


Installing a Graphical User Interface (GUI) on Kali Linux

This guide provides a step-by-step walkthrough of installing XRDP on a Kali Linux instance to establish remote desktop access with a graphical user interface.



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Create a virtual machine ...











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Project details

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

Subscription * ⓘ 
Resource group * ⓘ 
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Instance details



Virtual machine name * ⓘ 
Region * ⓘ 
Availability options ⓘ 
Zone options ⓘ
☒ Self-selected zone
Choose up to 3 availability zones, one VM per zone
☐ Azure-selected zone (Preview)
Let Azure assign the best zone for your needs
Availability zone * ⓘ 
 You can now select multiple zones. Selecting multiple zones will create one VM per zone. [Learn more](#) 
Security type ⓘ 
 Trusted launch virtual machine is required when using TP Gallery images.
Image * ⓘ  
[See all images](#) | [Configure VM generation](#)
VM architecture ⓘ
☐ Arm64
☒ x64




[< Previous](#)

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Run with Azure Spot discount  ☐


Size *  Standard_B2als_v2 - 2 vcpus, 4 GiB memory (\$31.03/month) 
[See all sizes](#)


Enable Hibernation  ☐
 Hibernation is not supported by the image and size that you have selected. Choose an image and size that is compatible with Hibernation to enable this feature.
[Learn more](#) 

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.

[< Previous](#) [Next : Disks >](#) [Review + create](#)

Select a virtual machine size that maximizes resources within the budget assigned and business requirements.

SecAdmin Notes:

- Azure's internal configurations necessitate specific inbound ports (HTTP 80, HTTPS 443, SSH 22, and RDP) based on VM size.
- RDP access is required to facilitate remote connection and management.

Hands-On

Launch your terminal application. No administrative privileges are required. Connect to the virtual machine via SSH using: `ssh <Username>@<PublicIP>`. After entering your password,

proceed with the system update and installation of necessary dependencies and packages.

```
>ssh kali@20.15.201.112
```

Public IP address : 20.15.201.112

We will install an update to the file with root privileges, and upgrade the system dependencies.

```
(Run: "touch ~/.hushlogin" to hide this message)
(kali㉿kali)-[~]
$ sudo apt update && sudo upgrade -y
```

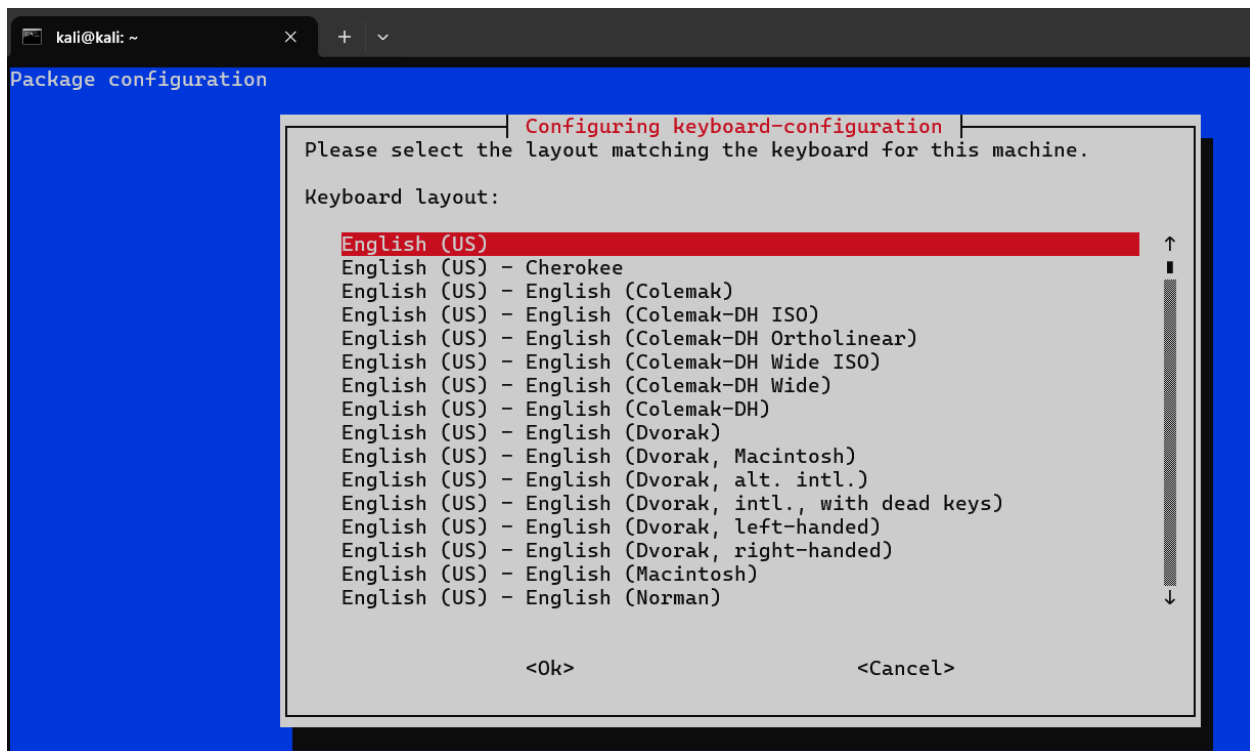
Use `sudo apt-get install xfce4 xfce4-goodies -y` to perform a root-level installation of the XFCE4 desktop environment and its "goodies" package. The `-y` flag automatically answers "yes" to all installation prompts, preventing interactive confirmation.

