



Backup and Restore VM Files With Microsoft Azure

Created by: Second Group

**30 Safar 1440 H / 8 November 2018
Hands on materi ke Delapanbelas**

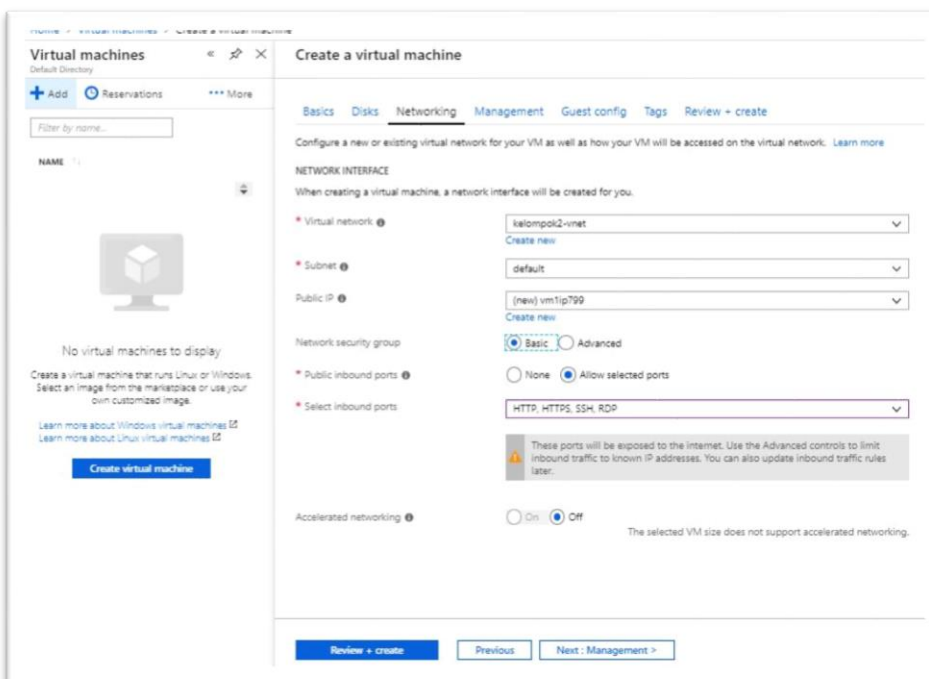
TUJUAN

Tujuan dari melakukan hands on ini adalah untuk mempelajari cara backup dan restore files pada VM di Microsoft Azure dengan OS Windows (untuk OS lain ada kemungkinan terdapat perbedaan perintah dasar).

STEP I, Membuat VM di Azure

Sebelum melakukan backup dan restore files di Azure, sebelumnya harus dipastikan telah membuat VM. Untuk itu, pada laporan ini terlebih dahulu akan dijelaskan tutorial pembuatan VM di azure.

Setelah login di account azure, step pertama yang harus dilakukan adalah membuat VM, selanjutnya atur penamaan VM tersebut dengan mengkonfigurasi **Subscription** dan **Resource Group** pada dashboard di menu **Basics**. Next lanjut pada menu **Disk** lakukan pengaturan berdasarkan kebutuhan user, setelah itu klik next-networking, pada menu **Networking** selanjutnya set **Network Interface** sesuai dengan gambar terlampir (bisa diatur berdasarkan kebutuhan user). Klik next-management, lalu pada menu **Management** atur kembali **Monitoring** sesuai dengan kebutuhan, setelah selesai, klik "next-guest config" lalu tanpa perubahan lanjut klik "next-tags" (apabila diperlukan, dapat disetting berdasarkan kebutuhan user) and last klik next-Review+create. Sebelum itu review kembali dan make sure semua telah ter-setting sesuai dengan kebutuhan user. Jika sudah sesuai, klik **create!** and congratulation new VM has been successfully created!!



