

Instalação de GUI na EC2

Objetivo

Utilizar GUI (Graphical User Interface – Interface Gráfica do Usuário) na instância EC2 AWS.

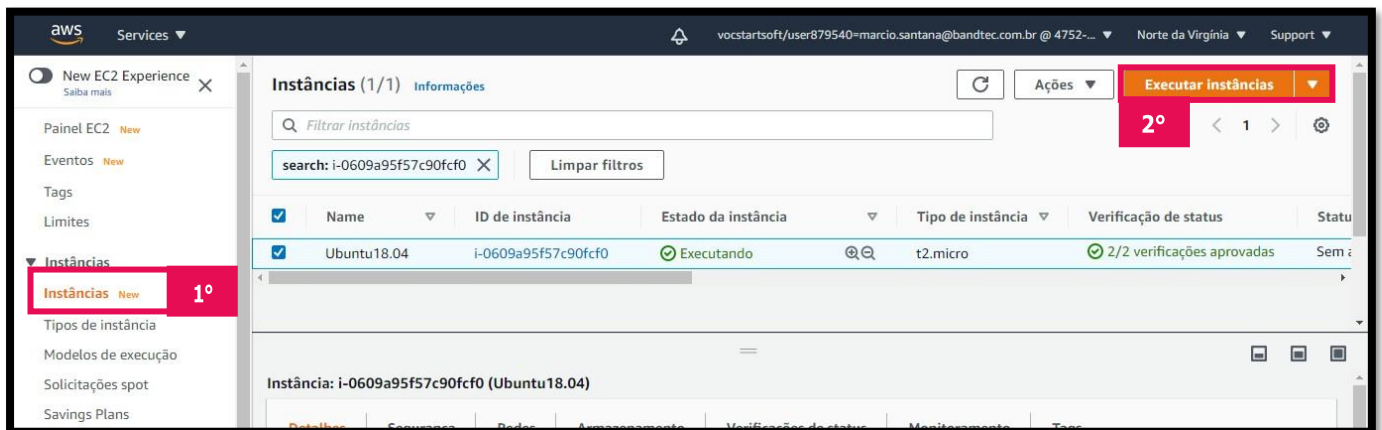
Requisitos

- ✓ Ter acesso à plataforma da AWS;
- ✓ Adicionar regra de entrada RDP (Origem 0.0.0.0/0)
- ✓ Conexão SSH com sua instância EC2;

