

.NET CORE AZURE VM DEPLOY GUIDE

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ABSTRACT. Simple and easy way to deploy your .NET Core web application to the Azure Ubuntu-based virtual machine.

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1. VIRTUAL MACHINE CREATION

Firstly, it is necessary to create a virtual machine (unexpectedly) where deployment to be hosted on. In this guide is considered free virtual machine of type **Standard B1ms** (1 vcpu, 2 GiB memory) with Ubuntu 20.04 operating system. Definitely it won't be considered step by step creation in this document, however required VM parameter are as follows:

- Size: **Standard B1ms** (1 vcpu, 2 GiB memory)
- OS: **Ubuntu Server 20.04 LTS - Gen2**
- Availability options: **No infrastructure required**
- Authentication type: **SSH public key**
- SSH public key source: **Use existing public key (create it before you created VM)**

Date: May 23, 2022.

2010 Mathematics Subject Classification. 26E70, 05A30.

Key words and phrases. Azure, DevOps, Virtual machine, Deploy, Nginx, SSH, CI/CD, Azure pipelines, Github actions .

- Public inbound ports: HTTP(80), HTTPS(443), SSH(22)
- OS disk type: Standard SSD
- Encryption type: Default
- Public IP: Basic SKU, Static (be sure to create static IP)
- Select inbound ports: HTTP(80), HTTPS(443), SSH(22)
- Boot diagnostics: Disabled

Chosen parameters of the virtual machine are collected in order to minimize vm's cost. If you are not sure, refer to the screenshots via the [link](#).

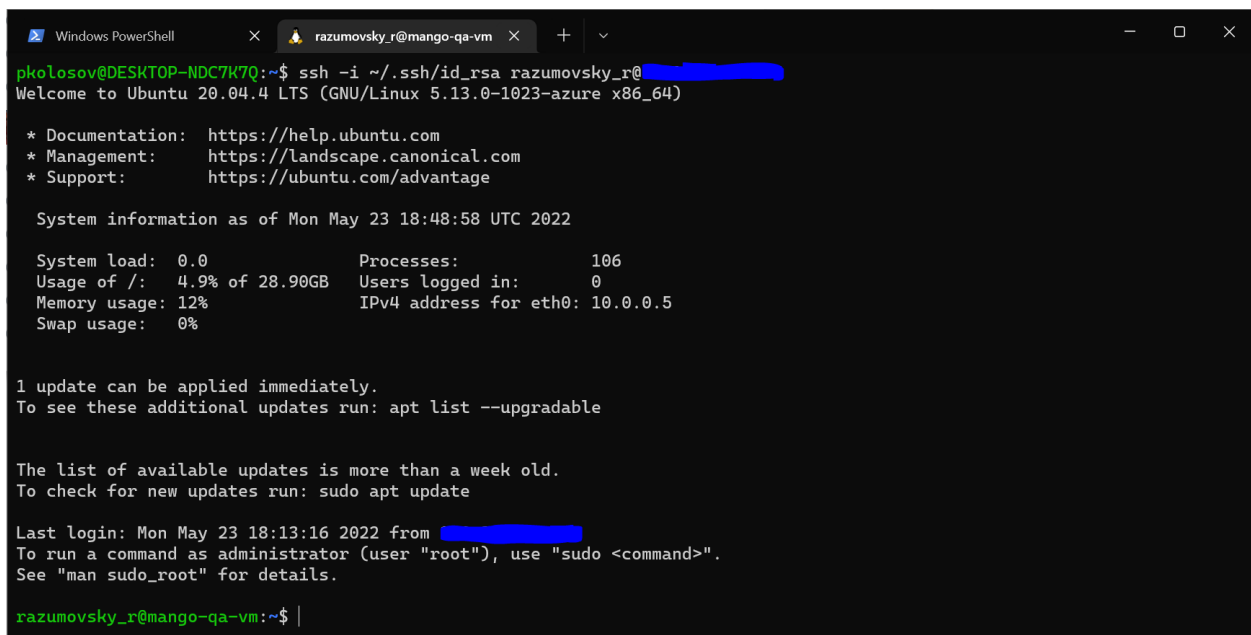
2. CONNECT TO VM VIA SSH

It is assumed that programmer uses WSL 2 under Windows 10 in order to work with VM via the SSH. By default, SSH keys are stored under the path `c/Users/username/.ssh`. Assume that RSA key-pair is stored there and have the names `id_rsa` and `id_rsa.pub` for private and public keys respectively. In order to interact the VM via SSH it is necessary to copy RSA keypair to the WSL `username/.ssh` folder, we use the commands under WSL

- `cp /mnt/c/Users/pkolosov/.ssh/id_rsa /.ssh/`
- `cp /mnt/c/Users/pkolosov/.ssh/id_rsa.pub /.ssh/`

Then connection is available now using the command

- `ssh -i /.ssh/id_rsa razumovsky_r@MachineStaticIP`



```
Windows PowerShell
razumovsky_r@mango-qa-vm
pkolosov@DESKTOP-NDC7K7Q:~$ ssh -i ~/.ssh/id_rsa razumovsky_r@[REDACTED]
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.13.0-1023-azure x86_64)

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

System information as of Mon May 23 18:48:58 UTC 2022

System load:  0.0          Processes:      106
Usage of /:   4.9% of 28.90GB Users logged in:  0
Memory usage: 12%         IPv4 address for eth0: 10.0.0.5
Swap usage:   0%

1 update can be applied immediately.
To see these additional updates run: apt list --upgradable

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

Last login: Mon May 23 18:13:16 2022 from [REDACTED]
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

razumovsky_r@mango-qa-vm:~$
```

Figure 1. SSH connected successfully.

3. INSTALL .NET SDK TO UBUNTU 20.04
4. COPY BUILD FILES TO THE VM VIA SSH
5. CONFIGURE UBUNTU SERVICE
6. INSTALL AND CONFIGURE NGINX SERVER
7. CONFIGURE DOMAIN NAME AND SSL
8. DEPLOY FRONTEND PROJECT
9. CONCLUSIONS

Conclusions of your manuscript.

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