# Test Project

## Module B1 - Copper Cabling System

## *ICT Network Infrastructure*

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# Introduction

Module B consists of the following documents and files:

- Part 1 Test Project: Copper Cabling System Installation
- Part 2 Test Project: Monitoring Platform Configuration and Verification
- Fig.MB_series: Installation Drawings for Part 1
- Doc.MB1: Part 2 Record Form

This document applies specifically to Part 1.

# Description of project and tasks

**Part 1: Copper Cabling System Installation**

This part consists of the following documents/files, which are provided as digital files:

- Fig.MB_series,
- Doc.MB1.

# Instructions to the Competitor

The total competition time for Module B, covering both Part 1 and Part 2, is five hours.

No separate time limit is specified for Part 1 or Part 2. Competitors may undertake the two parts in either order within the total competition time of five hours.

- Competitors shall install the cabling system in accordance with Fig. MB_series.
- The installation locations of panels and other equipment shall be in accordance with MB_5_Location.
- Competitors shall complete the connection diagrams in Fig.MB_2_CP-A, Fig.MB_3_CP-B and Fig.MB_4_CP-C. The Competitor shall determine the connection ports and any other unspecified connection details. The installation shall conform to the completed connection diagrams.
- For all installation work, cable routing, bend radius management, fixing, protection, service loop management, extra length storage, and labelling shall comply with the specified requirements.
- Conduct a wiremap test on every completed installed link. Record the test results in the specified form.
- Conduct a certification test using the DSX on at least 50% of the completed installed links associated with each panel. Where the number of completed links associated with a panel is odd, round up to the next whole link. Save the test results in the specified folder.
- All measurements and tests shall be performed in accordance with the applicable standards and appropriate test procedures.
- The certification test shall be performed using the Permanent Link configuration and the test limit specified for each link in Fig.MB_series. Pass*, Fail* and Fail results shall be retained. The result file name shall correspond to the physical link ID.
- Other installation requirements to be followed are specified in the drawings.


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# Mandatory Requirements for Installation and Measurement for Part 1

## Non-compliance with Installation Requirements

- Where the SMT determines that a Competitor has failed to comply with any of the installation requirements set out in [1][2][3][6][7][8][10][11][12] below, they shall notify the Competitor and instruct the required restoration and rework. The Competitor shall, where practicable, return the affected part of the installation to the condition immediately before the non-compliant work commences and repeat the work in accordance with the applicable requirement. Where restoration is not possible, replacement materials may be provided for the rework. The time required for restoration and rework shall be included in the competition time, and no additional time shall be granted. If the repeated work complies with the applicable requirements, full points remain available for the corresponding assessment item.

## General Installation Requirements

1. All competition work shall, in principle, be performed in accordance with the installation methods and procedures applied at actual installation sites.
2. Special installation methods that are used solely to reduce competition time or gain a scoring advantage, that are feasible only in the competition environment, and that would not be acceptable at an actual installation site are not permitted.
3. All installation work shall be carried out in a manner that ensures quality, safety and maintainability.
4. Products shall be installed and handled in accordance with the manufacturer's instructions. Where different instructions are specified in the Test Project, drawings or other competition documents, those instructions shall take precedence.

## Cable Length, Routing and Management

5. Where a cable length is specified by a numerical value, drawing or other means, the cable length shall comply with that specification.
6. Where a cable length is not specified, the cable shall be routed along the designated path, and the required length shall be confirmed before the cable is cut. However, where multiple cables have the same starting point, termination point, routing path and required maintenance slack, the required length may be confirmed using the first cable, after which the remaining cables may be cut to the same reference length.
7. A maximum of six twisted-pair cables may be routed simultaneously in one cable-routing operation along the same routing path.
8. A cable-routing operation begins when the cables are first placed along the designated route and ends when they have been routed to the specified termination location.
9. Temporary installation marks may be applied to identify cables during installation. However, such marks shall not be used as a substitute for identification labels. All cables for which identification labels are specified in the Installation Specifications or the Labelling Guidelines shall be fitted with the required labels.
10. A cable shall not be finally dressed or placed in its final storage position until its termination or connection has been completed. Temporary securing, support or staging necessary to ensure safety during installation or prevent damage to the cable is permitted.
11. A cable shall not be terminated before it has been routed along the designated path and positioned at the specified termination point.
12. Several cables shall not be pre-bundled or dressed on the floor or in another location and then routed as a bundle onto a cable ladder or other cable-routing system.
13. Unless otherwise specified, sufficient cable slack shall be provided for re-termination and other maintenance work. Excessive slack or coiled cable shall not obstruct equipment airflow.