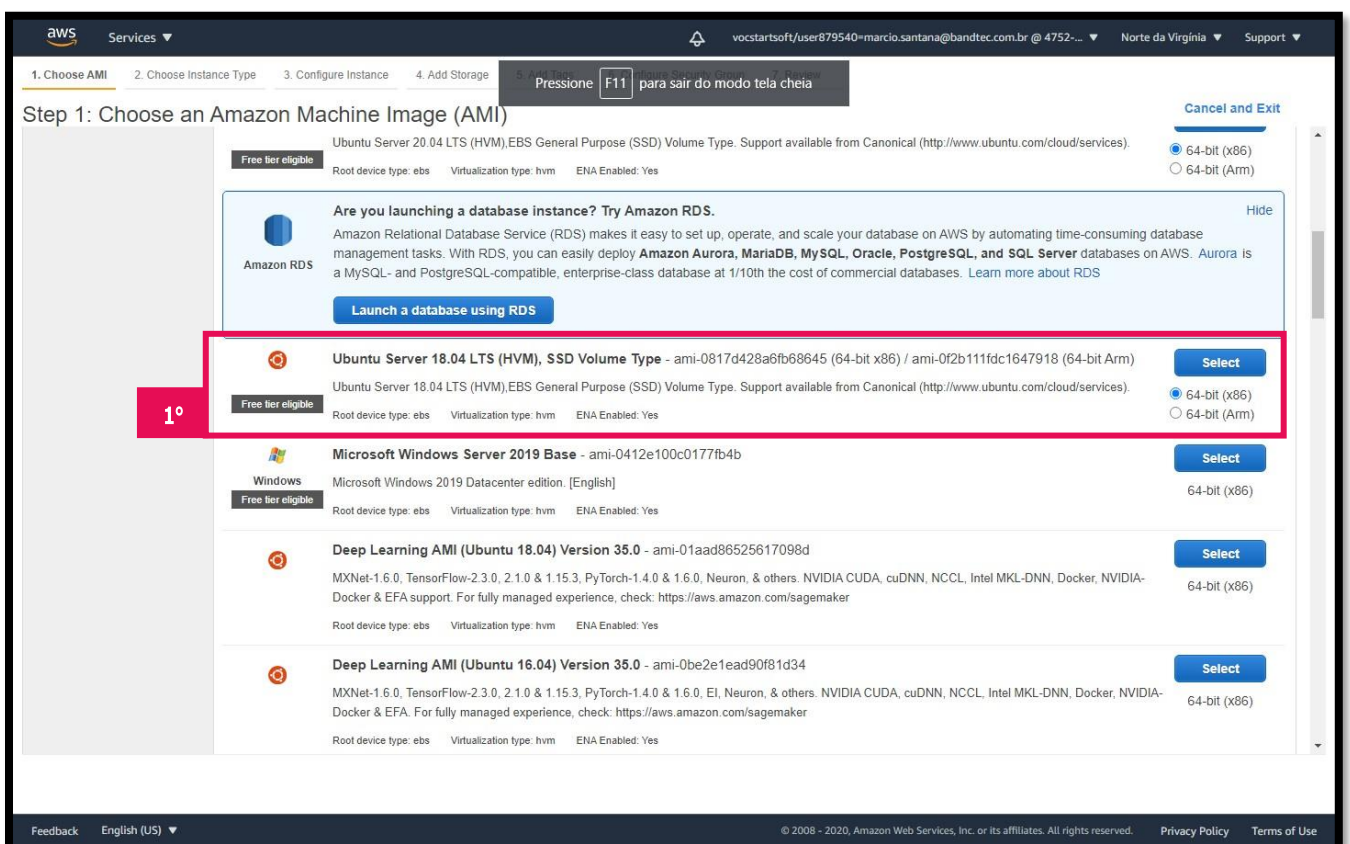
► Start

1. Vamos criar uma instância, para isso, siga os próximos passos.

1.1 Inicie a criação de uma nova instância.



1.2 Selecione uma instância.



1.3 Selecione o tipo da instância.

aws Services

vocstartsoft/user879540=marcio.santana@bandtec.com.br @ 4752-... Norte da Virginia Support

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t3a.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	General purpose	t3a.micro	2	1	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	General purpose	t3a.small	2	2	EBS only	Yes	Up to 5 Gigabit	Yes
<input type="checkbox"/>	General purpose	t3a.medium	2	4	EBS only	Yes	Up to 5 Gigabit	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

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1.4 Confirme os detalhes da instância.

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 3: Configure Instance Details

Configure the instance to suit your requirements. You can launch multiple instances from the same AMI, request Spot instances to take advantage of the lower pricing, assign an access management role to the instance, and more.

Number of instances Launch into Auto Scaling Group

Purchasing option ☐ Request Spot instances

Network Create new VPC

Subnet Create new subnet

Auto-assign Public IP

Placement group ☐ Add instance to placement group

Capacity Reservation

Domain join directory Create new directory

IAM role Create new IAM role

Shutdown behavior

Stop - Hibernate behavior ☐ Enable hibernation as an additional stop behavior

Enable termination protection ☐ Protect against accidental termination

Monitoring ☐ Enable CloudWatch detailed monitoring
Additional charges apply.

Tenancy
Additional charges will apply for dedicated tenancy.

Elastic Inference ☐ Add an Elastic Inference accelerator
Additional charges apply.

Cancel Previous Review and Launch Next: Add Storage

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1.5 Confirme o armazenamento.

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1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 4: Add Storage

Your instance will be launched with the following storage device settings. You can attach additional EBS volumes and instance store volumes to your instance, or edit the settings of the root volume. You can also attach additional EBS volumes after launching an instance, but not instance store volumes. Learn more about storage options in Amazon EC2.

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encryption
Root	/dev/xvda	snap-0f0e35e3435b2eb19	8	General Purpose SSD (gp2)	100 / 3000	N/A	<input checked="" type="checkbox"/>	Not Encrypt

Add New Volume

Free tier eligible customers can get up to 30 GB of EBS General Purpose (SSD) or Magnetic storage. Learn more about free usage tier eligibility and usage restrictions.

Cancel Previous Review and Launch Next: Add Tags

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1.6 Não é necessário adicionar nenhuma tag

aws Services

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 5: Add Tags

A tag consists of a case-sensitive key-value pair. For example, you could define a tag with key = Name and value = Webserver.
A copy of a tag can be applied to volumes, instances or both.
Tags will be applied to all instances and volumes. [Learn more](#) about tagging your Amazon EC2 resources.

Key (128 characters maximum)	Value (256 characters maximum)	Instances ⓘ	Volumes ⓘ
This resource currently has no tags			
Choose the Add tag button or click to add a Name tag. Make sure your IAM policy includes permissions to create tags.			

Add Tag (Up to 50 tags maximum)

Cancel Previous Review and Launch Next: Configure Security Group 1°

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1.7 Adicione uma Regra, do tipo RDP.

aws Services

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a new security group ☐ Select an existing security group

4° Security group name: regras

Description: launch-wizard-3 created 2020-10-20T00:50:21.749-03:00

Type ⓘ	Protocol ⓘ	Port Range ⓘ	Source ⓘ	Description ⓘ
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
2° RDP	TCP	3389	3° Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

1° Add Rule

Warning
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous Review and Launch 5°

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RDP???

O que é?

A sigla **RDP** vem do inglês Remote Desktop Protocol, ou seja, Protocolo de Área de Trabalho Remota, é um protocolo que permite que usuários consigam ter acesso às suas respectivas áreas de trabalho sem que seja necessário estar fisicamente próximo a seus computadores.

Para que serve?

Se você já precisou acessar remotamente seu computador do trabalho ou algum servidor, provavelmente usufruiu dos benefícios que essa ferramenta pode propiciar, pois é esse o propósito para o qual o RDP foi concebido, permitir que pessoas consigam acessar remotamente suas áreas de trabalho (GUI).