The screenshot shows the 'Create a virtual machine' wizard in the Azure portal, specifically the 'Networking' tab. The left sidebar shows the 'Virtual machines' section with a 'Create virtual machine' button. The main area is titled 'Create a virtual machine' and has tabs for 'Basics', 'Disks', 'Networking', 'Management', 'Guest config', 'Tags', and 'Review + create'. The 'Networking' tab is active, showing the 'NETWORK INTERFACE' section. It includes fields for 'Virtual network' (set to 'kelompok2-vnet'), 'Subnet' (set to 'default'), and 'Public IP' (set to '[new] vmTip799'). There are also options for 'Network security group' (set to 'Basic'), 'Public inbound ports' (set to 'Allow selected ports'), and 'Select inbound ports' (set to 'HTTP, HTTPS, SSH, RDP'). A warning message states: 'These ports will be exposed to the internet. Use the Advanced controls to limit inbound traffic to known IP addresses. You can also update inbound traffic rules later.' At the bottom, there are buttons for 'Review + create', 'Previous', and 'Next: Management >'. A blue arrow points from the text 'Setting Networking' to the 'Networking' tab.

Setting Networking

Home > Virtual machines > Create a virtual machine

Virtual machines

Default Directory


+ Add

Reservations

*** More

Filter by name...

NAME %



No virtual machines to display

Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image.

Learn more about Windows virtual machines >> Learn more about Linux virtual machines >>


Create virtual machine


Create a virtual machine

Basics Disks Networking Management Guest config Tags Review + create


Configure monitoring and management options for your VM.

MONITORING


Boot diagnostics  ☐ On ☒ Off

OS guest diagnostics  ☐ On ☒ Off


IDENTITY

System assigned managed identity  ☐ On ☒ Off

AUTO SHUTDOWN

Enable auto-shutdown  ☐ On ☒ Off

BACKUP

Enable backup  ☐ On ☒ Off

Review + create Previous Next: Guest config >

Setting
Management

Home > Virtual machines > Create a virtual machine

Virtual machines

Default Directory


+ Add

Reservations

*** More

Filter by name...

NAME %



No virtual machines to display

Create a virtual machine that runs Linux or Windows. Select an image from the marketplace or use your own customized image.

Learn more about Windows virtual machines >> Learn more about Linux virtual machines >>

Create virtual machine

Create a virtual machine

Validation passed


Basics Disks Networking Management Guest config Tags Review + create

PRODUCT DETAILS

Ubuntu Server 18.04 LTS by Canonical
Terms of use | Privacy policy

Standard B1s by Microsoft
Terms of use | Privacy policy

Pricing not available for this offering
View Pricing details for more information.

Subscription credits apply 

142.0640 IDR/hr
Pricing for other VM sizes

TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the Azure Marketplace Terms for additional details.