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14. Cables shall be secured to the cable tray at the specified intervals. Cables belonging to different systems or applications shall be routed in accordance with the designated pathways and segregation requirements. They shall not be intermixed and shall be secured independently.

## Labelling Requirements

15. Cable IDs, panel IDs, and other identification IDs shall be determined and consistently managed by the Competitor in accordance with the Labelling Guidelines.
16. Identification labels shall be produced using a label printer in accordance with the Labelling Guidelines.

## Measurement Requirements

17. Copper cabling measurements shall be performed in accordance with the applicable requirements of ISO/IEC 11801.
18. Before performing any official certification test, Competitors shall confirm that the tester is within its valid calibration period, that the correct test limit and cable type have been selected, and that the tester is ready for measurement in accordance with the manufacturer's instructions.
19. All official measurement results shall be retained in the internal memory of the test instrument and shall not be deleted or overwritten, regardless of whether the results are a Pass or Fail. Competitors shall export copies of the results for submission and save them in the designated folder without deleting or overwriting the original results.


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# Test Project

## Module B2 - Monitoring System Configuration and Verification

## *ICT Network Infrastructure*

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WSC2026_TP02_MB2_en

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# Introduction to Test Project

Module B consists of the following documents and files:

- Part 1 Test Project: Copper Cabling System Installation
- Part 2 Test Project: Monitoring Platform Configuration and Verification
- Fig.MB_series: Installation Drawings for Part 1
- Doc.MB1: Part 2 Record Form

This document applies specifically to Part 2.

# Description of project and tasks

Part 2: Monitoring Platform Configuration and Verification

- Configure and verify the following two monitoring systems in accordance with the scenario and detailed requirements specified in this document:
  - System A: Data Centre Power and Environmental Monitoring System
  - System B: ICT Network Infrastructure Monitoring System
- Submit the required records, screenshots, configuration evidence, and verification results specified in Doc.MB1, using the designated file names.

# Instructions to the Competitor

The total competition time for Module B, covering both Part 1 and Part 2, is five hours.

Part 1 and Part 2 have no prescribed time allocation. Competitors may undertake them in either order, and no separate time limit applies to either Task.

## System A: Data Centre Power and Environmental Monitoring System

### System Configuration

In the data centre power and environmental monitoring system, data obtained from monitored devices, including temperature and humidity sensors, power meters, UPS units and air-conditioning equipment, is transmitted to the monitoring system through an integrated data acquisition unit or a serial server.

In an actual installation, when a monitored device uses Modbus RTU/RS-485, the serial server converts the serial communication with the monitored device into communication that can be used over an Ethernet/IP network. The integrated data acquisition unit collects data from the monitored devices and transmits it to the monitoring system through the monitoring management network.


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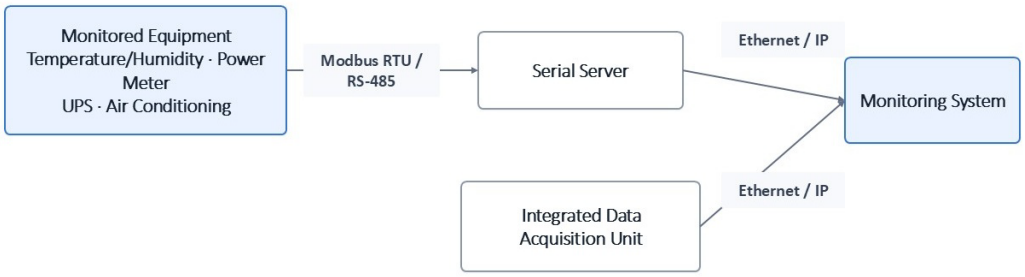



Figure: Monitoring_System_Architecture

In this Test Project, the actual installation configuration is simulated. Although no independent physical serial server exists in the simulator, a serial server shall be registered as a communication interface device and its network settings shall be configured. Competitors shall therefore design the IP addresses used by the integrated data acquisition unit and serial server on the monitoring management network. The actual RS-485 cabling to monitored devices and the configuration of serial communication parameters are outside the scope of the work and assessment.