SSH???

O que é?

A sigla **SSH** vem do inglês Secure Shell, ou seja, Shell Seguro, é um protocolo de rede que permite aos usuários acessar e gerenciar remotamente servidor pela internet.

Para que serve?

Com o acesso SSH, o usuário pode fazer login em um outro computador por uma rede protegida por criptografia. Desse jeito, ele pode executar comandos, mover e editar arquivos de um local para outro sem riscos de interceptação por agentes maliciosos.

Qual a diferença entre os dois? 🤔

Uma das principais diferenças é que, através do protocolo **SSH** eu acesso o Shell (Terminal) da máquina/servidor remoto, e com o protocolo **RDP** eu acesso a área de trabalho (GUI) da Máquina/servidor remoto.

1.8 Confirme a criação da instância

The screenshot shows the 'Step 7: Review Instance Launch' page in the AWS Management Console. At the top, a navigation bar includes the AWS logo, 'Services', and a user profile. Below the navigation bar, a progress bar shows seven steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group, and 7. Review (which is the current step). A yellow warning box at the top states: 'Improve your instances' security. Your security group, regras, is open to the world. Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. Edit security groups'. Below the warning, the 'AMI Details' section shows 'Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-032930428bf1abbff'. The 'Instance Type' section shows a table with columns: Instance Type, ECUs, vCPUs, Memory (GiB), Instance Storage (GB), EBS-Optimized Available, and Network Performance. The row for 't2.micro' shows 1 vCPU, 1 GiB memory, and EBS only storage. The 'Security Groups' section shows a table with columns: Type, Protocol, Port Range, Source, and Description. The row for 'SSH' shows TCP protocol and port range 22. At the bottom right, there are 'Cancel', 'Previous', and 'Launch' buttons. A red box with the number '1°' is placed over the 'Launch' button.

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

Improve your instances' security. Your security group, regras, is open to the world.
Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details [Edit AMI](#)

Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type - ami-032930428bf1abbff
The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.
Root Device Type: ebs Virtualization type: hvm

Instance Type [Edit instance type](#)

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups [Edit security groups](#)

Security group name regras
Description launch-wizard-3 created 2020-10-20T00:50:21.749-03:00

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	0.0.0.0/0	
RDP	TCP	3389	0.0.0.0/0	

[Cancel](#) [Previous](#) [Launch](#) **1°**

1.9 Crie uma chave de acesso.

The screenshot shows a dialog box titled 'Select an existing key pair or create a new key pair'. The dialog box contains a text area with the following text: 'A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance. Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.' Below the text area, there is a dropdown menu with the following options: 'Choose an existing key pair', 'Choose an existing key pair', 'Create a new key pair', and 'Proceed without a key pair'. The 'Create a new key pair' option is highlighted with a red box and a red circle with the number '1°'. At the bottom of the dialog box, there are 'Cancel' and 'Launch Instances' buttons.

Select an existing key pair or create a new key pair

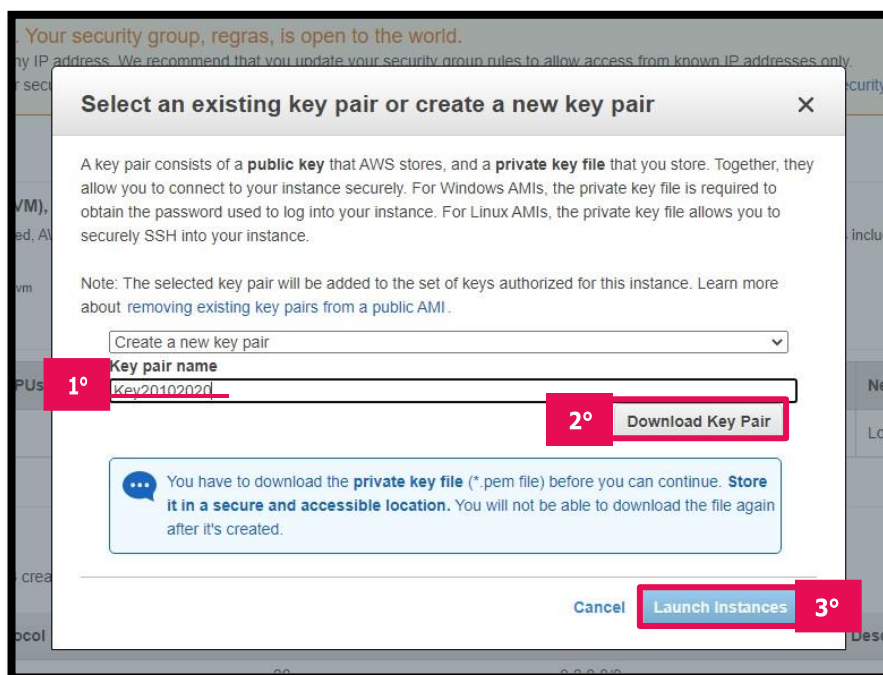
A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key file allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about removing existing key pairs from a public AMI.

