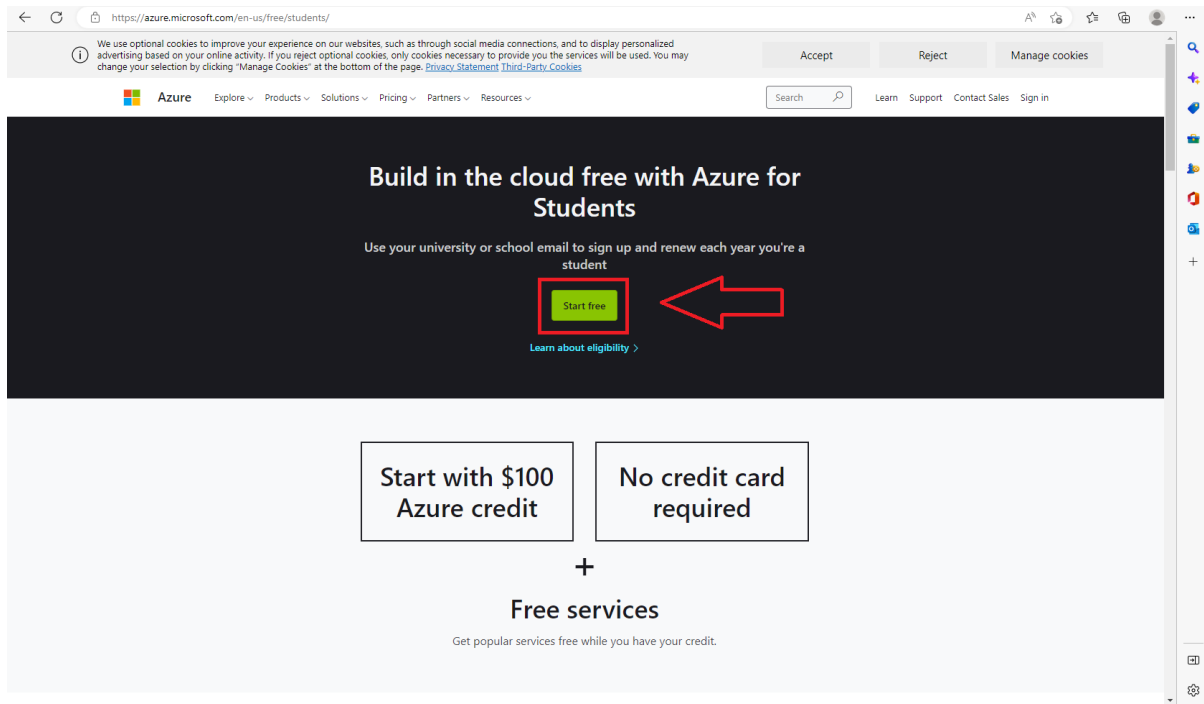
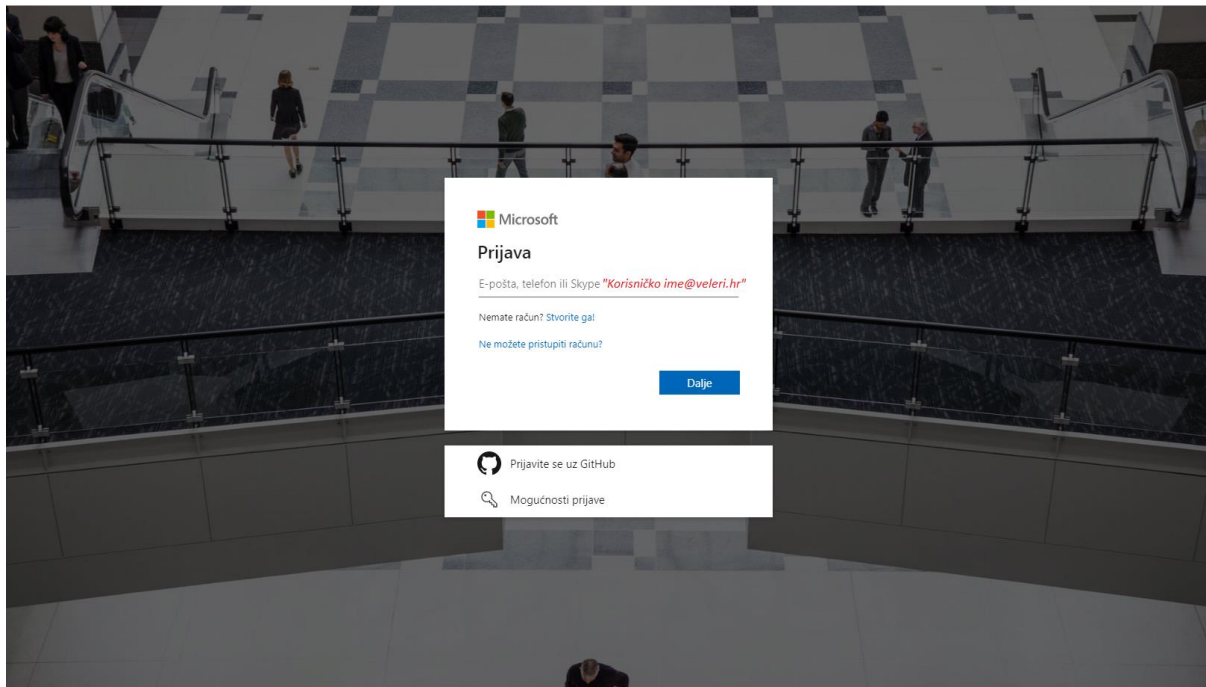


Upute za Microsoft Azure (virtual machine)

Prvi korak koji se mora napraviti je otići na stranicu [Microsoft Azure for students](https://azure.microsoft.com/en-us/free/students/). Nakon toga pritisnemo na gumb „Start free“



Sada nam se prikazuje prozor za login. U njemu upisujemo svoj email od veleučilišta (npr. [„korisnicko ime“@veleri.hr](mailto:korisnicko_ime@veleri.hr)). Nakon što smo upisali email pritisnemo gumb „Dalje“.



Sljedeće nam se otvara prozor za prijavu od AAi@EduHr. Unutra upisujemo svoje podatke od veleučilišta (npr. [„korisnicko ime“@veleri.hr](mailto:korisnicko_ime@veleri.hr)).

A screenshot of the AAi@EduHr login form. The form is white with a blue border and contains the AAi@EduHr logo at the top. Below the logo, there is a text input field with a placeholder that reads "KORISNIČKA OZNAKA". Below the input field, there is a text input field with a placeholder that reads "ZAPORKA". At the bottom of the form is a large blue button labeled "PRIJAVA". Below the button, there is a link labeled "Pomoć" and a version number "Srce v3.0".