XFCE4: It's a lightweight and fast desktop environment that provides a graphical user interface (GUI).

xfce4-goodies: This is a package that contains extra utilities and plugins that enhance the XFCE4 desktop experience.

```
(kali㉿kali)-[~]
$ sudo apt-get install xfce4 xfce4-goodies -y
```

Next, accept the package configuration by clicking OK.



We will begin by installing and updating XRDP. Subsequently, we will enable the service to start on boot using `sudo systemctl enable xrdp`. Finally, we will start the XRDP service immediately with `sudo systemctl start xrdp`.

XRDP acts as a bridge, enabling communication between RDP clients and the Linux X Window System (which is responsible for the graphical display). It essentially translates RDP signals into commands that the Linux desktop can understand, and vice versa.

```
(kaliⓀkali)-[~]  
$ sudo apt-get install xrdp -y
```

```
(kaliⓀkali)-[~]  
$ sudo systemctl enable xrdp
```

```
(kaliⓀkali)-[~]  
$ sudo systemctl start xrdp
```

To ensure XFCE4 starts automatically upon user login, execute the following command:
echo "startxfce4" > ~/.xsession. This writes the command to launch XFCE4 into the user's .xsession file.

```
(kali㉿kali)-[~]  
$ echo "startxfce4" > ~/.xsession
```

systemctl enable ufw is a command used in Linux systems that utilize systemd (a system and service manager) to configure the Uncomplicated Firewall (UFW) to start automatically at system boot

First, install any missing UFW dependencies. Then, use systemctl enable ufw to activate your firewall on startup. This is an important security measure for Linux systems.

```
(kali㉿kali)-[~]  
$ sudo apt-get install ufw
```

```
(kali㉿kali)-[~]  
$ sudo systemctl enable ufw  
Synchronizing state of ufw servi
```

We will now configure the firewall to permit RDP connections by allowing traffic on port 3389.

Open Firewall Ports:

22- SSH (Secure Shell)

3389- RDP (Remote Desktop Protocol)

5985 - WinRM (Windows Remote Management - HTTP)

5986 - WinRM (Windows Remote Management - HTTPS)

```
(kali㉿kali)-[~]  
$ sudo ufw allow 3389/tcp
```

To finalize the configuration, we will restart the XRDP service and then exit.

```
(kali㉿kali)-[~]  
$ sudo systemctl restart xrdp
```

Next, access the instance's networking settings and add a new inbound rule. Specify the port, enable TCP, and ensure the service is running.

SecAdmin Notes: Depending on the instance size, you may need to modify the existing SSH rule to also allow RDP traffic.

Finally, we will open a remote desktop connection and log in using our installed distribution.

SSH
TestingMachine-nsg

Source

Source port ranges *

Destination

Service

Destination port ranges

Protocol
☐ Any
☒ TCP
☐ UDP
☐ ICMPv4

Action
☒ Allow
☐ Deny

Priority *

Name

AllowAnyRDPInbound
TestingMachine-nsg

Source

Source port ranges *

Destination

Service

Destination port ranges

Protocol
☐ Any
☒ TCP
☐ UDP
☐ ICMPv4

Action
☒ Allow
☐ Deny

Priority *

Name

Description


[Save](#) [Cancel](#) [Give feedback](#)

Remote Desktop Connection

Remote Desktop Connection

Computer:

Login to kali



Session

username

password

[OK](#) [Cancel](#)