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| JPK's logo  sldn's logo  LEARN AND WORK ASSIGNMENT  (LWA) | | | |
| NOSS  (CODE NOSS) | COMPUTER SYSTEM OPERATION  (IT-020-3:2013) | | |
| Competency Unit Title  (CU CODE) | COMPUTER NETWORK CONNECTIVITY  SET-UP  (IT-020-3:2013-C06) | LEVEL | 3 |
| Competency Unit Descriptor | Computer network connectivity set-up refers an activity which links the computer and other hardware or devices within the system such as scanner, printer, multifunction machine and fax to communicate each other to execute tasks.  The person who is competent in this competency unit shall be able to carry out configuration setting to link the computer and other hardware and peripherals, maintain and troubleshoot the connectivity to ensure computers and peripherals within the system are connected each other in accordance with user’s requirement and company SOP  The outcome of this competency is to prepare a link among computers system devices in order them to communicate each other to execute tasks according to user’s requirement.  The personnel who are to be trained for this competency must in prior have the following competencies:  i. Competence in CU 1: Computer set-up | | |
| Candidate Name |  | | |
| Candidate I/C  Number |  | | |
| Company’s Name |  | | |

CU WORK ACTIVITY STATEMENT:

PERFORM COMPUTER NETWORK CONNECTIVITY AND SET-UP ACTIVITIES

DURATION:

A. SETTING GOAL

You are required to perform computer network connectivity and set-up activities based on performance criteria below:

* 1. Determine type of computer network configuration
  2. Ensure types of network connectivity (LAN, WAN, MAN)
  3. Obtain computer network configuration details from superior
  4. Initialize and connect network adapter (wired,wireless)
  5. Configure, check and verify network configuration parameters

1.6 Configure network security setting in accordance with security

requirement

1.7 Inspect and confirm physical connectivity

1.8 Conduct and verify network connection test according with network

connectivity test procedure.

1.9 Analyze and confirm connectivity test result

1.10 Execute and specify the corrective action

1.11 Confirm and verify the computer network connectivity

1.12 Obtain and interpret the computer network test result

1.13 Identify the computer network problem

1.14 Recommend to user the corrective action

1.15 Perform the troubleshoot actions

1.16 Test and verify the network connections

1.17 Update and report computer networks troubleshoot status to user and superior.

1.18 Document computer networks configuration.

1.19 Record and submit job order to user for acknowledgement.

1.20 Prepare computer network report.

B. PLANNING

You are required to plan activities in performing computer network connectivity and set-up to achieve setting goal by using resources listed below:

* 1. Identify tools, equipment & materials.

|  |  |
| --- | --- |
| ITEMS | RATIO (TEM : Trainees) |
| 1) LCD Projector  2) Laptop/PC  3) Computer peripheral  3.1 Network Interface Card (NIC)  3.2 Scanner  3.3 Printer / multifunction  3.4 Computer / PC  3.5 Server  3.6 Wireless devices  4) Computer peripheral drivers  5) Switch  6) Router  7) Access Point  8) Patch panel  9) Patch cord  10) RJ 45 Faceplate  11) Network Simulator (software)  12) Sample of network connectivity  testing report  12) Sample of UAT status report  13) Sample of Network connectivity set-  up documentation  14) Sample of Network configuration  manual  15) Sample of compatibility record | 1:25  1:25  1:5  1:5  1:10  1:10  1:10  1:10  1:5  1:5  1:1  1:1  1:1  1:1  1:1  1:1 |

* 1. Perform computer network connectivity and set-up workflow.
  2. Identify computer network connectivity and set-up procedures, flow chart and correct sequence.
  3. Plan duration/time of computer network connectivity and set-up procedures.
  4. Identify manpower in performing computer network connectivity and set-up activities.
  5. You may review references as guidelines in performing this activity.

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| --- |
| REFERENCES |
| 1. Books, Hephaestus (2011) . Computer Peripherals, Including: Computer Monitor,   Fax, Hard Disk Drive, Stored Energy Printer, Peripheral, Plug and Play, Auto-Configuration, Game Port, Hot Swapping, Autodetection, Surge Protector, Remote Terminal Unit,. Western Digital Media Center. Hephaestus Books, Lightning Source Uk Ltd. ISBN-13: 978-1-242-97956-9   1. Jyoti Snehi. (2006). Computer Peripherals and Interfacing. Firewall Media.   ISBN-13: 978-81-7008-929-2   1. R.A. Penfold. (2005). How to Set Up Your New Computer. Bernard Babani   Publishing ISBN-13: 978-0-85934-559-0   1. Robert B J Warnar (2012). Computer Peripheral Memory System Forecast   (Volume 500-545). |

C. DECISION MAKING

* 1. You are required to get coach approval before performing computer network connectivity and set-up the computer network connectivity activities.