AAi@EduHr

Autentikacijska i autorizacijska infrastruktura znanosti i visokog obrazovanja u Republici Hrvatskoj

KORISNIČKA OZNAKA

ZAPORKA

PRIJAVA

[Pomoć](#)

Srce v3.0

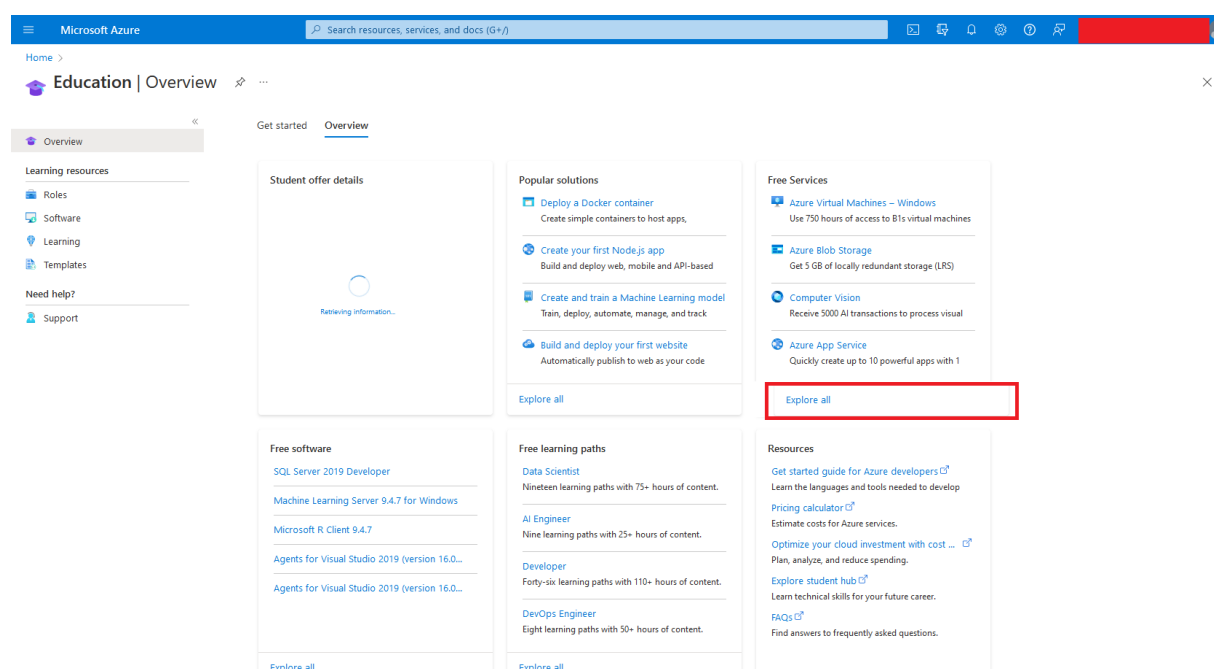
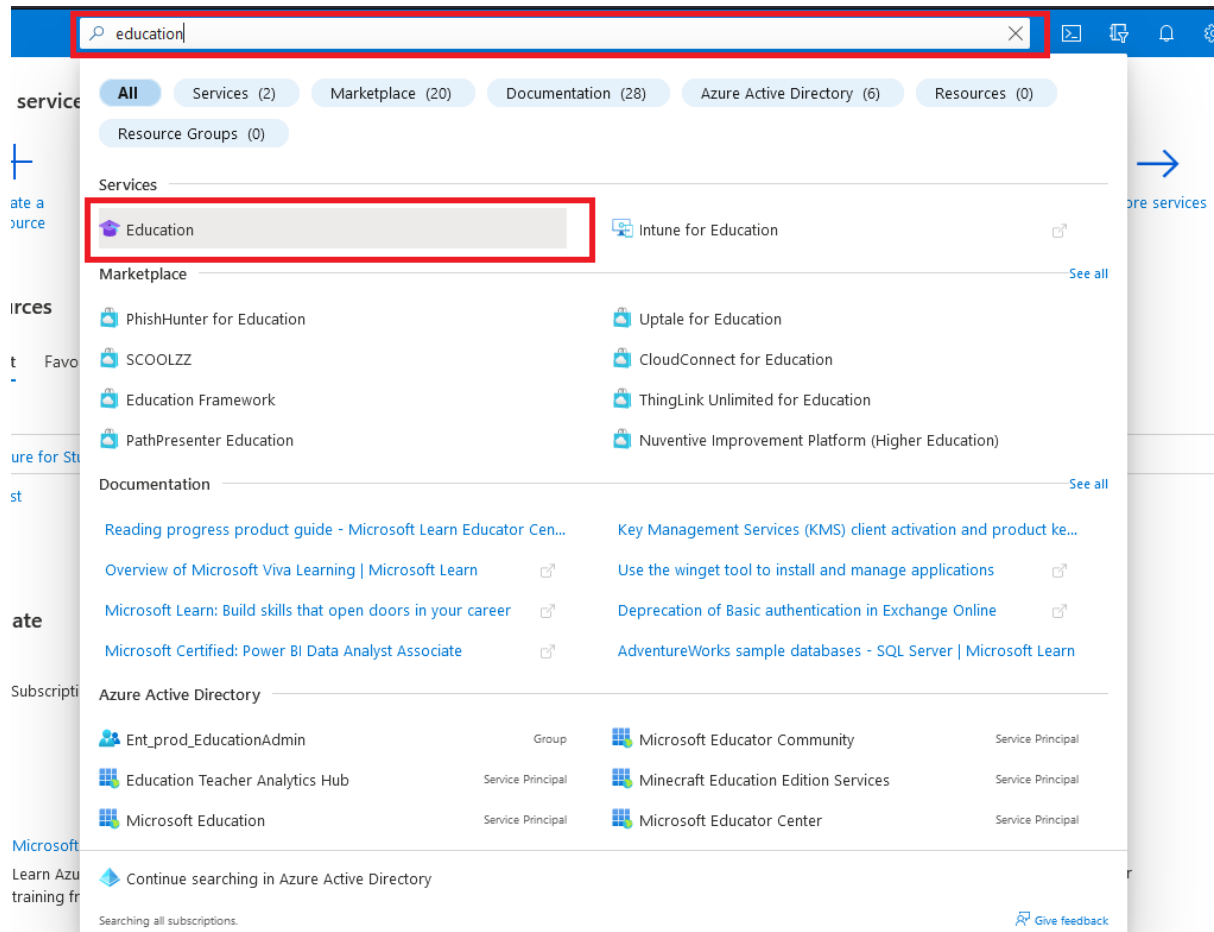
Nakon šta smo se prijavili otvara nam se stranica od Microsoft Azure. Pritisnemo Microsoft Azure.

