I created 4 yaml files for ansible and 1 inventory files. This documantation has yaml files explain and give we answer “how do it?”

1-)install\_qemu.yml

This Ansible playbook automates the installation of QEMU on Windows machines listed in the win inventory group. It begins by downloading the official QEMU installer from the provided URL and saving it to the current user's Downloads folder. Next, it silently installs QEMU using the /S flag, ensuring the installation does not prompt the user. To avoid reinstalling, it checks if the target directory (C:\Program Files\qemu) already exists. Finally, it adds the QEMU installation directory to the system's PATH variable, allowing QEMU commands to be used from any command prompt without specifying the full path.

2-)install\_vagrant.yml

This Ansible playbook automates the installation of Vagrant on Windows machines in the win inventory group. It first checks if Chocolatey, a popular Windows package manager, is installed; if not, it installs it using a PowerShell script. Then, it uses Chocolatey to install Vagrant. To make sure the vagrant command can be used from anywhere, it adds the Vagrant binary directory to the system’s PATH environment variable. The playbook then runs

vagrant --version

to verify the installation and finally prints out the installed version using a debug message.

3-)disk\_shrink.yml

This Ansible playbook automates shrinking the C drive on a Windows system by a user-specified amount (e.g., 5 GB) and then creates a new partition using that freed space, assigning it a drive letter such as T:. It prompts the user to input the amount of space to shrink (in GB) and the desired file system type (exFAT, NTFS, or FAT32). Using these inputs, it generates a PowerShell script that first shrinks the C partition, then creates a new partition in the unallocated space, formats it using the chosen file system, and assigns the specified drive letter (T:). Before running the script, it ensures the C:\qemu directory exists and writes the PowerShell script into that folder.

4-)start\_vm\_via\_qemu.yml

This Ansible playbook configures a persistent QEMU virtual machine on a Windows host with its virtual disk stored on an external drive, and ensures the VM automatically starts at user login. It creates a PowerShell script that prompts the user to select an ISO image on first boot and creates a qcow2 virtual disk if it doesn’t already exist. After installation, it sets a flag so the VM boots from the disk on future runs. A .bat file is placed in the user’s Startup folder to run this PowerShell script every time they log in.

5-)hosts.ini

This is an Ansible inventory file that defines a group named win which contains the IP address of a Windows machine. It specifies connection variables such as the username (vagrant), password (vagrant), and that the connection should be made using WinRM (Windows Remote Management). The ansible\_winrm\_server\_cert\_validation=ignore option disables certificate validation, which is useful when connecting to machines with self-signed certificates or development VMs like Vagrant boxes.