BASICS

Subscription Azure Pass

Resource group kielompok2

Virtual machine name vm1

Region East US

Availability options No infrastructure redundancy required

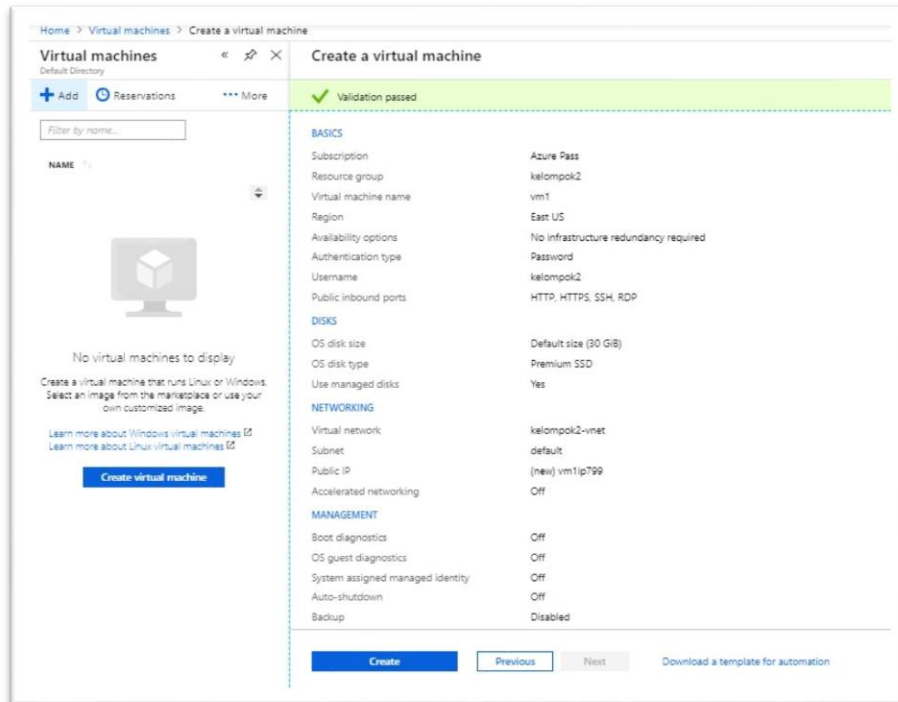
Authentication type Password

Username kielompok2

Public inbound ports HTTP, HTTPS, SSH, RDP

Create Previous Next Download a template for automation

Setting Review
+
Create



Tampilan akhir creat VM saat semua telah ter-setting berdasarkan kebutuhan user

Lanjutan STEP I

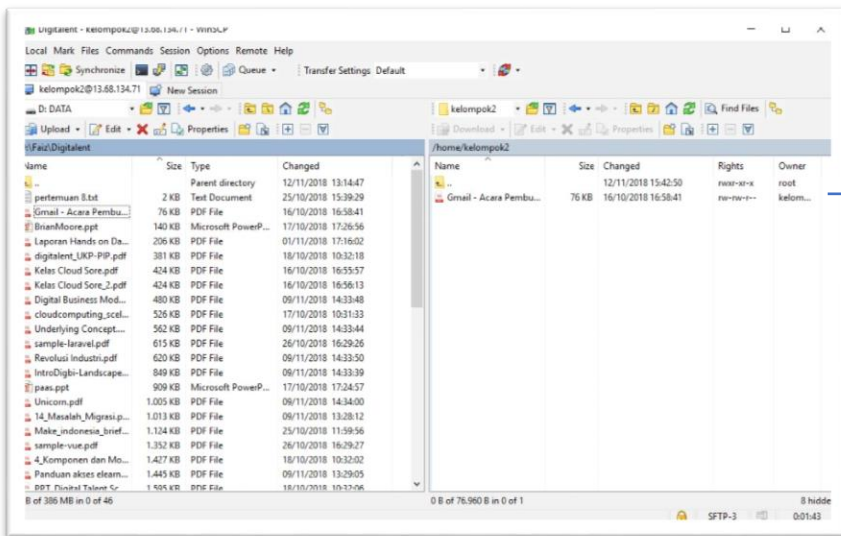
Setelah berhasil membuat VM di Azure, akses VM tersebut menggunakan SSH via PuTTY dengan memasukkan IP adres VM yang telah didapat, selanjutnya login menggunakan username dan password. Lanjut install **nginx** menggunakan perintah **apt-get install nginx**. Setelah proses instalasi selesai dilakukan, maka lakukanlah pengecekan akses web server menggunakan web browser dengan cara mengetik alamat IP public dari VM tersebut di address bar. Maka tampilannya akan seperti gambar berikut



Tampilan web browser menggunakan alamat IP public saat instalasi nginx berhasil dilakukan