The screenshot shows the Microsoft Azure Education Overview page. The top navigation bar includes the Microsoft Azure logo, a search bar, and user account information. The main content area is titled 'Education | Overview' and features a sidebar with navigation links: Overview, Learning resources, Roles, Software, Learning, Templates, Need help?, and Support. The main content is organized into several sections:

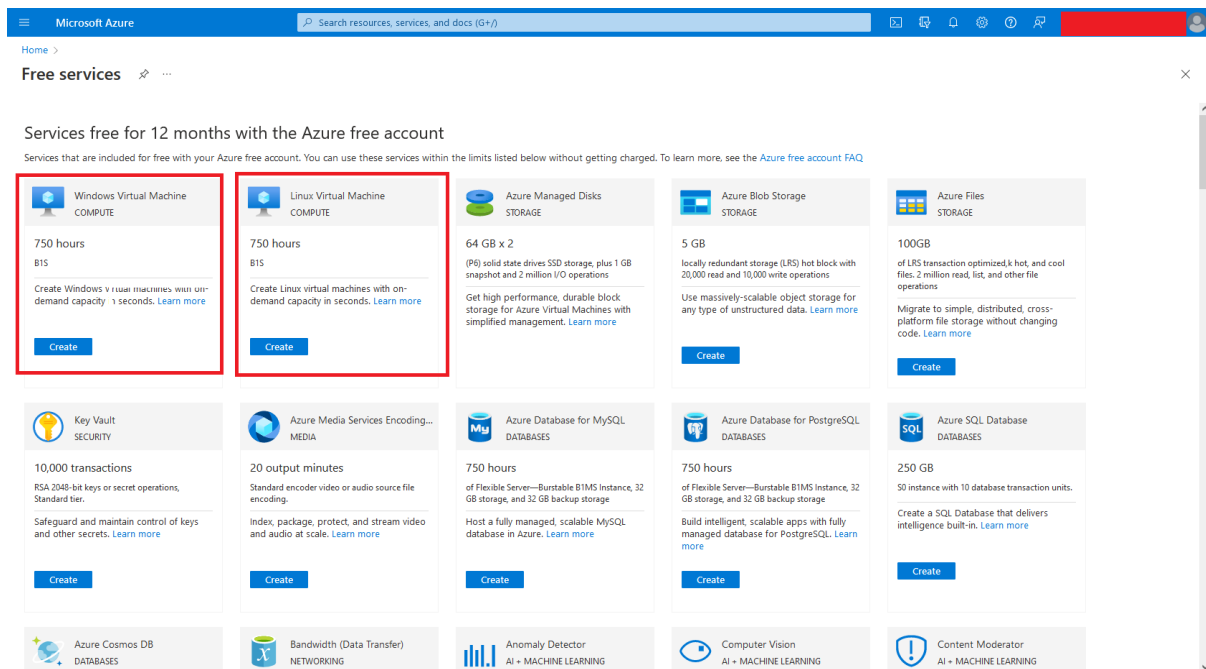
- Student offer details:** Displays available credits (€100 out of €100), days until credits expire (364), and November costs (€0.00).
- Popular solutions:** Lists solutions such as 'Deploy a Docker container', 'Create your first Node.js app', 'Create and train a Machine Learning model', and 'Build and deploy your first website'.
- Free Services:** Lists services like 'Azure Virtual Machines - Windows', 'Azure Blob Storage', 'Computer Vision', and 'Azure App Service'.
- Free software:** Lists software like 'SQL Server 2019 Developer', 'Machine Learning Server 9.4.7 for Windows', 'Microsoft R Client 9.4.7', and 'Agents for Visual Studio 2019 (version 16.0...)'. There is a 'View cost details' link.
- Free learning paths:** Lists learning paths such as 'Data Scientist', 'AI Engineer', 'Developer', and 'DevOps Engineer'.
- Resources:** Lists resources like 'Get started guide for Azure developers', 'Pricing calculator', 'Estimate costs for Azure services', 'Optimize your cloud investment with cost ...', 'Explore student hub', and 'FAQs'.

Each section has an 'Explore all' link at the bottom.

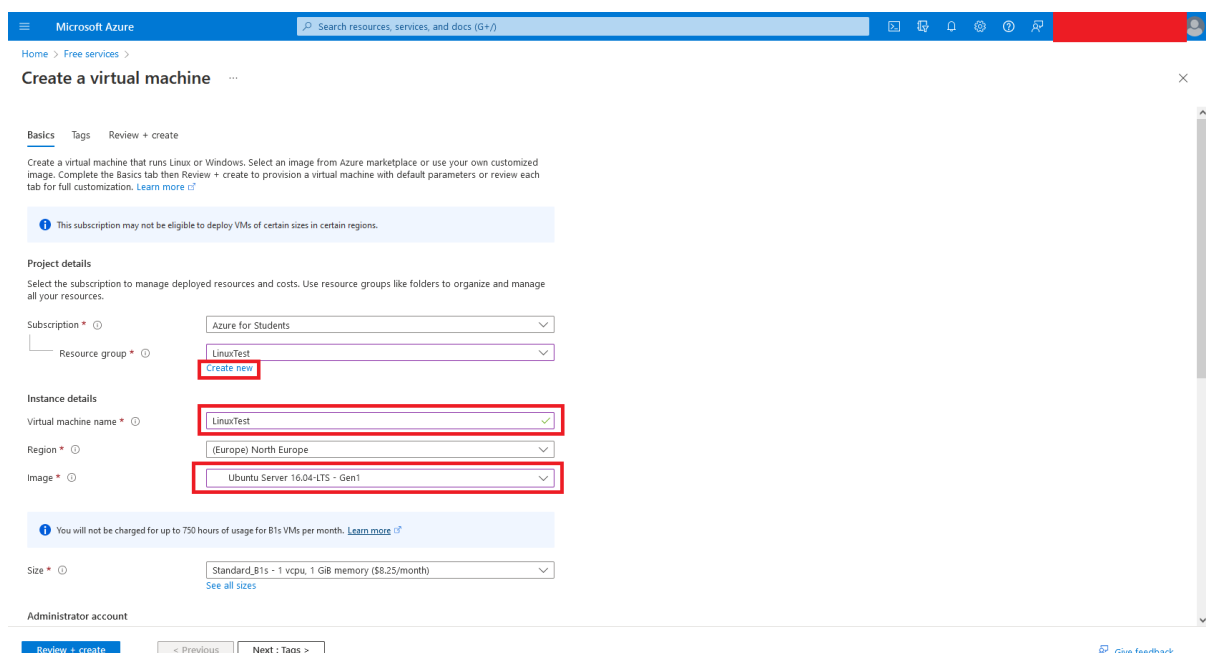
Sada smo na glavnoj stranici od Microsoft Azure. Da bi pronašli naše besplatne alate tj. Servise moramo u tražilicu potražiti „Education“. Kada smo odabrali „Education“ otvara nam se stranica gdje se nalaze naši besplatni alati.



Da bismo vidjeli sve naše alate moramo pritisnuti opciju „*Explore all*“ pod „*Free Services*“. Kada smo pritisnuli, pokazuje nam se svi alati koje možemo koristiti besplatno.



Za primjer ćemo odabrati Linux virtualno mašinu. Da bi napravili virtualnu mašinu moramo prvo pritisnuti gumb „*Create*“. Kada smo pritisnuli otvara nam se nova stranica na kojoj se nalaze opcije za virtualnu mašinu.



Pod opcijom „*Subscription*“ postavljamo opciju „*Azure for Students*“, a pod „*Resource group*“ moramo prvo napraviti novu grupu tako da pritisnemo „*Create new*“ i napišemo kako će se zvati. Za „*Virtual machine name*“ stavljamo kako će nam se zvati virtualna mašina. Za „*Region*“ stavljamo „*Europe*“. Za „*Image*“ možete odabrati bilo koji os koji želite.

Microsoft Azure

Search resources, services, and docs (G+)

Home > Free services >

Create a virtual machine

Basics Tags Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

This subscription may not be eligible to deploy VMs of certain sizes in certain regions.

Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * Azure for Students

Resource group * LinuxTest [Create new](#)

Instance details

Virtual machine name * LinuxTest

Region * (Europe) North Europe

Image * Ubuntu Server 16.04-LTS - Gen1

You will not be charged for up to 750 hours of usage for B1s VMs per month. [Learn more](#)

Size * Standard_B1s - 1 vcpu, 1 GiB memory (\$8.25/month) [See all sizes](#)

Administrator account

[Review + create](#) < Previous Next: Tags > [Give feedback](#)

Microsoft Azure

Search resources, services, and docs (G+)

Home > Free services >

Create a virtual machine

Basics Tags Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

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Size * Standard_B1s - 1 vcpu, 1 GiB memory (\$8.25/month) [See all sizes](#)

CentOS-based 6.5 HPC - Gen1

CentOS-based 6.8 HPC - Gen1

CentOS-based 7.1 HPC - Gen1

CentOS-based 7.3 SRIOV - Gen1

CentOS-based 7.3 HPC - Gen1

CentOS-based 7.3 - Gen1

Debian 8 "Jessie" - Gen1

Debian 8 "Jessie" with backports kernel - Gen1

Debian 8 "Stretch" - Gen1

CoreOS Linux (Alpha) - Gen1

CoreOS Linux (Beta) - Gen1

CoreOS Linux (Stable) - Gen1

Ubuntu Server 14.04-LTS - Gen1

Ubuntu Server 16.04-LTS - Gen1

Red Hat Enterprise Linux 6.7 - Gen1

Za opciju „*Authentication type*“ stavljamo opciju „*password*“. Za „*Username*“ i „*Password*“ stavljamo ime korisnika i lozinku s kojim ćemo se prijavljivati u virtualnu mašinu.

Microsoft Azure

Home > Free services >

Create a virtual machine

request quota
Refresh quota

Administrator account

Authentication type ☐ SSH public key ☒ Password

Username *

Password *

Confirm password *

Inbound port rules

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

Public inbound ports * ☐ None ☒ Allow selected ports

Select inbound ports *

⚠ This will allow all IP addresses to access your virtual machine. This is only recommended for testing. Use the Advanced controls in the Networking tab to create rules to limit inbound traffic to known IP addresses.

Licensing

If you have eligible Red Hat Enterprise Linux subscriptions that are enabled for Red Hat Cloud Access, you can use Azure Hybrid Benefit to attach your Red Hat subscriptions to this VM and save money on compute costs. [Learn more](#)

Your Azure subscription is currently not a part of Red Hat Cloud Access. In order to enable AHB for this VM, you must add this Azure subscription to Cloud Access. [Learn more](#)

[Review + create](#) < Previous Next: Tags > [Give feedback](#)

Kada smo ispunili sve opcije pritisnemo „*Review + create*“.

Basics

Tags

Review + create

Ako su svi podaci ispravni, na vrhu stranice će se pojaviti poruka „*Validation passed*“, to znači da su podaci ispravi i možemo napraviti virtualnu mašinu. Da bi napravili virtualnu mašinu pritisnemo gumb „*Create*“ i virtualna mašina će se napraviti.

Microsoft Azure

Search resources, services, and docs (G+/J)

Home > Free services >

Create a virtual machine

Validation passed

BasicsTagsReview + create

You have set SSH port(s) open to the internet. This is only recommended for testing. If you want to change this setting, go back to Basics tab.

Ubuntu Server 16.04-LTS
Image

Standard B1s
1 vcpu, 1 GiB memory

Basics

Subscription

Azure for Students

Resource group

LinuxTest

Virtual machine name

LinuxTest

Region

North Europe

Image

Ubuntu Server 16.04-LTS - Gen1

Size

Standard B1s (1 vcpu, 1 GiB memory)

Authentication type

SSH public key

Username

TestLinux

Key pair name

LinuxTest_key

Public inbound ports

SSH

Azure Spot

No

Create

< Previous

Next >

Download a template for automation

Kada smo pritisknuli „*Create*“ otvorit će se stranica na kojoj prikazuje da se virtualna mašina stvara „*Deployment is in progress*“, kada virtualna mašina napravi prikazat će sljedeću poruku „*Your deployment is complete*“

Microsoft Azure

Search resources, services, and docs (G+/J)

Home >

CreateVm-canonical.UbuntuServer-16.04-LTS-20221130113827 | Overview

Deployment

Search

Delete

Cancel

Redeploy

Download

Refresh

Overview

Inputs

Outputs

Template

Deployment is in progress

Deployment name: CreateVm-canonical.UbuntuServer-16.04-LTS-2...

Subscription: Azure for Students

Resource group: LinuxTest

Start time: 11/30/2022, 11:39:13 AM

Correlation ID:

Deployment details

Resource	Type	Status	Operation details
LinuxTest	Microsoft.Compute/virtualMachines	Created	Operation details
linuxtest51	Microsoft.Network/networkInterfaces	Created	Operation details
LinuxTest-vnet	Microsoft.Network/virtualNetworks	OK	Operation details
LinuxTest-ip	Microsoft.Network/publicIPAddresses	OK	Operation details
LinuxTest-nsg	Microsoft.Network/networkSecurityGroups	OK	Operation details

Give feedback

Tell us about your experience with deployment

Microsoft Defender for Cloud

Secure your apps and infrastructure

[Go to Microsoft Defender for Cloud >](#)

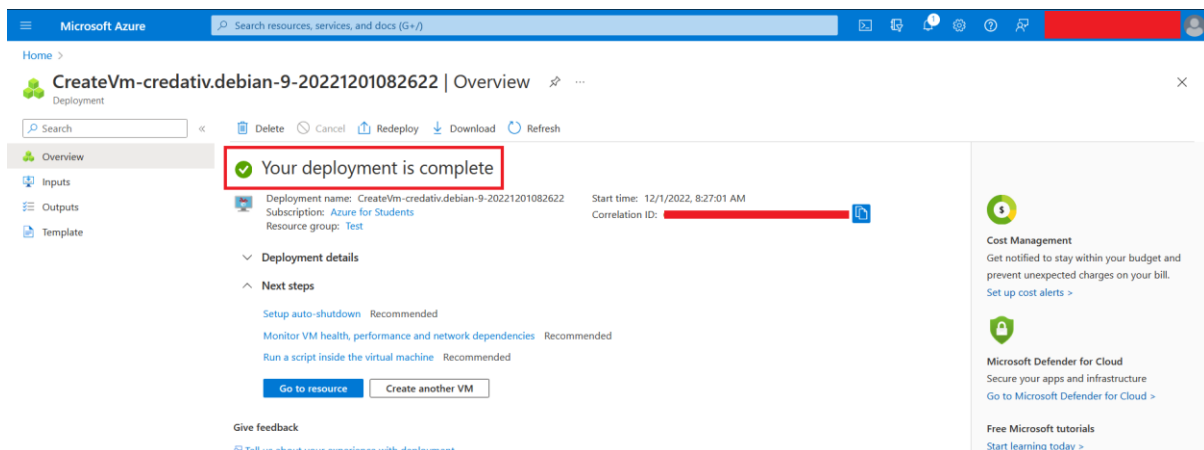
Free Microsoft tutorials

Start learning today >

Work with an expert

Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.

