CANONICAL ubuntu

How to import a virtual machine to LXD instance

VM 移轉 LXD 平台

If you have an existing machine, either physical or virtual (VM or container), you can use the lxd-migrate tool to create a LXD instance based on your existing disk or image.
https://documentation.ubuntu.com/lxd/en/latest/howto/import_machines_to_instances/

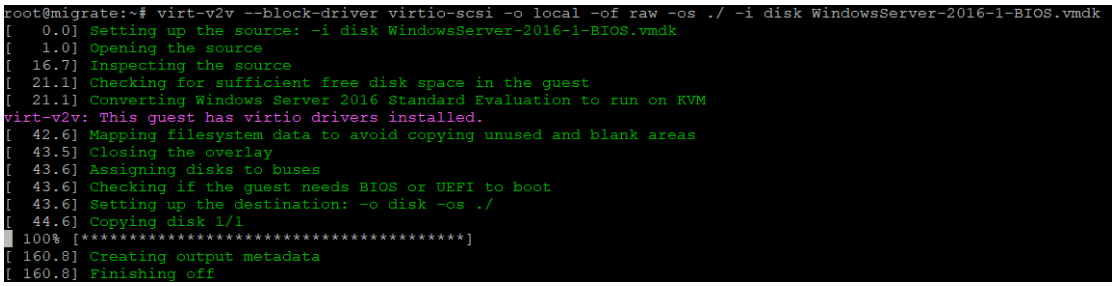
安裝 Migrate 套件與環境

於 Ubuntu24.04 LTS 配置環境

```
sudo apt update
sudo apt install -y libvirt-clients virtinst virt-v2v
sudo wget -nd -O srvany.rpm https://kojipkgs.fedoraproject.org//packages/mingw-srvany/1.1/4.fc38/noarch/mingw32-srvany-1.1-4.fc38.noarch.rpm
sudo apt install -y rpm2cpio
sudo rpm2cpio srvany.rpm | cpio -idmv && mkdir /usr/share/virt-tools && mv ./usr/i686-w64-mingw32/sys-root/mingw/bin/*exe /usr/share/virt-tools/
sudo apt install -y dnf
sudo dnf install https://fedorapeople.org/groups/virt/virtio-win/repo/stable/virtio-win-0.1.240-1.noarch.rpm
sudo virt-v2v --block-driver virtio-scsi -o local -of raw -os ./ -i disk WindowsServer-2016-BIOS.vmdk
```

轉檔範例

```
root@migrate:~$ sudo virt-v2v --block-driver virtio-scsi -o local -of raw -os ./ -i disk WindowsServer-2016-1-BIOS.vmdk
[     0.0] Setting up the source: -i disk WindowsServer-2016-1-BIOS.vmdk
[     1.0] Opening the source
[    16.7] Inspecting the source
[    21.1] Checking for sufficient free disk space in the guest
[    21.1] Converting Windows Server 2016 Standard Evaluation to run on KVM
virt-v2v: This guest has virtio drivers installed.
[    42.6] Mapping filesystem data to avoid copying unused and blank areas
[    43.5] Closing the overlay
[    43.6] Assigning disks to buses
[    43.6] Checking if the guest needs BIOS or UEFI to boot
[    43.6] Setting up the destination: -o disk -os ./
[    44.6] Copying disk 1/1
 100% [****************************************]
[   160.8] Creating output metadata
[   160.8] Finishing off
```



匯入檔案

```
sudo wget https://github.com/canonical/lxd/releases/latest/download/bin.linux.lxd-migrate.x86_64
sudo chmod u+x bin.linux.lxd-migrate.x86_64
sudo lxc config trust add --name lester
sudo ./bin.linux.lxd-migrate.x86_64
```

匯入範例

```
root@node2:/home/lester# ./bin.linux.lxd-migrate.x86_64
Please provide LXD server URL: https://192.168.2.166:8443/
Certificate fingerprint:
0b1787fe001b7d51522104f3e99a89b7b53eadc19d6f406afcff625d983c38e7
ok (y/n)? y

1) Use a certificate token
2) Use an existing TLS authentication certificate
3) Generate a temporary TLS authentication certificate
Please pick an authentication mechanism above: 1
Please provide the certificate token:
eyJjbGllbnRfbmFtZSI6Imxlc3RlciIsImZpbmdlcnByaW50IjoiMGIxNzg3ZmUwMDFiN2Q1MTUyMjEwNGYzZTk5YTg5YjdiNTNlYWRjMTlkNmY0MDZhZmNmZjYyNWQ5ODNjMzhlNyIsImFkZHJlc3NlcyI6WyIxOTIuMTY4LjIuMTY2Ojg0NDMiLCIyNDAuMTY2LjAuMTo4NDQzIl0sInNlY3JldCI6ImM4ODA4MTIxZGZmZDlkZWY1NmIyMTY4MmM5MWJjMmUzZjI1MTJjZGE2NDNhZjE2YTI4YTQ4YmFmYjk0MWQxMGIiLCJleHBpcmVzX2F0IjoiMDAwMS0wMS0wMVQwMDowMDowMFoifQ==

Remote LXD server:
   Hostname: node2
   Version: 5.21.1

Would you like to create a container (1) or virtual-machine (2)?: 2
Name of the new instance: windowsMigrate
Please provide the path to a disk, partition, or image file: /home/lester/WindowsServer-2016-1-BIOS-sda
Does the VM support UEFI Secure Boot? [default=no]:
```

Instance to be created:

Name: windowsMigrate

Project: default

Type: virtual-machine

Source: /home/lester/WindowsServer-2016-1-BIOS-sda

Config:

security.secureboot: "false"

Additional overrides can be applied at this stage:

1) Begin the migration with the above configuration

2) Override profile list

3) Set additional configuration options

4) Change instance storage pool or volume size

5) Change instance network

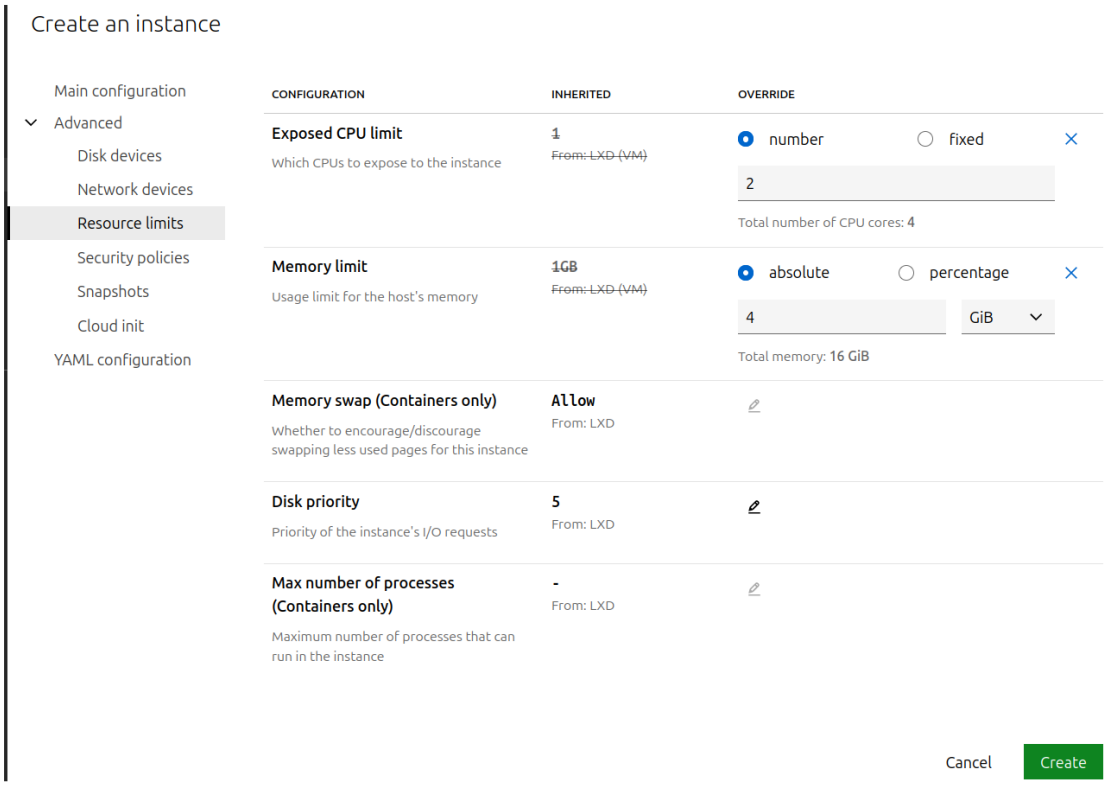
Please pick one of the options above [default=1]:

```
root@node2:/home/lester# ./bin.linux.lxd-migrate.x86_64
Please provide LXD server URL: https://192.168.2.166:8443/
Certificate fingerprint: 0b1787fe001b7d51522104f3e99a89b7b53eadc19d6f406afcff625d983c38e7
ok (y/n)? y

1) Use a certificate token
2) Use an existing TLS authentication certificate
3) Generate a temporary TLS authentication certificate
Please pick an authentication mechanism above: 1
Please provide the certificate token: eyJjbGllbnRfbmFtZSI6Imxlc3RlciIsImZpbmdlcnByaW50IjoiMGIxNzg3ZmUwMDE
lcyI6WyIxOTIuMTY4LjIuMTY2Ojg0NDMiLCIyNDAuMTY2LjAuMTo4NDQzIl0sInNlY3JldCI6ImM4ODA4MTIxZGZmZDlkZWYlNmIyMTY4
MS0wMVQwMDowMDowMFoifQ==

Remote LXD server:
  Hostname: node2
  Version: 5.21.1

Would you like to create a container (1) or virtual-machine (2)?: 2
Name of the new instance: windowsMigrate
Please provide the path to a disk, partition, or image file: /home/lester/WindowsServer-2016-1-BIOS-sda
Does the VM support UEFI Secure Boot? [default=no]:

Instance to be created:
  Name: windowsMigrate
  Project: default
  Type: virtual-machine
  Source: /home/lester/WindowsServer-2016-1-BIOS-sda
  Config:
    security.secureboot: "false"

Additional overrides can be applied at this stage:
1) Begin the migration with the above configuration
2) Override profile list
3) Set additional configuration options
4) Change instance storage pool or volume size
5) Change instance network

Please pick one of the options above [default=1]:
```

虛擬機開機前設定

```
sudo lxc config set security.csm=true
sudo lxc config set migration.stateful=true
sudo lxc config set security.secureboot=false
```

VM 資源配置：CPU、記憶體、硬碟及設定



YAML 檢視虛擬機設定