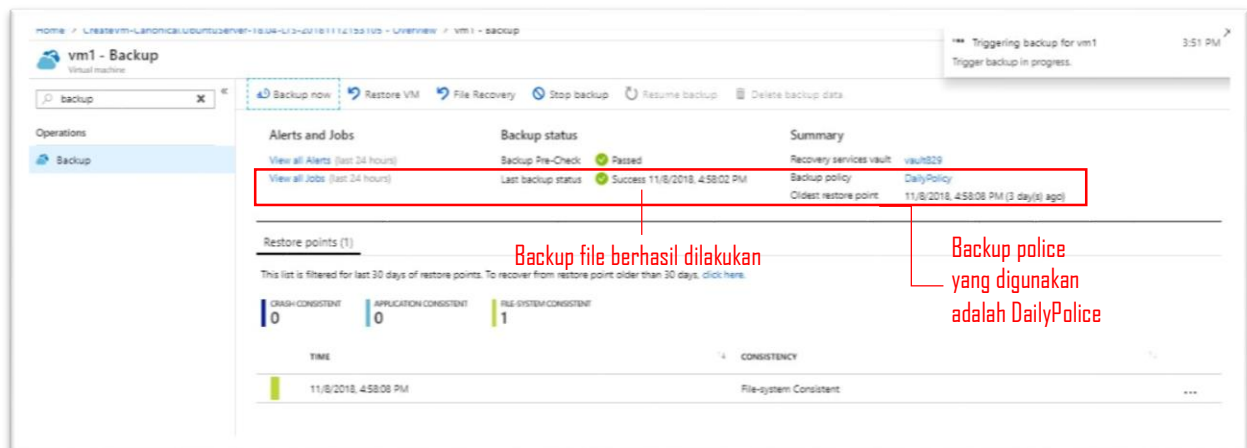
STEP II Tutorial Backup VM

Pastikan terlebih dahulu, file yang ingin dibackup pada VM tersebut. Jika file tersebut belum tersedia di VM yang telah dibuat sebelumnya, maka langkah awal yang harus dilakukan adalah mengupload file yang bersangkutan melalui WinSCP (seperti gambar yang terlampir dibawah ini). Setelah file tersebut tersedia di VM, barulah bisa dilakukan backup untuk file tersebut.



Upload file
menggunakan
winSCP

Next, kembali ke azure, pada bagian “Operation” klik **Backup**. Pada bagian ini terdapat beberapa option police backup. Kebijakan backup files bergantung dari kebutuhan user itu sendiri. Setelah menentukan pilihan police backup, simpan perubahan cukup dengan cara klik **save**. Selanjutnya, lakukan backup pada file tersebut dengan memilih menu **Backup Now** pada dashboard backup. Setting retain backup till, nantinya file tersebut akan tersedia sampai batas akhir dari tanggal yang tanggal yang telah ditentukan. Wait a moment, and backup files was successfully performed!!



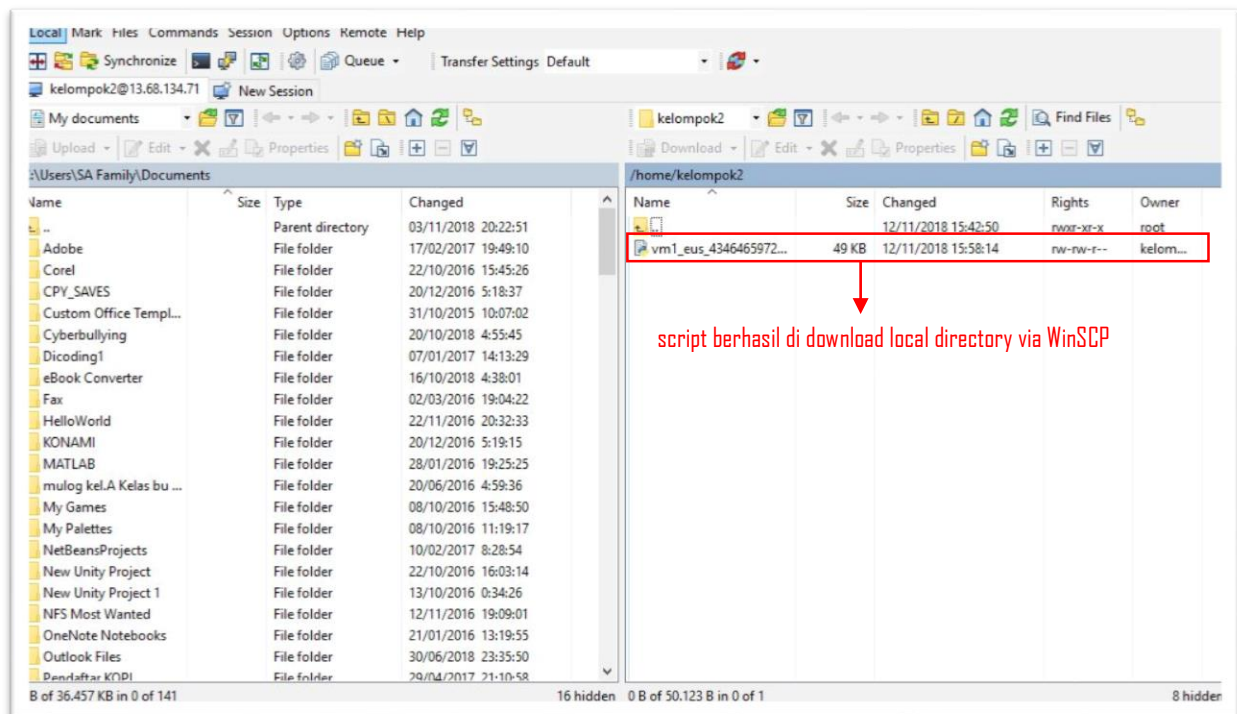
For Your Information (FYI)