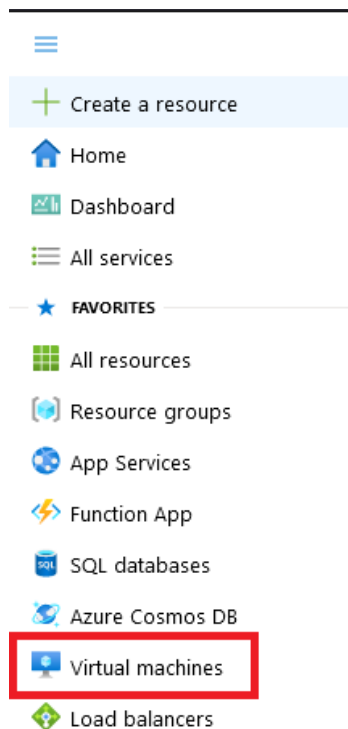
[Find an Azure expert >](#)



Nakon šta se virtualna mašina napravila idemo u „*Home*“ tj. Kliknemo na „*Microsoft Azure*“. I onda pritisnemo opciju za prikaz izbornika u gornjem lijevom kutu.



Otvora nam se izbornik na kojem ćemo odabrati „*Virtual machines*“.



Otvora nam se stranica gdje možemo vidjet naše napravljene virtualne mašine. Pritisnemo na našu virtualnu mašinu da vidimo detalje.

Home > **Virtual machines** ☆ ...

veien.hr (veienhr.onmicrosoft.com)

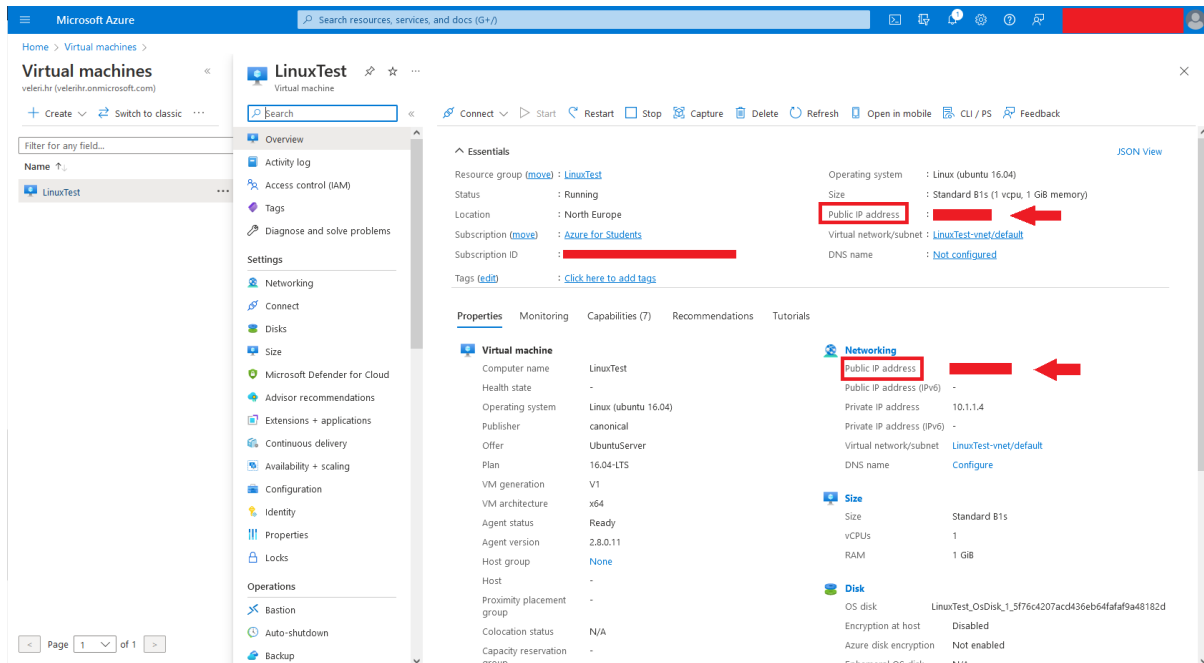
+ Create ▾ ↺ Switch to classic ⌚ Reservations ▾ ⚙ Manage view ▾ ⌛ Refresh ⬇ Export to CSV 🔗 Open query | 🏷 Assign tags ▶ Start ⌛ Restart ☐ Stop 🗑 Delete ☰ Services ▾ 🔧 Maintenance ▾

Filter for any field... Subscription equals all Type equals all Resource group equals all Location equals all Add filter

No grouping ▾ List view ▾

☐ Name ↑↓	Type ↑↓	Subscription ↑↓	Resource group ↑↓	Location ↑↓	Status ↑↓	Operating system ↑↓	Size ↑↓	Public IP address ↑↓	Disks ↑
☐ LinuxTest	Virtual machine	Azure for Students	LinuxTest	North Europe	Running	Linux	Standard_B1s		1
☐ Testt	Virtual machine	Azure for Students	Test	North Europe	Running	Linux	Standard_B1s		1

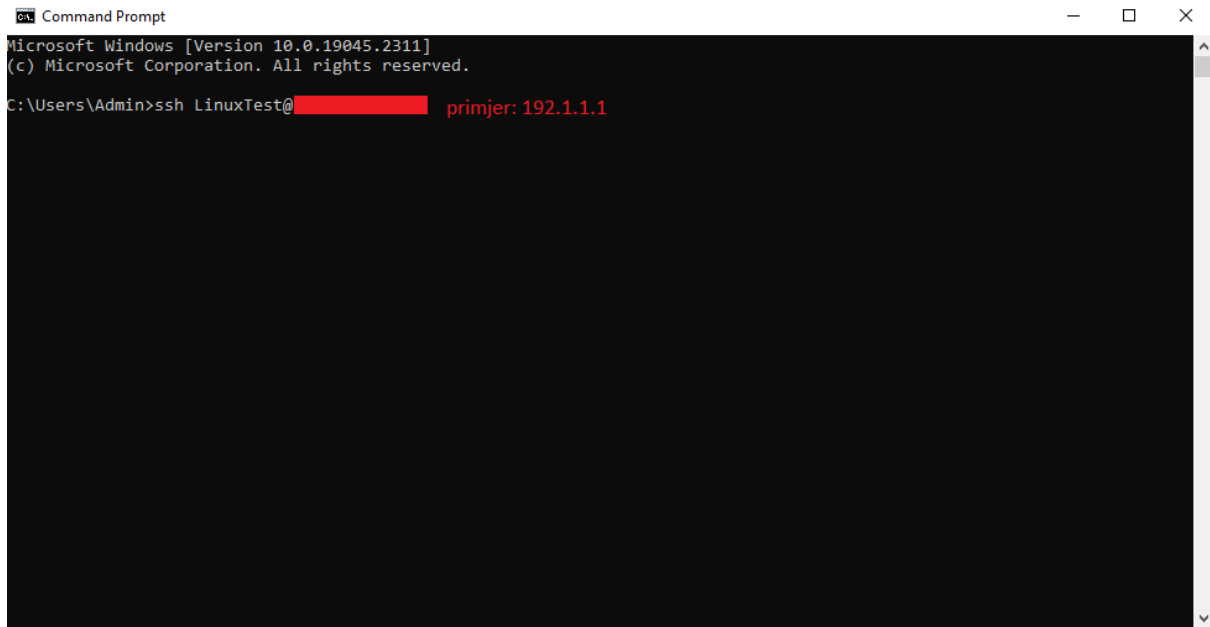
Moramo pronaći javnu IP adresu od virtualne mašine kako bismo mogli pristupiti.