Choose an existing key pair
Choose an existing key pair
Create a new key pair
Proceed without a key pair

☐ I acknowledge that I have access to the selected private key file (1SOKEY.pem), and that without this file, I won't be able to log into my instance.

[Cancel](#) [Launch Instances](#)



Caso já tenha uma instância e a chave de segurança dela, apenas adicione uma nova regra, seguindo os próximos passos.

Pares de chaves (.pem) na Amazon EC2 📄

Um par de chaves, o qual consiste em uma chave privada e uma chave pública, trata-se de um conjunto de credenciais de segurança usadas para provar sua identidade ao se conectar a uma instância. O Amazon EC2 armazena a chave pública, e você armazena a chave privada. Você usa a chave privada, em vez de uma senha, para acessar as instâncias com segurança. Qualquer um com sua chave privada pode se conectar às instâncias, por isso é importante que você armazene as chaves privadas em um lugar seguro.

Ao executar uma instância, um par de chaves será solicitado. Se você planeja se conectar à instância usando SSH, deverá especificar um par de chaves. É possível escolher um par de chaves existente ou criar um novo par de chaves.

Como o Amazon EC2 não mantém uma cópia da sua chave privada, não há como recuperar a chave privada caso você a perca.

As chaves que o Amazon EC2 usa são chaves SSH-2 RSA de 2048 bits.

...no menu de opções, selecione “Grupos de segurança”