## Task 1 (System A): IP Address Design for the Monitoring Management Network

Based on the following network conditions, determine the static IP addresses to be assigned to the integrated data acquisition unit and serial server, and reserve a contiguous IP address range for eight Ethernet-connected monitoring devices to be added in the future. In Task 2, configure the communication interface device using the serial server IP address, subnet mask and default gateway determined in this Task.

### Network Conditions

To be disclosed on the Competition day.

### Requirements

Competitors shall complete the following:

1. Identify the prefix length and subnet mask of the assigned network.
2. Identify the network address and broadcast address.
3. Determine the usable host IP address range.
4. Determine the static IP address to be assigned to the integrated data acquisition unit.
5. Determine the static IP address to be assigned to the serial server.
6. Determine a contiguous IP address range for eight monitoring devices to be added in the future.
7. Confirm that all determined IP addresses and address ranges satisfy all network conditions.
8. Record the determined values in the IP Address Design Record (separate document).
9. Apply the parameters, including the determined network settings, to the integrated data acquisition unit. Refer to the Operating Procedure for the method of applying the parameters.
10. Confirm that all parameters have been entered correctly and submit a screenshot with the [Add New] dialog left open.


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Table: IP Address Design Record (submitted separately)

| Item | Design Value |
|---|---|
| **Network address** | |
| **Prefix length** | |
| **Subnet mask** | |
| **Usable host IP address range** | |
| **Broadcast address** | |
| **Default gateway** | |
| **Reserved IP address range** | |
| **IP address of the integrated data acquisition unit** | |
| **Serial server IP address** | |
| **IP address range for eight future devices** | |

## Operating Procedure

1. Log in successfully to the data centre power and environmental monitoring system and display the main screen.
2. On the left navigation bar, click [Device Management] to expand the drop-down menu.
3. From the expanded submenu, select [Device List] to display the device list screen.
4. On the device list screen, click [Add New] to open the device settings dialog.
5. Configure the device parameters in accordance with the following requirements.


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## Task 2 (System A): Addition and Configuration of a Communication Interface Device

Using the device management function of the data centre power and environmental monitoring system, add to Serial Port 6 the communication interface device used to communicate with the relay device. Enter the specified device information and the network settings designed in Task 1 and save the configuration. After configuration, confirm that the saved values comply with the specified conditions and the Task 1 design results.

### Requirements

Competitors shall complete the following:

1. Using the device management function, register the specified communication interface device. Then enable and configure Serial Port 6 of that device for communication with the relay device.
2. Enter the basic and network information for the communication interface device as specified in the table.

Table: Basic Settings for the Communication Interface Device (submitted separately)

| Item | Setting |
|---|---|
| **Device type** | 8-port RS-485 serial server |
| **Device model** | TAS-LAN-468 |
| **Device name** | Temperature Management |
| **Serial number** | wq |
| **Serial server IP address** | Serial server IP address determined in Task 1 |
| **Subnet mask** | Subnet mask determined in Task 1 |
| **Gateway address** | Default gateway specified in Task 1 |

1. Enable Serial Port 6 of the communication interface device.
2. Configure the communication parameters and connected-device information for Serial Port 6 as specified in the table. Refer to the Operating Procedure.
3. Take a screenshot of the complete [Serial Port Settings (Serial Port 6)] screen after configuration. All parameters, including operating mode, local port, destination IP address/port, connected-device type and channel settings, shall be clearly visible.

### Operating Procedure

1. On the left navigation bar, expand [Device Management] and select [Communication Interface Device] to display the settings screen.
2. On the Serial Port tab, select [Serial Port 6].
3. Configure it in accordance with the requirements.
4. Confirm that all parameters are correct, and click [Save] to apply the settings.


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Table: Serial Port Settings

| Item | Setting |
|---|---|
| **Setting status** | On |
| **Operating mode** | TCP client |
| **Local port** | 506 |
| **Destination IP address** | IP address of the integrated data acquisition unit determined in Task 1 |
| **Destination port** | 8084 |
| **Baud rate** | 9600 bps |
| **Data bits** | 8 |
| **Stop bits** | 1 |
| **Parity** | None |
| **Connected-device type** | IO Controller |
| **Connected device** | Relay |
| **Channel type - input RX** | Relay |
| **Channel type - output TX** | Relay |


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## Task 3 (System A): Configuration of Alarm Levels and an Alarm Model

Using the alarm management function of the power and environmental monitoring system, create two alarm levels with different severity levels. Then create a Machine Room High Temperature Alarm model to monitor the machine room temperature, and configure the specified alarm level, threshold, delay time, repeat-notification interval, alarm notification content and recovery notification content.

After configuration, confirm that the saved alarm levels and alarm model match the specified conditions, and save screenshots of the results.

## Task 3-1 (System A): Creation of Alarm Levels

Table: Configuration Conditions

| Item | Level 1 Alarm | Level 2 Alarm |
|---|---|---|
| **Alarm level name** | Level 1 Alarm | Level 2 Alarm |
| **Description** | The device parameter significantly exceeds the criterion and may cause a system failure or safety risk. Check the status immediately and perform the necessary recovery action. | The device parameter slightly exceeds the criterion. Although the core system functions are not affected, check the status promptly and perform the necessary inspection. |

### Requirements

Competitors shall complete the following:

1. Display the alarm level management screen of the alarm management function.
2. Create a new Level 1 Alarm and set the specified name and description in accordance with the table.
3. Create a new Level 2 Alarm and set the specified name and description in accordance with the table.
4. Save each alarm level created.
5. After saving, confirm that both alarm levels are registered in the list.
6. Take a screenshot of the complete [Alarm Level] screen after configuration. The names, descriptions, and creation dates of Level 1 Alarm and Level 2 Alarm shall be clearly visible.

### Operating Procedure

1. On the left navigation bar, expand [Alarm Management] and select [Alarm Level] to display the alarm level management screen.
2. Click [Add New] to create the first alarm level.
3. Click [Save] to complete its creation.
4. Click [Add New] again to create the second alarm level.
5. Click [Save] to complete its creation.


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## Task 3-2 (System A): Creation of the Machine Room High Temperature Alarm Model

Table: Basic Settings

| Item | Setting |
|---|---|
| **Alarm type name** | Machine Room High Temperature Alarm |
| **Alarm level** | Level 1 Alarm |
| **Alarm type description** | High temperature alarm |
| **Trigger type** | Numeric |
| **Alarm setting** | Alarm upper limit |
| **Alarm upper limit** | 35℃ |
| **Delay time** | 10 seconds |
| **Alarm repeat-notification interval** | 5 minutes |

### Requirements

Competitors shall complete the following:

1. Display the alarm model settings screen of the alarm management function.
2. Create a new Machine Room High Temperature Alarm model.
3. Configure the basic settings in accordance with the table.
4. Create and configure the content displayed when the alarm is triggered and when it is cleared so that the applicable status and required action are clear. The alarm notification shall identify the location, abnormal condition and required response. The recovery notification shall identify the restored condition and required confirmation.
5. Check all settings and save the alarm model.
6. After saving, reopen the alarm model and confirm that the saved settings match the specified conditions.
7. Take a screenshot of the complete [Edit Alarm Model] dialog after configuration. All parameters, including the alarm name, level, threshold, delay time and alarm content, shall be clearly visible.

### Operating Procedure

1. On the left navigation bar, expand [Alarm Management] and select [Alarm Model] to display the alarm model settings screen.
2. Click [Add New] to open the Edit Alarm Model dialog.
3. Enter the required parameters in the [Basic Settings] section.
4. Enter the required content in the [Alarm Content Settings] section.
5. Confirm that all parameters are correct, and click [Save] at the bottom right of the dialog to complete creation of the alarm model.


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## Task 4 (System A): Configuration of Fan Interlocking Control Based on a High Temperature Alarm

Using the interlocking management function of the data centre power and environmental monitoring system, create a control rule that automatically starts the machine room fan when the Machine Room High Temperature Alarm created in Task 3 is triggered.

Based on the Requirements, Competitors shall determine the settings for the blank items in the table below, enter the determined settings in Doc.MB1, and configure the system accordingly.

Table: Interlocking Rule Settings

| Item | High Temperature Interlocked Fan |
|---|---|
| **Interlocking rule name** | Machine Room High Temperature Interlock - Fan Start |
| **Automatic execution** | To be determined by the Competitor |
| **Trigger alarm model** | To be determined by the Competitor |
| **Associated communication interface device** | Communication Interface Device (Test) |
| **Associated serial port** | To be determined by the Competitor |
| **Execution action 1** | To be determined by the Competitor |

### Requirements

Competitors shall complete the following:

1. Create a new interlocking rule using the interlocking management function.
2. Set the interlocking rule name to Machine Room High Temperature Interlock - Fan Start.
3. Configure the interlocking rule for automatic execution.
4. Select the alarm created in Task 3 as the trigger alarm model.
5. Select the specified communication interface device and serial port as the control target.
6. Configure the execution action to turn DO1 on and start the fan when the Machine Room High Temperature Alarm is triggered.
7. Check the entered settings and save the interlocking rule.
8. After saving, reopen the interlocking rule and confirm that the saved settings match the specified conditions.
9. Take a screenshot of the complete [Interlocking Settings] screen after configuration. The interlocking name Machine Room High Temperature Interlock - Fan Start, setting status On, and execution action (DO1) On - Fan - Open Circuit shall be clearly visible. In this simulator, the action “DO1 On – Fan – Open Circuit” represents the command to start the fan.

### Operating Procedure

1. On the left navigation bar, expand [Interlocking Management] and select [Interlocking Settings] to display the interlocking settings screen.
2. Click [Add New] to open the Edit Interlocking Settings dialog.
3. Enter the parameters in accordance with the requirements.
4. Confirm that all parameters are correct, and click [Save] at the bottom right of the dialog to complete creation of the interlocking settings.


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# System B: ICT Network Infrastructure Monitoring System

## System Configuration

This Test Project comprises a series of activities for establishing and verifying ICT network monitoring functions. Competitors shall analyse monitoring data, determine the status of monitored targets, and design and configure the required alarm conditions based on the network configuration, assessment criteria and operational requirements.

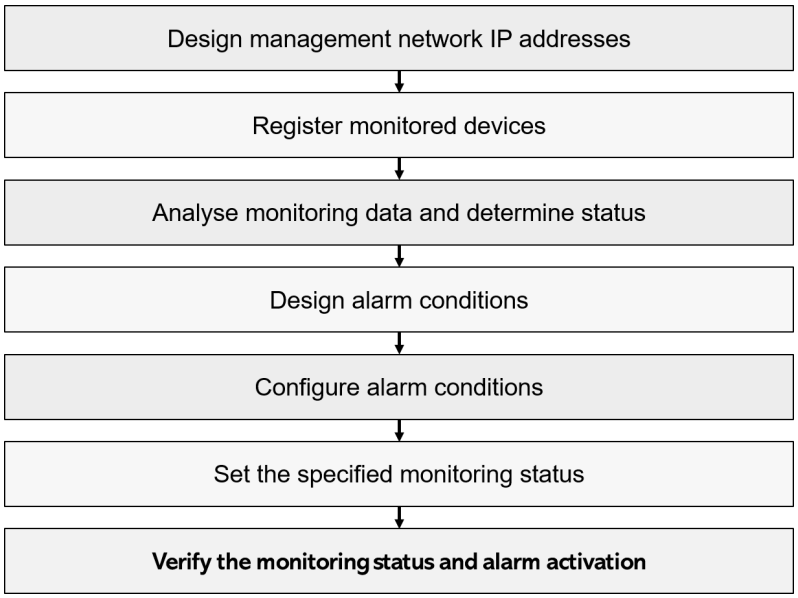



Figure: Workflow for Establishing and Verifying ICT Network Monitoring Functions

## Task 5 (System B): Management Network IP Address Design and Access Switch Registration

Based on the provided network requirements, determine the subnet of the monitoring management network and the management IP address of the access switch. Register the access switch in the ICT network infrastructure monitoring system using the determined management IP address.

## Network Conditions

To be disclosed on the competition day.

## Requirements

Competitors shall complete the following:

1. Determine the prefix length and subnet mask from the required number of hosts per subnet.
2. Determine the network address and broadcast address of the specified monitoring management network.
3. Determine the usable host address range.
4. Determine the management IP address of the access switch in accordance with the requirements.
5. Record the determined values in the Record Form (separate document).
6. Display the device management screen of the ICT network infrastructure monitoring system.
7. Register the access switch in accordance with the following settings.
8. Save a screenshot showing the registration result.


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Table: IP Address Design Record (submitted separately)

| ITEM | ANSWER |
|---|---|
| Prefix length | |
| Subnet mask | |
| Network address of the monitoring management network | |
| Broadcast address | |
| Usable host address range | |
| Management IP address of the access switch | |

Table: Device Registration Conditions

| ITEM | SETTING |
|---|---|
| Device type | Access switch |
| Switch name | access |
| Management IP address | IP address designed by the Competitor |
| Device model | HUAWEI S5730 |


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## Task 6 (System B): Monitoring Data Analysis and Identification of Abnormal Conditions

Using the monitoring analysis function of the ICT network infrastructure monitoring system, review the monitoring data of the associated access switch. Based on the provided assessment criteria, determine the status of each monitoring item and Identify and record the three monitoring items classified as Warning or Abnormal.

### Requirements

Competitors shall complete the following:

1. Review the monitoring data of the associated access switch (three ports).
2. Classify each monitoring item as Normal, Warning or Abnormal in accordance with the provided assessment criteria.
3. Identify all monitoring items classified as Warning or Abnormal.
4. For each identified monitoring item, record the following information in the Record Form:

- Monitoring item
- Monitored value or status
- Assessment result
- Basis for the assessment

5. Save a screenshot of the monitoring screen showing the recorded monitored values.
6. If no item is classified as Warning or Abnormal, record in the Record Form that all monitoring items are normal.

Table: Record Form (submitted separately)

| MONITORING ITEM | MONITORED VALUE/STATUS | ASSESSMENT RESULT | BASIS FOR ASSESSMENT |
|---|---|---|---|
| | | Warning / Abnormal | |
| | | Warning / Abnormal | |
| | | Warning / Abnormal | |


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## Assessment Criteria

Assess monitoring data in accordance with the following criteria. A value equal to a threshold shall be classified at the higher severity level. For example, CPU utilisation of 70% is Warning, and 85% is Abnormal. A monitoring item for which Warning is not defined shall be classified as either Normal or Abnormal.

Table: Assessment Criteria

| MONITORING ITEM | NORMAL | WARNING | ABNORMAL |
|---|---|---|---|
| CPU utilisation | Less than 70% | 70% or more and less than 85% | 85% or more |
| Memory utilisation | Less than 80% | 80% or more and less than 90% | 90% or more |
| Temperature | Less than 60°C | 60°C or more and less than 75°C | 75°C or more |
| Inbound bandwidth utilization | Less than 70% | 70% or more and less than 90% | 90% or more |
| Outbound bandwidth utilization | Less than 70% | 70% or more and less than 90% | 90% or more |
| Link status of the specified switch port | Connected / UP | — | Disconnected / DOWN |
| Power supply status | Normal | — | Abnormal |

## Operating Procedure

1. Log in successfully to the ICT network infrastructure monitoring system and display the main screen.
2. On the left navigation bar, click [Monitoring Analysis] to expand the drop-down menu.
3. From the expanded submenu, select [Switch Monitoring] to display the switch monitoring screen.


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## Task 7 (System B): Design and Configuration of Alarm Conditions

Analyse the provided network configuration, monitoring data, monitoring-status assessment criteria and operational requirements, and identify the target devices and monitoring items for which alarms shall be configured. For each monitoring item, determine the appropriate trigger condition and threshold, configure and enable the alarm in the ICT network infrastructure monitoring system, and record the configuration and basis for the decision.

Table: Operational Requirements

| ID | OPERATIONAL REQUIREMENT |
|---|---|
| R1 | An alarm shall be triggered when CPU utilisation of the access switch reaches the Abnormal range defined in the monitoring-status assessment criteria. |
| R2 | The access switch operates with two redundant power supplies. If either power supply becomes abnormal, an alarm shall be triggered for maintenance response because redundancy has been lost. |
| R3 | Port GigabitEthernet1/0/6 of the access switch is a critical port connected to the upstream network. If its link is disconnected, the alarm delay shall be set to 0 seconds so that the alarm is triggered immediately after the link status changes to Disconnected/DOWN. |
| R4 | Unnecessary alarms shall not be triggered for events expected during normal operation, such as link disconnection on unused ports. |

### Requirements

Competitors shall complete the following:

1. Review the network configuration, monitoring data, monitoring-status assessment criteria and operational requirements.
2. Identify the target devices and monitoring items for which alarms are required.
3. For each monitoring item, determine the trigger condition and threshold that satisfy the operational requirements.
4. Identify items that shall not be monitored for alarms, such as unused ports, and exclude them from monitoring.
5. Configure each alarm in the ICT network infrastructure monitoring system based on the determined conditions.
6. Enable the configured alarms.
7. For each alarm, record the target device, monitoring item, trigger condition, threshold and basis for the decision in the Record Form.
8. Save screenshots showing the completed and enabled alarm configurations.