Da se spojimo na našu virtualnu mašinu moramo koristiti programe koje omogućuju spajanje sa SSH protokolom. To možemo preko CMD-a , terminala ili s drugim aplikacijama (npr. PuTTY).

Spajanje na virtualnu mašinu sa CMD

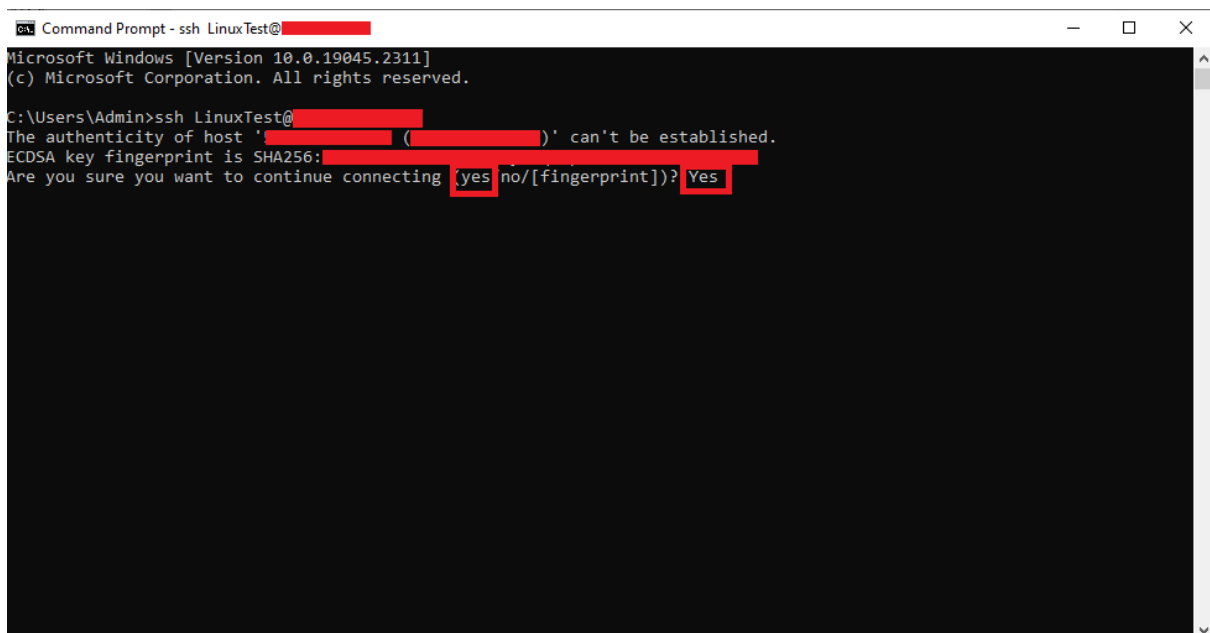
Prvo moramo pokrenut CMD, te upisat sljedeću komandu: ssh „ime korisnika“@„javni IP od virtualne mašine“ (npr. ssh [LinuxTest@192.1.1.1](#)).



```
Command Prompt
Microsoft Windows [Version 10.0.19045.2311]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Admin>ssh LinuxTest@[REDACTED] primjer: 192.1.1.1
```

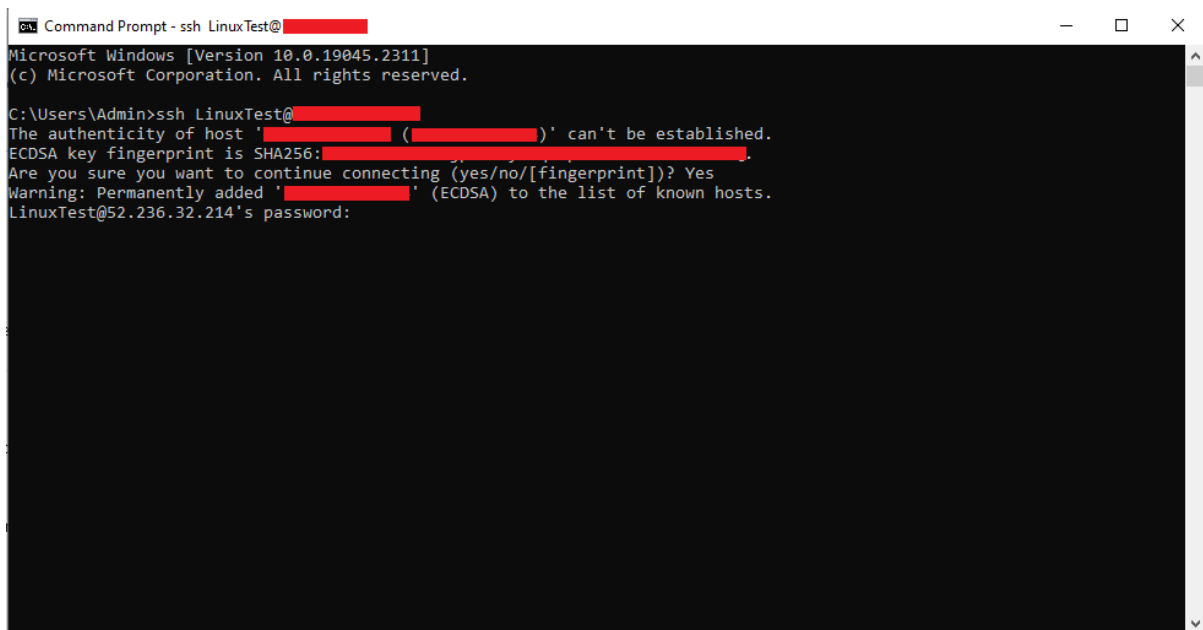
Kada upišemo komandu i pokrenemo je prikazat će nam se poruka unutar CMD-a za koju moramo napisat „yes“ da se izvrši konekcija prema virtualnoj mašini.



```
Command Prompt - ssh LinuxTest@[REDACTED]
Microsoft Windows [Version 10.0.19045.2311]
(c) Microsoft Corporation. All rights reserved.

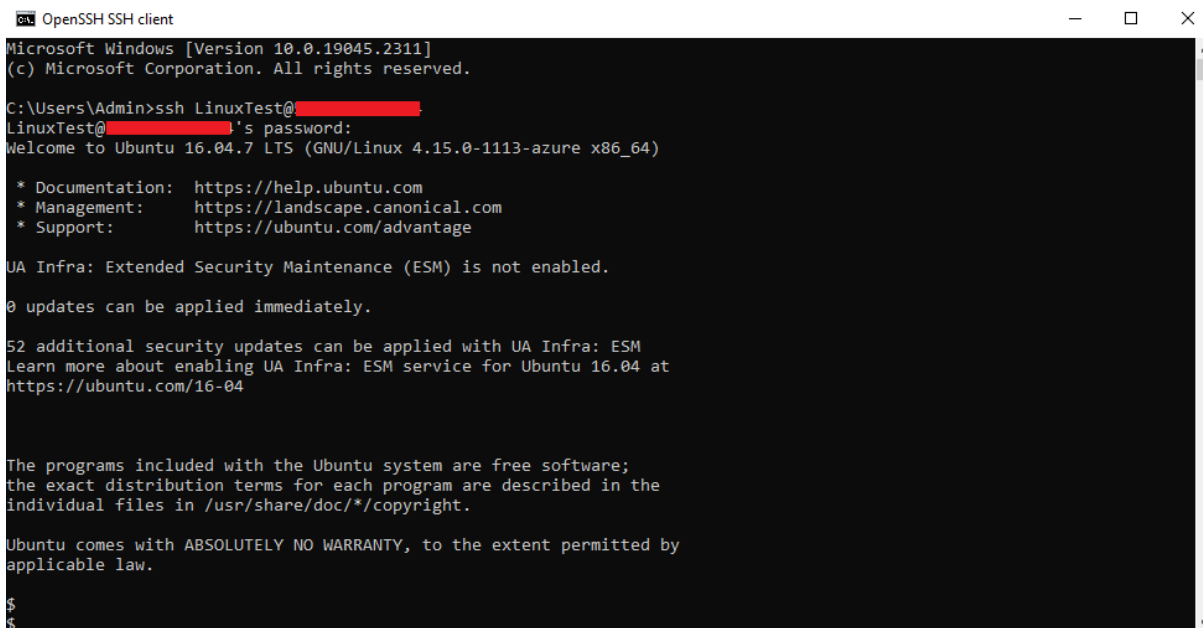
C:\Users\Admin>ssh LinuxTest@[REDACTED]
The authenticity of host '[REDACTED] ([REDACTED])' can't be established.
ECDSA key fingerprint is SHA256:[REDACTED]
Are you sure you want to continue connecting (yes/no/[fingerprint])? Yes
```