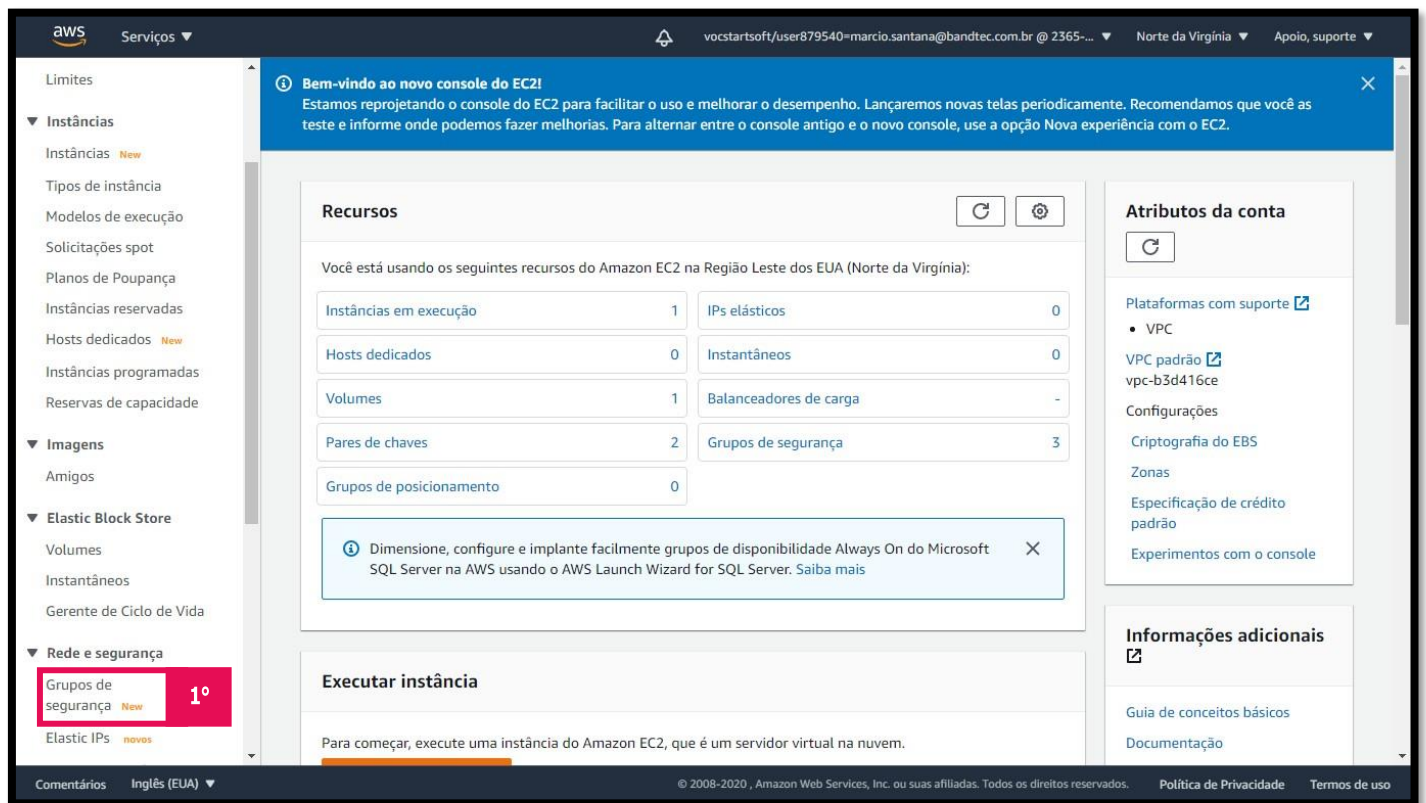


Figura 1 - Acessando o Grupos de

...selecione o Grupo de segurança utilizado pela sua instância EC2

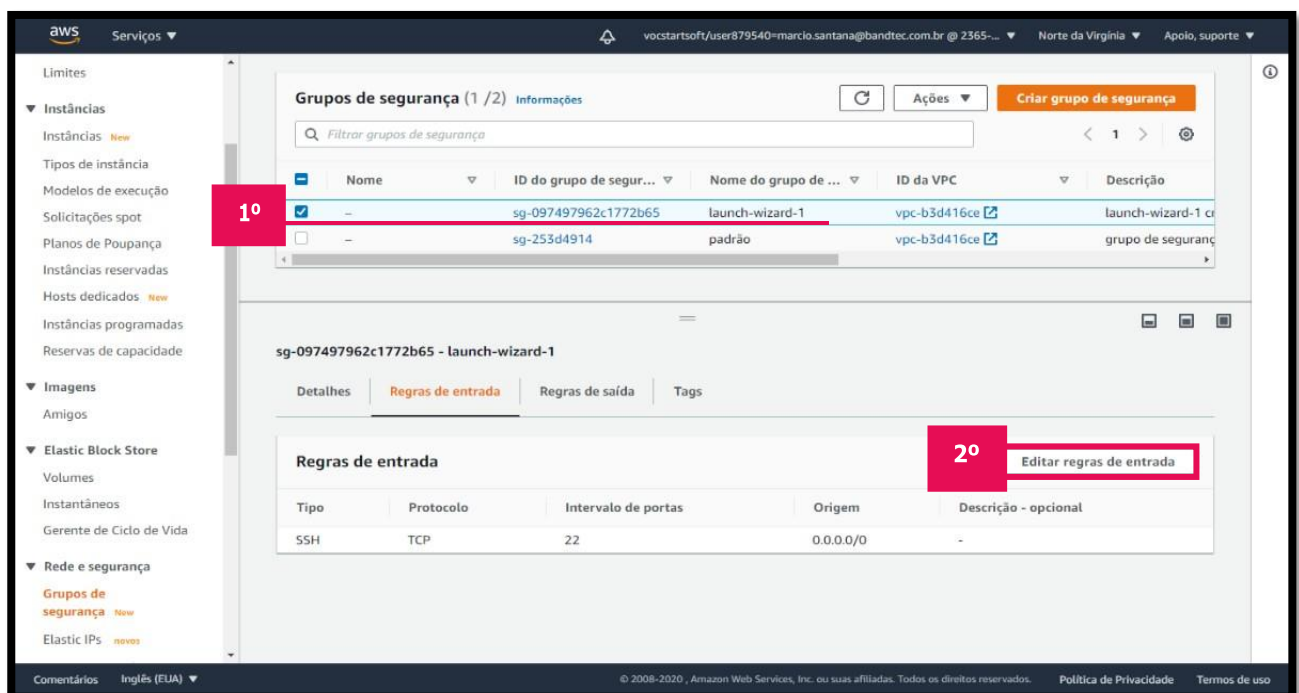


Figura 2 - Grupos de Segurança

...adicione uma nova regra de entrada ao seu Grupo de segurança

Figura 3 - Editando Grupo de Segurança - Instância já

Após essas configurações, sua instância EC2 estará pronta para iniciar a instalação da GUI.

2. Inicie um acesso via SSH, conforme ensinado em aula.
Você deve ver uma tela parecida com a figura 4.



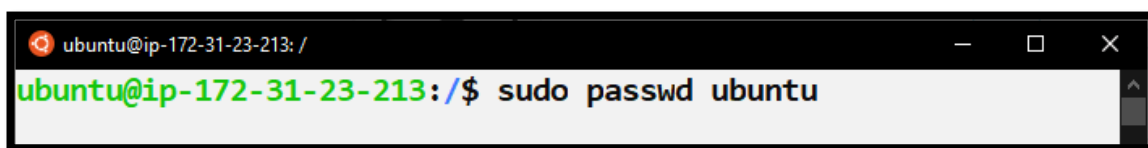
```
ubuntu@ip-172-31-23-213: /  
ubuntu@ip-172-31-23-213:/$
```

Figura 4 - Terminal da Instância

3. insira uma senha no usuário padrão,

Execute:

`sudo passwd ubuntu`

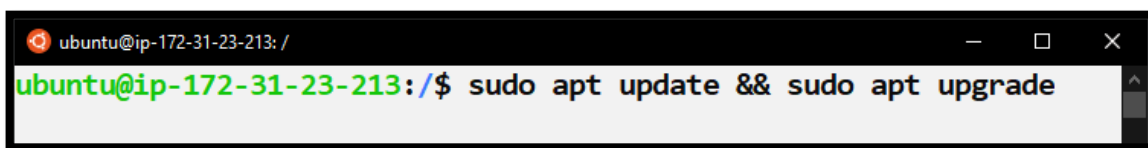


```
ubuntu@ip-172-31-23-213: /  
ubuntu@ip-172-31-23-213:/$ sudo passwd ubuntu
```