D. EXECUTING & MONITORING

You are required to perform computer network connectivity and set-up the activities according to the steps below:

* 1. Ensure types of computer network connectivity
  2. Ensure the wireless technology
  3. Identify types of computer peripheral and its driver

4.4 Prepare network installation equipment

* 1. Carry out Network Interface Card (NIC) installation
  2. Connect RJ 45 cable into NIC
  3. Install NIC driver into computer and peripherals
  4. Set-up wireless connection and configuration
  5. Set-up and config access switch and router

4.10 Configure IP addresses

4.11 Carry out network testing:

4.11.1 Ping test

4.11.2 Tracert test

4.11.3 Internet browser application test

4.11.4 Print-out test

4.11.5 Scanning test

4.11.6 Wireless Authentication test

4.11.7 Wireless connectivity test

* + 1. Network Simulator Connection Test

4.12 Execute User Acceptance Test (UAT)

4.13 Interpret NIC Light Emitting Diode (LED) indicator

4.14 Diagnose network connectivity symptom/ problem

4.14.1 Crimping failure

4.14.2 NIC Driver

4.14.3 Cable failure

4.14.4 OS compatibility

4.14.5 Hardware compatibility

4.15 Prepare network connectivity testing report

4.16 Prepare UAT status report

4.17 Carry out network connectivity set-up documentation

4.17.1 Prepare network configuration manual

4.17.2 Record and label drivers

4.17.3 Prepare compatibility record

4.18 Comply with attitude, safety and environment listed below when performing this activity.

|  |  |  |
| --- | --- | --- |
| ATTITUDE | SAFETY | ENVIRONMENTAL |
| Precise and through in identifying network connectivity | Adhere to company policy | Adhere to company policy |
| Meticulous in identifying computer system peripherals | Adhere to company confidentiality policy and record management procedure | Adhere to company confidentiality policy and record management procedure |
| Meticulous in connecting RJ cable and installing NIC |  |  |
| Accurate in carrying out IP configuration |  |  |
| Precise and systematic in performing computer network connectivity test |  |  |
| Detail and thorough when diagnose network connectivity symptom |  |  |
| Transparent and detail in preparing computer system maintenance report |  |  |

4.19 Apply core activities listed below when performing this activity.

|  |  |
| --- | --- |
| **Social Skills** | **Core Abilities** |
| Communication skills | 02.03 Communicate clearly. |
| Conceptual skills | 01.02 Document information procedures or processes.  02.04 Prepare brief reports and checklist  using standard forms. |
| Interpersonal skills | 01.11 Apply thinking skills and creativity.  03.01Apply cultural requirement to the  workplace.  03.07 Resolve interpersonal conflicts  03.15 Liaise to achieve identified outcomes.  03.16 Identify and assess client/customer  needs.  04.02 Set and revise own objectives and  goals. |
| Leadership skills | 01.01 Identify and gather information.  02.11 Convey information and ideas to people.  03.02 Demonstrate integrity and apply  practical practices.  03.05 Demonstrate safety skills  03.06 Respond appropriately to people and  situations.  04.04 Apply problem solving strategies.  04.05 Demonstrate initiative and flexibility  04.07 Negotiate acceptance and support for  objectives and strategies  06.04 Adapt competencies to new  situations/systems |
| Learning skills | 01.03 Utilize basic IT applications.  01.04 Analyse information.  01.05 Utilize the Internet to locate and gather  information.  01.06 Utilize word processor to process information  05.01 Implement project/work plans  06.01 Understand systems.  06.03 Identify and highlight problems  06.05 Analyse technical systems.  06.06 Monitor and correct performance of  systems. |
| Multitasking and prioritizing | 02.10 Prepare reports and instructions.  04.03 Organize and maintain own workplace. |
| Self-discipline | 02.01 Interpret and follow manuals, instructions and SOP's.  03.03 Accept responsibility for own work and  Work area.  04.01 Organize own work activities.  06.02 Comply with and follow chain of  command. |
| Teamwork | 03.08 Develop and maintain a cooperation  within work group.  03.13 Develop and maintain team harmony  and resolve conflicts.  03.14 Facilitate and coordinate teams and  ideas. |