Pilihan Backup Police di Azure

1. Default Police : Backup dilakukan setiap hari selama 30 hari
2. Daily Police : Backup dilakukan setiap hari selama 30 hari
3. BackupImmediately : Jenis backup harian dan mingguan

STEP III Restore File (In case only single file)

Final step dari hands on materi ini adalah, melakukan restore file. Sebelum melakukan restore, pastikan terlebih dahulu file yang ingin direstore ulang. Jika file tersebut belum tersedia, alternatifnya adalah dengan cara menghapus file sebelumnya yang telah diupload dan dibackup pada VM melalui winSCP. Setelah file tersebut terhapus, Lets try to restore file! First, buka azure lagi dan klik kembali **Backup** pada bagian "Operation". Pilih menu File Recovery pada dashboardnya Backup. Setelah itu, setting recovery point. Lanjut step berikutnya adalah download script ke local directory, lalu copy password untuk menjalankan script. Upload script menggunakan WinSCP. Setelah selesai, login SSH via puTTY, lakukan pengecekan file yang telah diupload menggunakan perintah `ls`. Jalankan script tersebut dan tunggu sampai proses restore selesai dan selamat file berhasil direstore kembali!




```

login as: kelompok2
kelompok2@13.68.134.71's password:
Welcome to Ubuntu 18.04.1 LTS (GNU/Linux 4.15.0-1030-azure x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Mon Nov 12 09:00:29 UTC 2018

System load:  0.0          Processes:      108
Usage of /:   4.2% of 28.90GB Users logged in:    0
Memory usage: 29%         IP address for eth0: 10.0.0.5
Swap usage:   0%

Get cloud support with Ubuntu Advantage Cloud Guest:
http://www.ubuntu.com/business/services/cloud

17 packages can be updated.
10 updates are security updates.

Last login: Mon Nov 12 08:43:50 2018 from 152.118.37.246
kelompok2@vm1:~$ ls
vm1_eus_4346465972040441602_776098636139_2bb987cd5a5647a18776c38a3122677856e8be5a97444c.py
kelompok2@vm1:~$

```

Tampilan pada PuTTY saat pengecekan script menggunakan perintah ls

```

kelompok2@vm1:~$ python vm1_eus_4346465972040441602_776098636139_2bb987cd5a5647a18776c38a3122677856e8be5a97444c.py
Launching the ilrscript as admin
Microsoft Azure VM Backup - File Recovery

Please enter the password as shown on the portal to securely connect to the recovery point
Connecting to recovery point using iSCSI service...
Connection succeeded!

Please wait while we attach volumes of the recovery point to this machine...

***** Volumes of the recovery point and their mount paths on this machine *****

Sr.No. | Disk | Volume | MountPath
1) | /dev/sdc | /dev/sdc1 | /home/kelompok2/vm1-20181112090132/Volume1
2) | /dev/sdc | /dev/sdc15 | /home/kelompok2/vm1-20181112090132/Volume3

The following partitions failed to mount since the OS couldn't identify the filesystem.

***** Volumes from unknown filesystem *****

Sr.No. | Disk | Volume | Partition Type
1) | /dev/sdc | /dev/sdc14 | BIOS Boot partition

Please refer to '/home/kelompok2/vm1-20181112090132/Scripts/MicrosoftAzureBackupILRLogFile.log' for more details.

***** Open File Explorer to browse for files. *****

After recovery, remove the disks and close the connection to the recovery point by clicking the 'Unmount Disks' button from the portal command in case of powershell or CLI.

After unmounting disks, run the script with the parameter 'clean' to remove the mount paths of the recovery point from this machine.

Please enter 'q/Q' to exit...q

```

Tampilan saat menunggu proses restore file ketika script sedang di run via PuTTY

```

kelompok2@vm1: ~
kelompok2@vm1:~$ ls
vm1-20181112090132
vm1_eus_4346465972040441602_776098636139_2bb987cd5a5647a18776c38a3122677856e8be5a97444c.py
kelompok2@vm1:~$

```

File yang telah dihapus, berhasil direstor kembali