Figura 6 - Troca de senha

4. atualize os pacotes do sistema,

Execute: `sudo apt update && sudo apt upgrade`



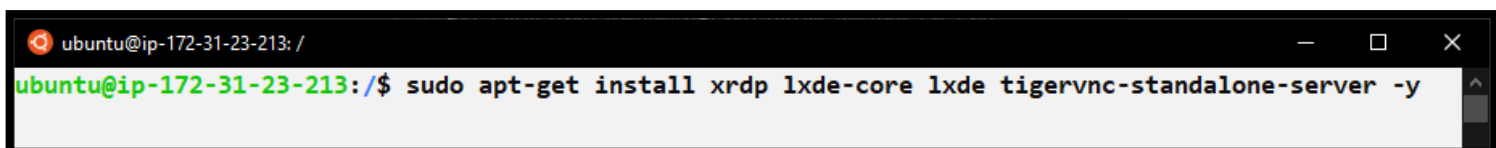
```
ubuntu@ip-172-31-23-213: /  
ubuntu@ip-172-31-23-213:/$ sudo apt update && sudo apt upgrade
```

Figura 7 - Atualização de pacotes

5. Instale na sua instância, o protocolo RDP e a GUI LXDE,

Execute:

`sudo apt-get install xrdp lxde-core lxde tigervnc-standalone-server -y`

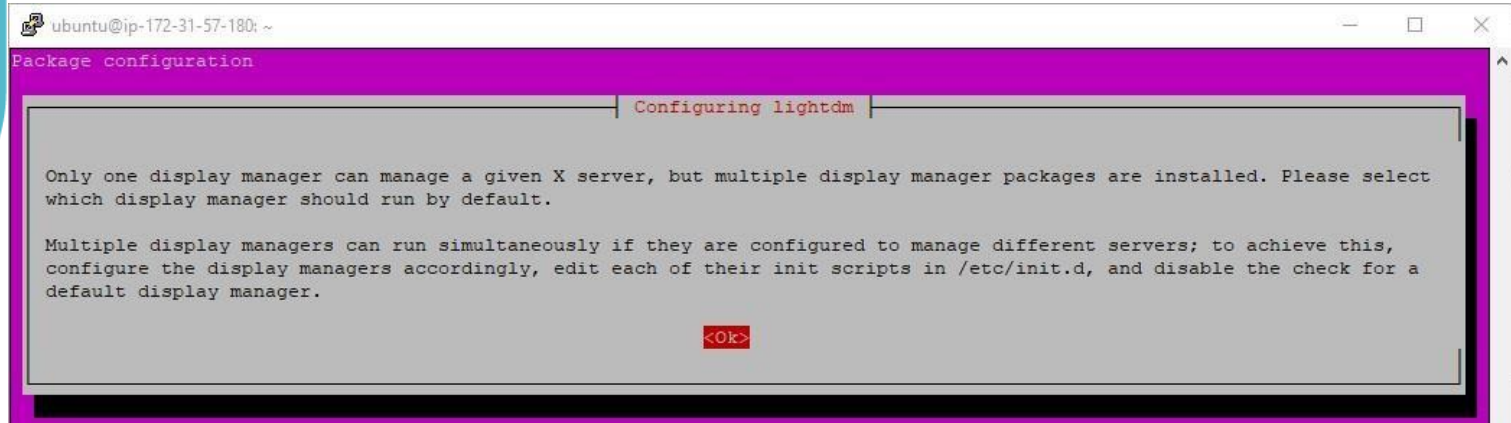


```
ubuntu@ip-172-31-23-213: /  
ubuntu@ip-172-31-23-213:/$ sudo apt-get install xrdp lxde-core lxde tigervnc-standalone-server -y
```

Figura 8 - Instalação do Protocolo RDP e GUI LXDE

Durante a instalação pode ser que apareça a seguinte mensagem abaixo, essa configuração é referente ao gerenciador de exibição, que é um programa que fornece recursos gráficos de login e manipula a autenticação do usuário.

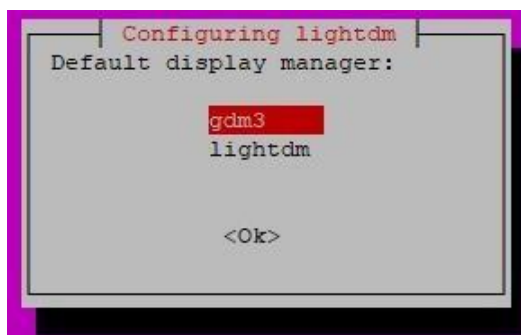
Pressione "Enter"



Agora, escolha o gerenciador padrão, em nosso caso, a diferença entre gdm3 (Gnome) e lightdm não era perceptível.

Recomendamos deixar em gdm3 (Gnome).

Pressione "Enter" para continuar a instalação



Pronto, agora sua instância já está pronta!
Agora vamos fazer o acesso remoto para ver a GUI.

6. Para realizar a conexão remota via GUI, vamos utilizar a ferramenta do Windows chamada "Conexão de Área de Trabalho Remota"

Então, pesquise por essa ferramenta na barra de pesquisa do Windows. No campo "Computador", insira o IP Público da sua instância EC2.