E. EVALUATING

You are required to evaluate computer network connectivity and set-up activities using the

checklist below.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | ASSESSMENT CRITERIA  (60%) | MARKS GIVEN BY APPRENTICE | | | | | MARKS GIVEN BY  COACH | | | | |
| 0 | 1-2 | 3-4 | 5-6 | 7 | 0 | 1-2 | 3-4 | 5-6 | 7 |
| 1 | Types of computer network connectivity identified |  |  |  |  |  |  |  |  |  |  |
| 2. | Wireless technology defined |  |  |  |  |  |  |  |  |  |  |
| 4. | Types of computer peripheral and its driver identified |  |  |  |  |  |  |  |  |  |  |
| 5. | Network installation equipment prepared |  |  |  |  |  |  |  |  |  |  |
| 6. | Network Interface Card (NIC) installation carried out |  |  |  |  |  |  |  |  |  |  |
| 7. | RJ 45 cable connected into NIC |  |  |  |  |  |  |  |  |  |  |
| 8. | NIC driver installed into computer and peripherals |  |  |  |  |  |  |  |  |  |  |
| 9. | Identifying the functionality of connection in Network Simulator |  |  |  |  |  |  |  |  |  |  |
| 10. | IP addresses configured |  |  |  |  |  |  |  |  |  |  |
| 11. | Network testing carried out:   * Ping test * Tracer test * Internet browser application test * Print-out test * Scanning test * Wireless Authentication test * wireless connectivity test |  |  |  |  |  |  |  |  |  |  |
| 12. | UAT executed |  |  |  |  |  |  |  |  |  |  |
| 13. | NIC Light Emitting Diode (LED) indicator interpreted |  |  |  |  |  |  |  |  |  |  |
| 14. | Network connectivity symptom/ problem diagnosed   * Crimping failure * NIC Driver * Cable failure * OS compatibility * Hardware compatibility |  |  |  |  |  |  |  |  |  |  |
| 15 | Network connectivity testing report prepared |  |  |  |  |  |  |  |  |  |  |
| 16. | UAT status report prepared |  |  |  |  |  |  |  |  |  |  |
| 17. | Network connectivity set-up documentation carried out   * Network configuration manual prepared * Drivers labeled and recorded * compatibility recorded |  |  |  |  |  |  |  |  |  |  |
|  | SUBTOTAL | A1 | | | | | A2 | | | | |
|  | FULL MARKS | 119 | | | | | 119 | | | | |
| B | ATTITUDE/SAFETY/  ENVIRONMENT  (20%) | MARKS GIVEN BY APPRENTICE | | | | | MARKS GIVEN BY  COACH | | | | |
| 0 | 1-2 | 3-4 | 5-6 | 7 | 0 | 1-2 | 3-4 | 5-6 | 7 |
| 1 | Attitude |  |  |  |  |  |  |  |  |  |  |
| 2. | Safety |  |  |  |  |  |  |  |  |  |  |
| 3 | Environmental |  |  |  |  |  |  |  |  |  |  |
|  |  | B1 | | | | | B2 | | | | |
|  |  | 21 | | | | | 21 | | | | |
| C | EMPLOYABILITY SKILLS  (SOCIAL SKILLS)  (20%) | MARKS GIVEN BY APPRENTICE | | | | | MARKS GIVEN BY  COACH | | | | |
| 0 | 1-2 | 3-4 | 5-6 | 7 | 0 | 1-2 | 3-4 | 5-6 | 7 |
| 1 | Communication skills |  |  |  |  |  |  |  |  |  |  |
| 2 | Conceptual skills |  |  |  |  |  |  |  |  |  |  |
| 3 | Interpersonal skills |  |  |  |  |  |  |  |  |  |  |
| 4 | Multitasking and prioritizing |  |  |  |  |  |  |  |  |  |  |
| 5 | Self-discipline |  |  |  |  |  |  |  |  |  |  |
| 6 | Teamwork |  |  |  |  |  |  |  |  |  |  |
| 7 | Learning skill |  |  |  |  |  |  |  |  |  |  |
| 8 | Leadership skill |  |  |  |  |  |  |  |  |  |  |
|  |  | C1 | | | | | C2 | | | | |
|  | FULL MARKS | 56 | | | | | 56 | | | | |

CALCULATION TABLE

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | MARKS GIVEN BY APPRENTICE | MARKS GIVEN BY COACH | WEIGHTED MARKS GIVEN BY  APPRENTICE | WEIGHTED MARKS GIVEN BY COACH |
| ASSESSMENT CRITERIA | A1 | A2 | A1 / 119X 60 | A2 /119X 60 |
| ATTITUDE, SAFETY & ENVIRONMENT | B1 | B2 | B1 / 21X 20 | B2 / 21X 20 |
| EMPLOYABILITY SKILLS (SOCIAL SKILLS) | C1 | C2 | C1 / 56X 20 | C2 / 56X 20 |
| Total | | | X | Y |
| Ratio of Percentage (Apprentice: Coach) | | | P% | Q% |
| Grand Total | | | (P/100 x X) + (Q/100 x Y) | |

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| COMMENTS/ RECOMMENDATIONS BY COACH |

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COACH: APPRENTICE:

DATE: DATE: