New Hire Technical Assessment — Ubuntu VM Setup & Environment Preparation

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1. Overview

This assessment evaluates your ability to perform essential system setup tasks required for OSWorld automation and UI-interaction workflows. You will:

- Install and configure VMware
- Download and install Ubuntu 22.04 Desktop
- Configure a consistent 1920×1080 display environment
- Validate your host machine's suitability for virtualization
- Document your full process thoroughly

This is **not** a coding exam. It is a **practical environment setup** and **system-preparedness** evaluation.

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2. Mandatory Hardware Requirements Check

Before beginning this assessment, you must confirm that your host machine meets these minimum requirements.

Minimum Host Requirements

- **RAM: 16 GB minimum (mandatory)**

- **CPU: 4-core processor recommended**
- **Free Disk Space: 60 GB minimum**
- **Virtualization Support: Intel VT-x / AMD-V enabled**
- **GPU: Capable of rendering VMware UI reliably**

Trainers must not proceed with machines having **less than 16GB RAM**.
Such machines will freeze, lag, and produce invalid automation trajectories.

Hardware Validation Task

Before completing any VM steps:

If using Windows

Run in Command Prompt:

```
None
systeminfo
```

Take a screenshot showing:

- Installed RAM
- CPU model
- Virtualization-enabled status

If using Linux

Run:

```
None
free -h
```

```
lscpu | grep -i 'model name'
```

If using macOS

Run:

```
None
sysctl hw.memsize
sysctl machdep.cpu.brand_string
```

Deliverables

- Save screenshot as: **host_hardware_specs.png**
- In *Report.pdf*, confirm:
    - Total RAM
    - CPU model
    - Virtualization availability
    - Confirmation that you meet the 16GB requirement

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3. Submission Requirements

You must submit a **single ZIP file** named:

```
None
<YourName>_Ubuntu_VM_Assessment.zip
```

It must contain the following:

- **Report.pdf**
- **VM_Config.txt**
- **Verification_File.txt**
- **Screenshots/** folder with all required screenshots

Folder Structure

```
None
<YourName>_Ubuntu_VM_Assessment.zip
├── Report.pdf
├── VM_Config.txt
├── Verification_File.txt
└── Screenshots/
    ├── host_hardware_specs.png
    ├── vmware_install_window.png
    ├── vmware_home.png
    ├── vmware_version.png
    ├── ubuntu_iso_download.png
    ├── ubuntu_install_start.png
    ├── ubuntu_install_keyboard.png
    ├── ubuntu_install_progress.png
    ├── ubuntu_first_login.png
    ├── resolution_settings.png
    ├── resolution_full_desktop.png
    ├── vmware_display_settings.png
    ├── ubuntu_fhd_locked.png
    └── fhd_lock_resized_window.png
└── CustomerOrdersCleaning/
      ├── customer_orders_2023.csv           # Original messy file
      ├── orders_cleaned.csv                 # Cleaned output file
      └── Screenshots/
          ├── 01_csv_loaded.png
          ├── 02_invalid_emails_highlighted.png
          ├── 03_invalid_emails_removed.png
          ├── 04_phone_numbers_standardized.png
          ├── 05_state_names_converted.png
```

```
        ├── 06_final_review.png
        ├── 07_saved_orders_cleaned.png
        └── 08_verification_loaded.png
```

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4. Assessment Tasks

Part 1 — Install VMware

Task

- Install VMware Workstation Player (Windows/Linux) or VMware Fusion (macOS).
- Open VMware after installation.

Deliverables

- Screenshot of installer window → `vmware_install_window.png`
- Screenshot of VMware home screen → `vmware_home.png`
- Version screenshot → `vmware_version.png`

Part 2 — Download Ubuntu 22.04 ISO

Task

Download the ISO from:
https://releases.ubuntu.com/22.04/

Using any alternate way like using unofficial Ubuntu 22.04 ISO is acceptable

Deliverable

- Screenshot of ISO in your Downloads folder → `ubuntu_iso_download.png`

Part 3 — Create the Virtual Machine

Required VM Specifications

- OS: Ubuntu 22.04 (64-bit)
- RAM: **8 GB or more (inside VM)**
- CPU: 2 cores
- Disk: 40 GB
- 3D acceleration enabled

Deliverables

- Screenshot of VMware VM creation summary
- Create **VM_Config.txt** containing:

```
None
VM Name:
RAM:
CPU Cores:
Disk Size:
3D Acceleration: yes/no
ISO Path:
```

Part 4 — Install Ubuntu 22.04

Task

Perform a normal installation:

- Choose **Normal Installation**
- Enable **Download updates while installing**
- Use any name and username
- Select **Erase disk** (virtual disk only)

Deliverables

Screenshots of:

- Installation start
- Keyboard selection
- Installation progress
- First login to desktop

Part 5 — Set Ubuntu Resolution to 1920×1080

Task

Inside Ubuntu:

1. Open: **Settings** → **Displays**
2. Set:
    - Resolution: **1920 × 1080**
    - Scale: **100%**

Deliverables

- Screenshot of display settings → `resolution_settings.png`
- Full desktop screenshot → `resolution_full_desktop.png`

Part 6 — System Verification

Task

Run these commands:

```
None
lsb_release -a
uname -a
df -h
echo $XDG_SESSION_TYPE
```

Deliverables

- Terminal screenshot → `verification_terminal.png`
- Output saved to **Verification_File.txt**

Part 6A — Lock VMware Resolution to FHD

Your Ubuntu VM must **always remain at 1920×1080**, even when resizing the VMware window.

Steps in VMware

Go to: **VM → Settings → Display**

Disable the following:

- Autofit Guest

- Autofit Window
- Stretch Guest
- Automatically Adjust User Interface Size

Uncheck:

- “Use host setting for monitors”

Enable:

- “Specify monitor settings”

Set:

- Custom resolution: **1920 × 1080**

Restart the VM.

Verification

Inside Ubuntu:

- Confirm resolution is still **1920×1080**
- Resize the VMware window
- The VM *must not* change resolution
- Scrollbars or viewport cropping is acceptable

Deliverables

- VMware display settings screenshot → `vmware_display_settings.png`

- Ubuntu FHD validation screenshot → `ubuntu_fhd_locked.png`

- Screenshot showing VMware resized while resolution remains fixed → `fhd_lock_resized_window.png`

Part 6B - Assessment Task 🎯

You will be given **ONE** task to complete. This task will test your ability to:

- Navigate between multiple applications
- Execute multi-step operations
- Handle data transformation workflows
- Document your process and results

Sample Assessment Task

Category: LibreOffice Calc Task
Task Type: Data Cleaning & Transformation

Task Instructions:

"Create a CSV file called 'customer_orders_2023.csv' with messy data - remove all rows where the email column contains invalid formats, standardize the phone numbers to (XXX) XXX-XXXX format, convert all state abbreviations to full names, and save the cleaned version as 'orders_cleaned.csv'"

What This Task Tests:

- File handling across applications (opening LibreOffice Calc)
- Data validation skills (identifying invalid email formats)
- Data transformation (standardizing phone numbers and state names)
- Attention to detail and accuracy
- Ability to save and verify outputs

Tools You May Use in the VM:

- Spreadsheet applications (LibreOffice Calc)

Step-by-Step Process and Screenshot Guidelines:

⚠️ Trainers must include screenshots at every major phase of the task to verify the workflow.

Step	Action	Screenshot Description	Suggested Screenshot Filename
1	Open the CSV file in LibreOffice Calc.	Show the raw data loaded into Calc.	01_csv_loaded.png
2	Inspect the data to identify invalid email formats.	Highlight rows with invalid email addresses.	02_invalid_emails_highlighted.png
3	Remove rows with invalid email formats.	Display the dataset after removing those rows.	03_invalid_emails_removed.png
4	Standardize phone numbers to (XXX) XXX-XXXX format.	Show before-and-after comparison of phone numbers.	04_phone_numbers_standardized.png
5	Replace state abbreviations with full state names.	Capture the transformation showing updated state names.	05_state_names_converted.png
6	Review the cleaned dataset to ensure all transformations are complete.	Highlight final cleaned dataset ready for export.	06_final_review.png

7	Save the cleaned file as orders_cleaned.csv.	Show the “Save As” dialog confirming file name and format.	07_saved_orders_cleaned.png
8	Verify the saved file by reopening it.	Display the reopened file showing cleaned data.	08_verification_loaded.png

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Deliverables Folder Structure:

```
None
/CustomerOrdersCleaning/
│
├── customer_orders_2023.csv           # Original messy file
├── orders_cleaned.csv                 # Cleaned output file
└── Screenshots/
    ├── 01_csv_loaded.png
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    ├── 07_saved_orders_cleaned.png
    └── 08_verification_loaded.png
```

✅ Completion Criteria:

- All invalid email rows removed.
- All phone numbers formatted as (XXX) XXX-XXXX.
- All state abbreviations replaced with full names.

- Cleaned file saved as orders_cleaned.csv.
- Screenshots provided for **each phase**, clearly showing before and after states.

Part 7 — Final Report

Create **Report.pdf** with the following sections:

1. Introduction
2. Host Hardware Verification (NEW)
3. VMware Installation
4. Ubuntu ISO Download
5. VM Creation
6. Ubuntu Installation
7. Ubuntu Display Resolution Configuration
8. VMware Resolution Locking
9. System Verification
10. LibreOffice Calc Assessment Task Process
11. Troubleshooting & Issues Faced
12. Time Spent

The report must be professional, clear, and well-structured.

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5. Evaluation (Pass / Fail)

To pass, all of the following must be true:

- Hardware meets 16GB RAM minimum
- All screenshots provided correctly
- VM runs reliably at a fixed **1920×1080**
- Ubuntu installed successfully
- VMware and Ubuntu display settings are configured correctly
- System verification commands executed
- **LibreOffice Calc assessment task** completed with all required screenshots and cleaned CSV output.
- Report.pdf is complete and professional
- No steps skipped or partially done

Failure in any critical step results in **failure**.

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6. Notes

- This assessment simulates real-world preparation steps required for UI automation tasks.
- Display consistency (fixed FHD) is essential for correct trajectory generation.
- Insufficient hardware causes real issues that cannot be worked around.