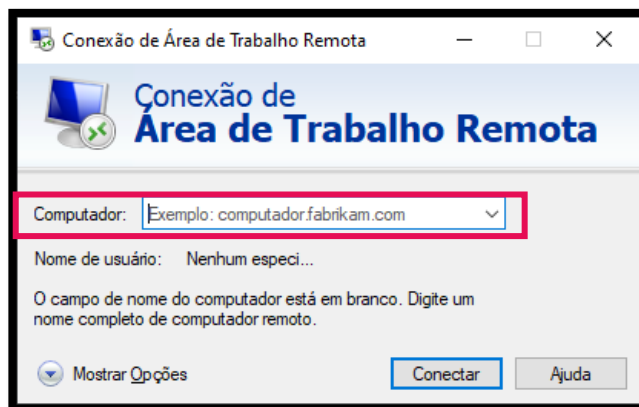
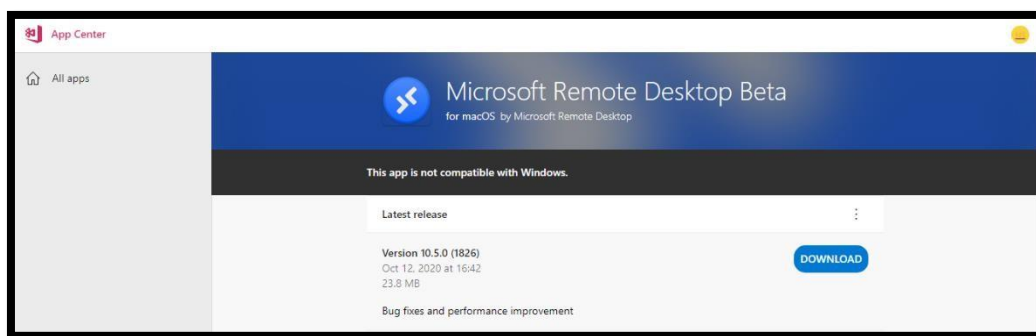


Figura 16 - Iniciando acesso remoto

Para usuários de **macOS**, utilizem o aplicativo abaixo:



[Link: Remote Desktop para macOS](#)

Para usuários de Distribuições **Linux**, executem os seguintes comandos:

Execute:

```
sudo apt install rdesktop
```

Para conectar em uma máquina: **Execute:**

```
rdesktop -u <usuario> -g 90% -PKD <ip da máquina>
```

Ou então utilize o Remmina

Para instalar

```
sudo apt-add-repository ppa:remmina-ppa-team/remmina-next
```

```
sudo apt update
```

```
sudo apt install remmina remmina-plugin-rdp remmina-plugin-secret
```

