Satisfactory  Not Yet Satisfactory  Date: Click here to enter a date.  Trainer Feedback: | |
| Click here to enter text. | |

**3.4** Now that you have completed the server evaluation and system upgrade, you will meet with the client (trainer) and discuss your findings as well as get feedback on the results and your recommendations

In the meeting you need to discuss the points covered in your report:

* Anomalies observed during evaluation
* Evaluation procedure
* Results of server evaluation
* Results of updates to PreviSat system
* Recommendations based on the evaluation

You need to complete the meeting in 7-9 minutes. Your trainer will observe your performance and complete an observation checklist.  
   
Complete the meeting template below

|  |  |  |
| --- | --- | --- |
| Meeting minute template | | |
| Meeting Objective: | | |
| Attendees: | | |
| Venue: | | |
| Date: | | |
| Points Discussed | Actions Suggested | Target Date |
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| **Submission Instructions**  Please save a copy of your assessment to keep in your own records.  Include your name in the file, for example, **ICTSAS436 YourName.docx**  Submit your saved document by uploading your completed assessment to **StudySpot** for marking by your trainer/assessor. |