Automated Windows VM Patching & Health Check - Project Guide

This document contains complete steps and code for your GitHub Project.
Project Name:
Automated Windows VM Patching & Health Check

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PHASE 1 - SETUP
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Install Ansible (WSL / Linux):
sudo apt update
sudo apt install ansible -y
pip install pywinrm

Enable WinRM on Windows (Run in PowerShell Admin):
winrm quickconfig
winrm set winrm/config/service/auth '@{Basic="true"}'
winrm set winrm/config/service '@{AllowUnencrypted="true"}'
Enable-NetFirewallRule -Name "WINRM-HTTP-In-TCP"

Fix Local Admin Restriction:
New-ItemProperty -Path "HKLM:\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System" -Name LocalA
Restart-Service WinRM

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INVENTORY FILE
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File: inventory/windows_hosts.ini

[windows]
192.168.1.5

[windows:vars]
ansible_user=ansibleadmin
ansible_password=YourPassword
ansible_connection=winrm
ansible_port=5985
ansible_winrm_transport=ntlm
ansible_winrm_server_cert_validation=ignore
ansible_winrm_operation_timeout_sec=120
ansible_winrm_read_timeout_sec=150

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HEALTH CHECK PLAYBOOK
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File: playbooks/health_check.yml

- name: Windows Server Health Check
  hosts: windows
  gather_facts: no
  tasks:
    - name: Get hostname
      ansible.windows.win_shell: $env:COMPUTERNAME
      register: hostname
    - name: Last Reboot Time
      ansible.windows.win_shell: |
        (Get-CimInstance -ClassName win32_operatingsystem).LastBootUpTime
      register: reboot
    - name: Check Disk Space
      ansible.windows.win_shell: |
        (Get-PSDrive C).Free
      register: disk
    - debug:
        msg:
          - "Server: {{ hostname.stdout }}"
          - "Last Reboot: {{ reboot.stdout }}"
          - "Disk Free(Bytes): {{ disk.stdout }}"

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PATCHING PLAYBOOK
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File: playbooks/patching.yml
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```yaml
- name: Windows Patch Installation
  hosts: windows
  gather_facts: no
  tasks:
    - name: Install Security & Critical Updates
      ansible.windows.win_updates:
        category_names:
          - SecurityUpdates
          - CriticalUpdates
        reboot: yes
        reboot_timeout: 1800
      register: update_result
    - debug:
        var: update_result
```

REBOOT PLAYBOOK

File: playbooks/reboot.yml

```yaml
- name: Windows Reboot Handling
  hosts: windows
  gather_facts: no
  tasks:
    - name: Reboot Server
      ansible.windows.win_reboot:
        pre_reboot_delay: 10
        reboot_timeout: 1800
        post_reboot_delay: 10
```

CSV REPORT PLAYBOOK

File: playbooks/windows_patching_csv.yml
(Generates CSV Report)