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Table: Record Form (submitted separately)

| Alarm ID | Target device | Monitoring item | Trigger condition/threshold | Operational requirement and assessment criterion forming the basis for the decision | Screenshot number |
|---|---|---|---|---|---|
| **A1** | | | | | |
| **A2** | | | | | |
| **A3** | | | | | |

## Task 8 (System B): Setting Monitoring Status and Verifying Alarm Operation

Using the operation and maintenance management function of the ICT network infrastructure monitoring system, set the specified monitored values and device statuses on the target switch. After setting them, verify that the monitored values and device statuses are correctly reflected on the switch monitoring screen and that alarms are triggered according to the conditions designed and configured in the preceding Task.

Table: Monitored Values and Device Statuses to Be Set

| NO. | MONITORING ITEM | SET VALUE/STATUS | EXPECTED MONITORING STATUS |
|---|---|---|---|
| 1 | CPU utilization | 90% | Abnormal |
| 2 | Power Supply 1 status | Abnormal | Abnormal |
| 3 | Link status of GigabitEthernet1/0/6 | Disconnected / DOWN | Abnormal |

## Requirements

Competitors shall complete the following:

1. Set the specified monitored values and device statuses for the target switch named "access".
2. Confirm that the configured monitored values and device statuses are correctly reflected on the switch monitoring screen.
3. For each monitoring item, record the value or status displayed on the monitoring screen.
4. Compare the displayed monitored value or device status with the assessment criteria and confirm that the monitoring status is classified as Abnormal.
5. Confirm that the corresponding alarm configured in the preceding Task is triggered for each generated abnormal condition.
6. For each monitoring item, record the following:

- Configured value or status
- Value or status displayed on the monitoring screen
- Match or mismatch with the expected monitoring status
- Corresponding alarm
- Alarm activation result

7. Save screenshots showing the abnormal monitored values or statuses and the corresponding activated alarm records.


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## Operating Procedure

1. Under [Operation and Maintenance Management], select [Switch Operation and Maintenance Management].
2. Select the switch named “access” as the target device.
3. Configure each item in accordance with the Monitored Values and Device Statuses to Be Set table.
4. Confirm the settings and select [Save].
5. Under [Monitoring Analysis], display [Switch Monitoring].
6. Under [Alarm Management], display [Alarm Records].


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Table: Record Form (submitted separately)

| No. | Monitoring item | Set value/status | Displayed value/status | Expected status | Match result | Corresponding alarm | Alarm result | Screenshot No. |
|---|---|---|---|---|---|---|---|---|
| **1** | CPU utilization | 90% | | Abnormal | □ Match<br>□ Mismatch | | □ Triggered<br>□ Not triggered | |
| **2** | Power Supply 1 status | Abnormal | | Abnormal | □ Match<br>□ Mismatch | | □ Triggered<br>□ Not triggered | |
| **3** | Link status of GigabitEthernet1/0/6 | Disconnected / DOWN | | Abnormal | □ Match<br>□ Mismatch | | □ Triggered<br>□ Not triggered | |

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# MODULE B: Doc.MB1 | TASK 1 | MANAGEMENT NETWORK IP ADDRESS DESIGN

| Comp. No. | | Date/Time | |
|---|---|---|---|

*Record the network design values determined from the specified requirements.*

| Item | Design Value |
|---|---|
| **Network address** | |
| **Prefix length** | |
| **Subnet mask** | |
| **Usable host IP address range** | |
| **Broadcast address** | |
| **Default gateway** | |
| **Reserved IP address range** | |
| **IP address of the integrated data acquisition unit** | |
| **IP address of the serial server** | |
| **IP address range reserved for eight future devices** | |