Kada smo upisali „yes“ pritisnemo „Enter“ na tipkovnici i CMD će se povezati na virtualnu mašinu. Sljedeće nas pita da unesemo lozinku virtualne mašine, tj. Lozinku korisnika. Dok se upisuje lozinka, ona se neće prikazivati u CMD-u kao da nismo ništa napisali ali u stvari jesmo, nego je skriveno zbog sigurnosnih razloga. Kada smo upisali lozinku pritisnemo „Enter“ tipku nakon čega ćemo biti ulogirani.



```
Command Prompt - ssh LinuxTest@
Microsoft Windows [Version 10.0.19045.2311]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Admin>ssh LinuxTest@
The authenticity of host ' ( )' can't be established.
ECDSA key fingerprint is SHA256:
Are you sure you want to continue connecting (yes/no/[fingerprint])? Yes
Warning: Permanently added ' (ECDSA) to the list of known hosts.
LinuxTest@52.236.32.214's password:
```



```
OpenSSH SSH client
Microsoft Windows [Version 10.0.19045.2311]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Admin>ssh LinuxTest@
LinuxTest@'s password:
Welcome to Ubuntu 16.04.7 LTS (GNU/Linux 4.15.0-1113-azure x86_64)

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

UA Infra: Extended Security Maintenance (ESM) is not enabled.

0 updates can be applied immediately.

52 additional security updates can be applied with UA Infra: ESM
Learn more about enabling UA Infra: ESM service for Ubuntu 16.04 at
https://ubuntu.com/16-04

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

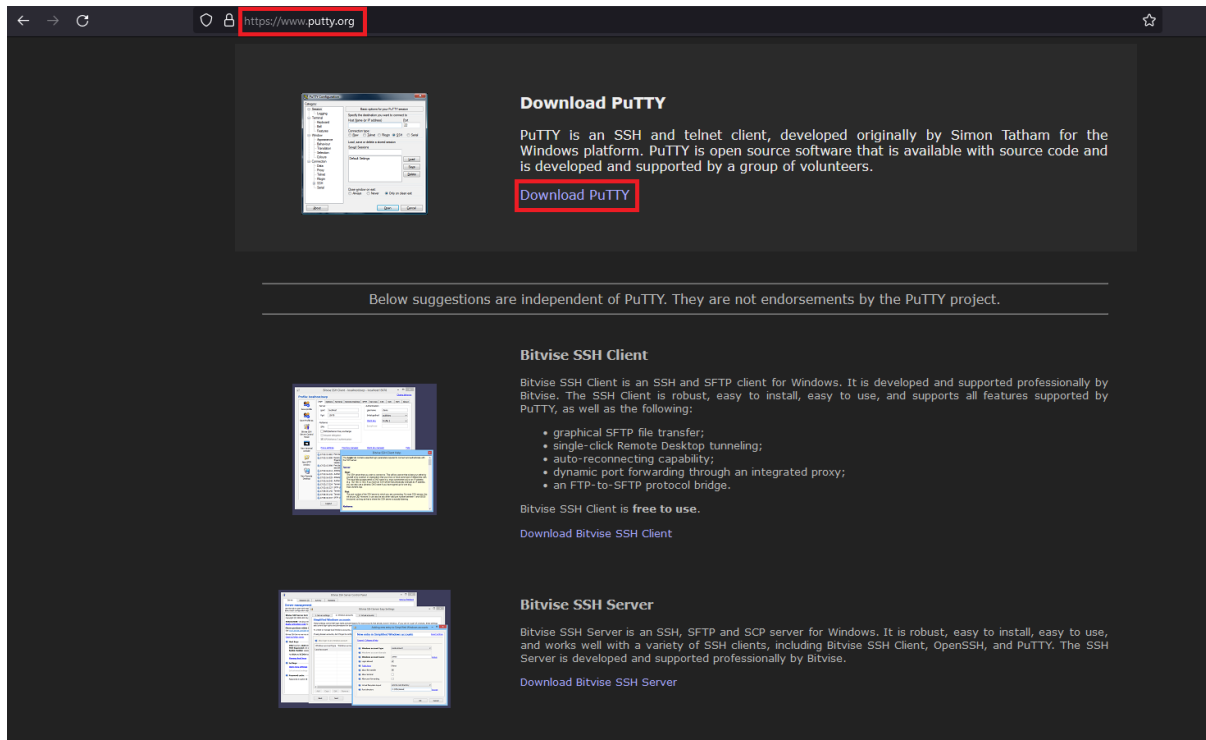
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

$
```