# MODULE B: Doc.MB1 | TASK 2 | SERIAL SERVER REGISTRATION

| Comp. No. | |
|---|---|

*Record or verify the registration settings for the specified serial server.*

| Item | Configuration |
|---|---|
| **Device type** | RS485 – 8-port serial server |
| **Device model** | TAS-LAN-468 |
| **Device name** | Temperature Management |
| **Serial number** | wq |
| **Serial server IP address** | |
| **Subnet mask** | |
| **Gateway address** | |
| **Serial Port 6 Settings Screenshot No.** | |

# MODULE B: DOC.MB1 | TASK 3 |
# CREATION OF THE MACHINE ROOM HIGH TEMPERATURE ALARM MODEL

| Comp. No. | |
|---|---|

| Configuration item | Required setting | Description | Confirmed result | Screenshot No. |
|---|---|---|---|---|
| **Level 1 Alarm** | Created | | | |
| **Level 2 Alarm** | Created | | | |
| **Machine Room High Temperature Alarm** | Created and enabled | | | |
| **Alarm upper limit** | 35°C | | | |
| **Delay time** | 10 seconds | | | |
| **Repeat-notification interval** | 5 minutes | | | |

# MODULE B: Doc.MB1 | TASK 4 | HIGH-TEMPERATURE FAN INTERLOCK CONFIGURATION

| Comp. No. | |
|---|---|

*Record the interlock configuration used to start the fan when a high-temperature alarm occurs.*

| Item | High-Temperature Interlocked Fan |
|---|---|
| **Interlock name** | Machine Room High-Temperature Interlock – Fan Start |
| **Automatic execution** | |
| **Trigger alarm model** | |
| **Assigned communication interface device** | Communication Interface Device (Test) |
| **Assigned serial port** | |
| **Execution action 1** | |

# MODULE B: Doc.MB1 | TASK 5 | MANAGEMENT NETWORK IP ADDRESS DESIGN

| Comp. No. | |
|---|---|

*Record the management network addressing values and the management IP address assigned to the access switch.*

| Item | Answer |
|---|---|
| **Prefix length** | |
| **Subnet mask** | |
| **Network address of the monitoring management network** | |
| **Broadcast address** | |
| **Usable host address range** | |
| **Management IP address of the access switch** | |

# MODULE B: Doc.MB1 | TASK 6 | MONITORING DATA ANALYSIS AND STATUS DETERMINATION

| Comp. No. | |
|---|---|

*Record three monitoring items, the observed value or state, the determination, and the basis for the determination.*

| Monitoring Item | Monitored Value / Status | Determination | Basis for Determination | Screen shot No. |
|---|---|---|---|---|
| | | ☐ Warning<br>☐ Abnormal<br>☐ No Warning or Abnormal item was identified; all monitoring items were Normal. | | |
| | | ☐ Warning<br>☐ Abnormal<br>☐ No Warning or Abnormal item was identified; all monitoring items were Normal. | | |
| | | ☐ Warning<br>☐ Abnormal<br>☐ No Warning or Abnormal item was identified; all monitoring items were Normal. | | |

# MODULE B: Doc.MB1 | TASK 7 | ALARM CONDITION DESIGN

| Comp. No. | |
|---|---|

*Define three alarm conditions and identify the screenshot that provides evidence of each configuration.*

| Alarm ID | Target Device | Monitoring Item | Alarm Condition / Threshold | Operational Requirement and Criterion Supporting the Decision | Screenshot No. |
|---|---|---|---|---|---|
| **A1** | | | | | |
| **A2** | | | | | |
| **A3** | | | | | |

# MODULE B: Doc.MB1 | TASK 8 | MONITORING STATUS AND ALARM VERIFICATION

| Comp. No. | |
|---|---|

*Set each specified condition, verify its display on the monitoring screen, and record the corresponding alarm result.*

| No. | Monitoring Item | Set Value / Status | Displayed Value / Status | Expected Monitoring Status | Reflection Result | Corresponding Alarm | Alarm Result | Screenshot No. |
|---|---|---|---|---|---|---|---|---|
| **1** | CPU utilization | 90% | | Abnormal | ☐ Match<br>☐ Mismatch | | ☐ Triggered<br>☐ Not triggered | |
| **2** | Power Supply 1 status | Abnormal | | Abnormal | ☐ Match<br>☐ Mismatch | | ☐ Triggered<br>☐ Not triggered | |
| **3** | GigabitEthernet1/0/6 link status | Disconnected / DOWN | | Abnormal | ☐ Match<br>☐ Mismatch | | ☐ Triggered<br>☐ Not triggered | |