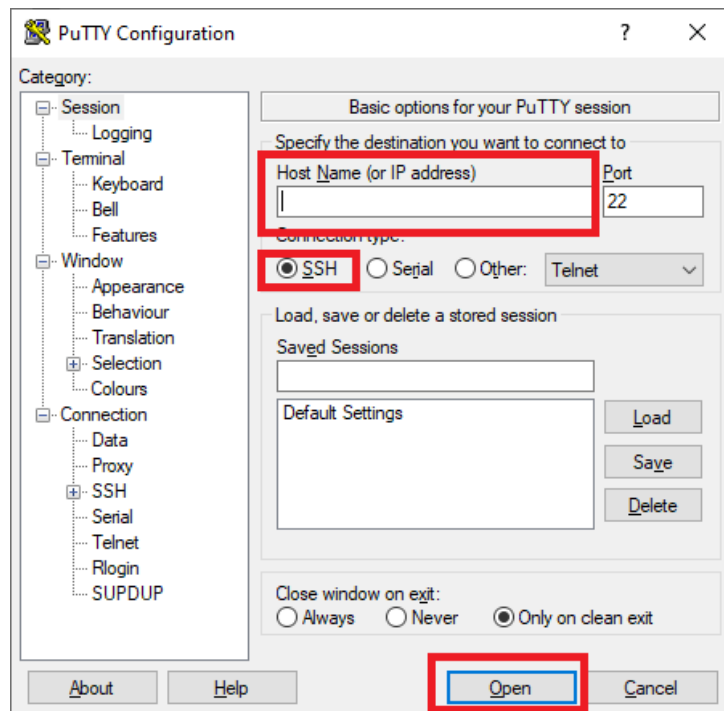
Kada smo ulogirani možemo koristiti virtualnu mašinu.

Spajanje na virtualnu mašinu sa aplikacijom PuTTY

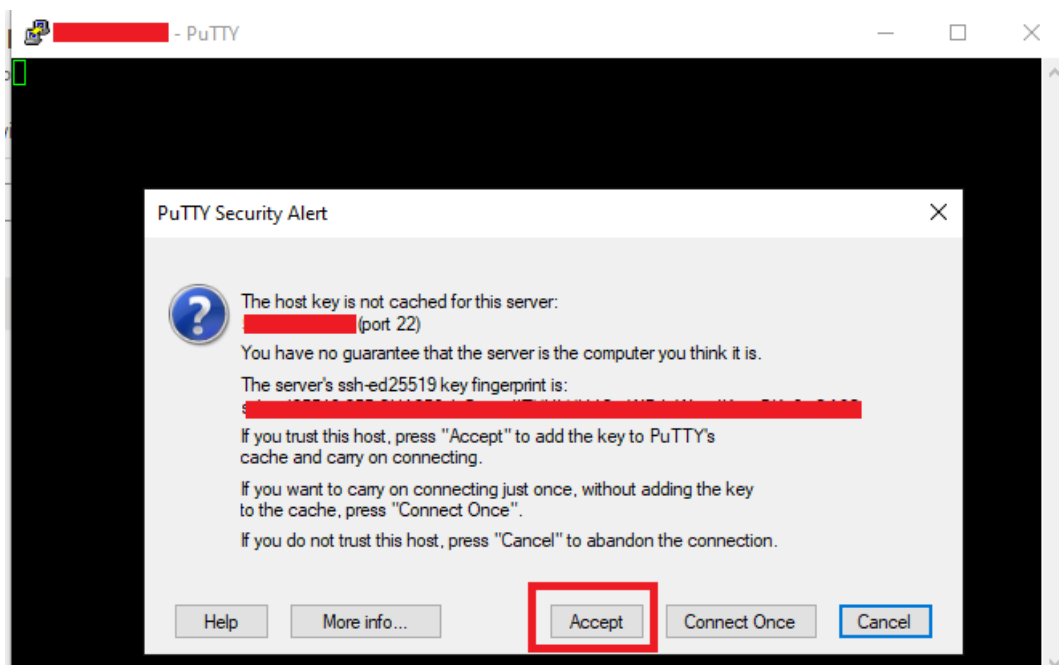
Da se spajamo na virtualnu mašinu sa PuTTY, prvo moramo preuzeti aplikaciju koju možete na ovome [linku](https://www.putty.org).



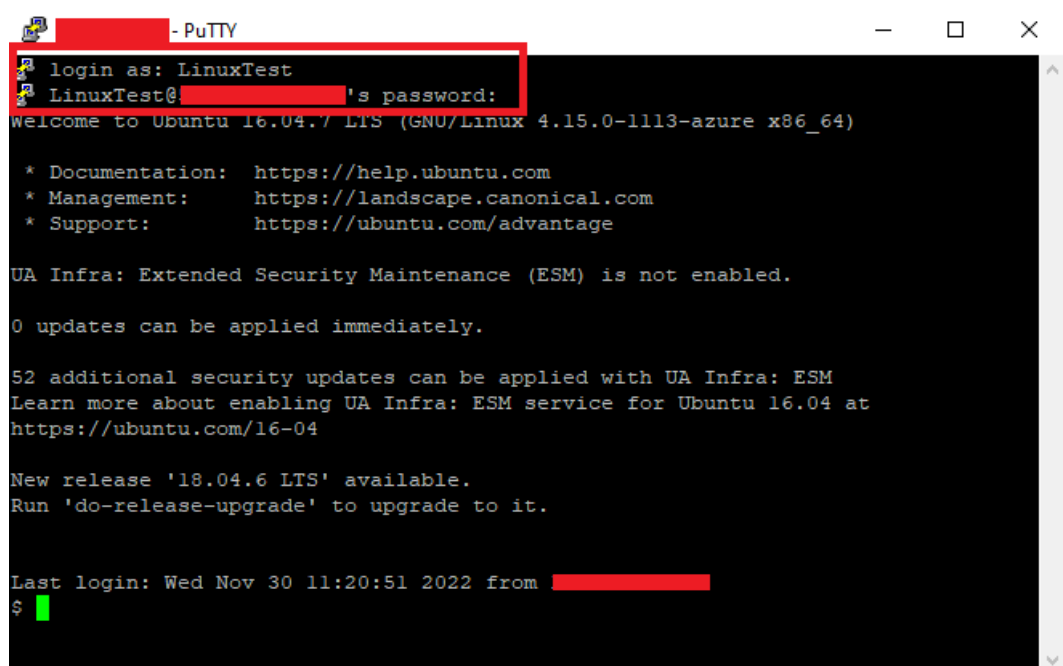
Kada se preuzme i instalira program, pokrećemo ga i otvara se njegov prozor u kojem nas pita da upišemo IP adresu. Tu upisujemo IP adresu od virtualne mašine i pritisnemo gumb „Open“.



Otvora nam se prozor na kojem pritisnemo „Accept“ da se spojimo na virtualnu mašinu.



Postupak je isti kao i kod CMD-a, samo šta nas prvo pita korisničko ime da unesemo pa onda tek lozinku.



```
- PuTTY
login as: LinuxTest
LinuxTest@[REDACTED]'s password:
Welcome to Ubuntu 16.04.7 LTS (GNU/Linux 4.15.0-1113-azure x86_64)

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

UA Infra: Extended Security Maintenance (ESM) is not enabled.

0 updates can be applied immediately.

52 additional security updates can be applied with UA Infra: ESM
Learn more about enabling UA Infra: ESM service for Ubuntu 16.04 at
https://ubuntu.com/16-04

New release '18.04.6 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Wed Nov 30 11:20:51 2022 from [REDACTED]
$
```