7. A figura abaixo mostra onde obter o IP Público.

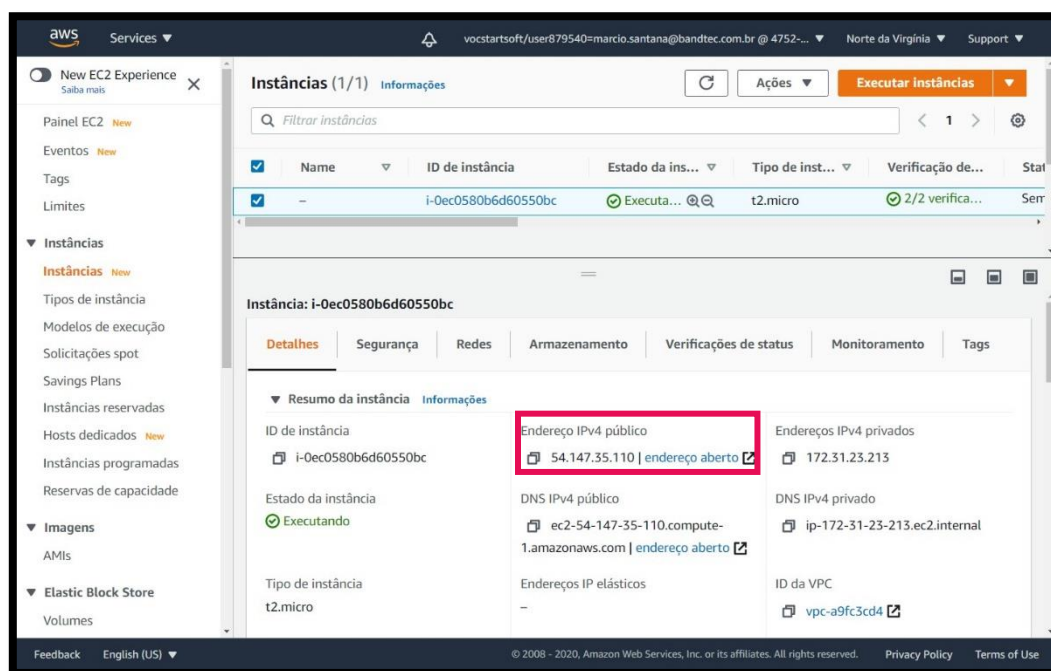


Figura 17 - Obtendo IP Público

8. Insira o IP, e clique em Conectar.

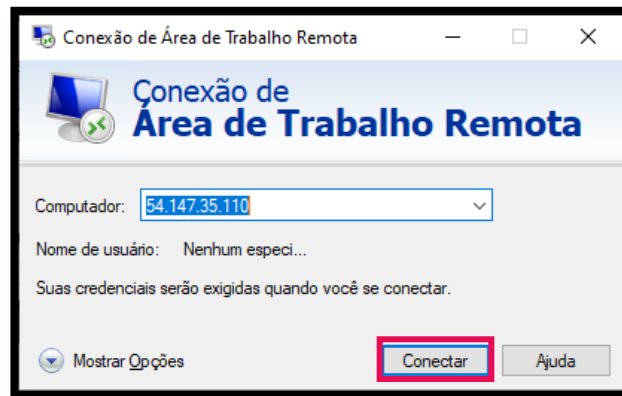


Figura 18- Inserindo IP Público

9. Aceite a conexão.

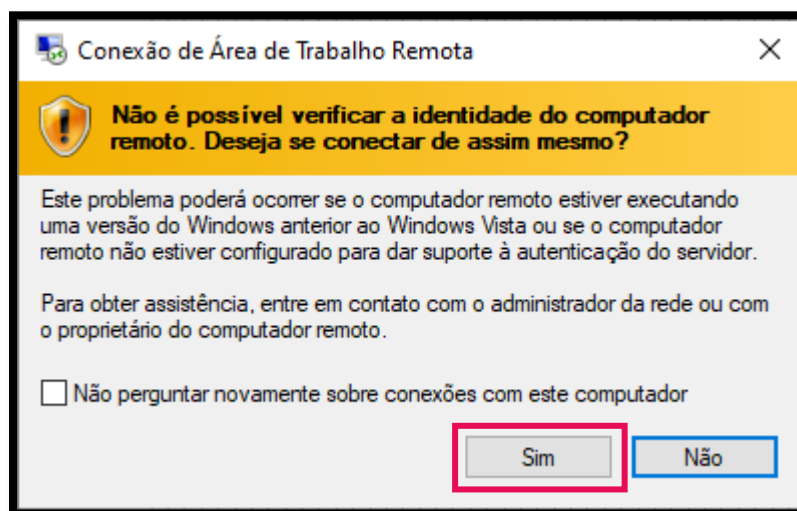


Figura 19 - Confirmando acesso remoto

10. Se tudo estiver correto, você deve ver uma tela como essa:
Insira o seu usuário e senha, que foi criado lá no incio.

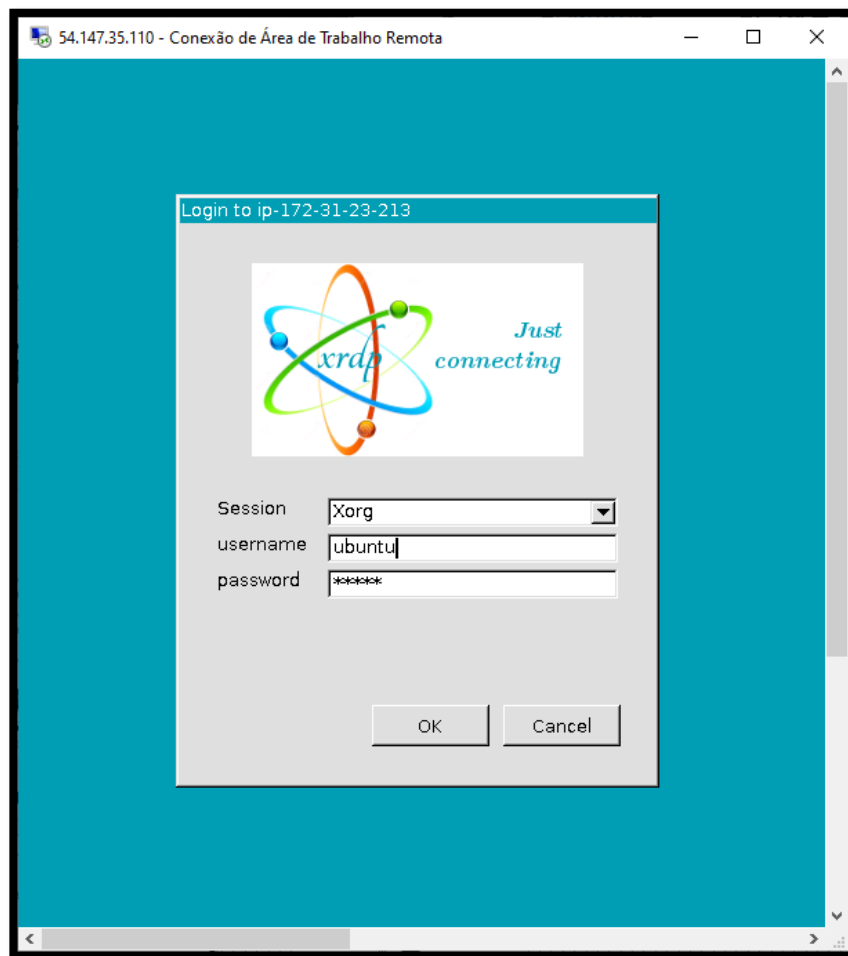
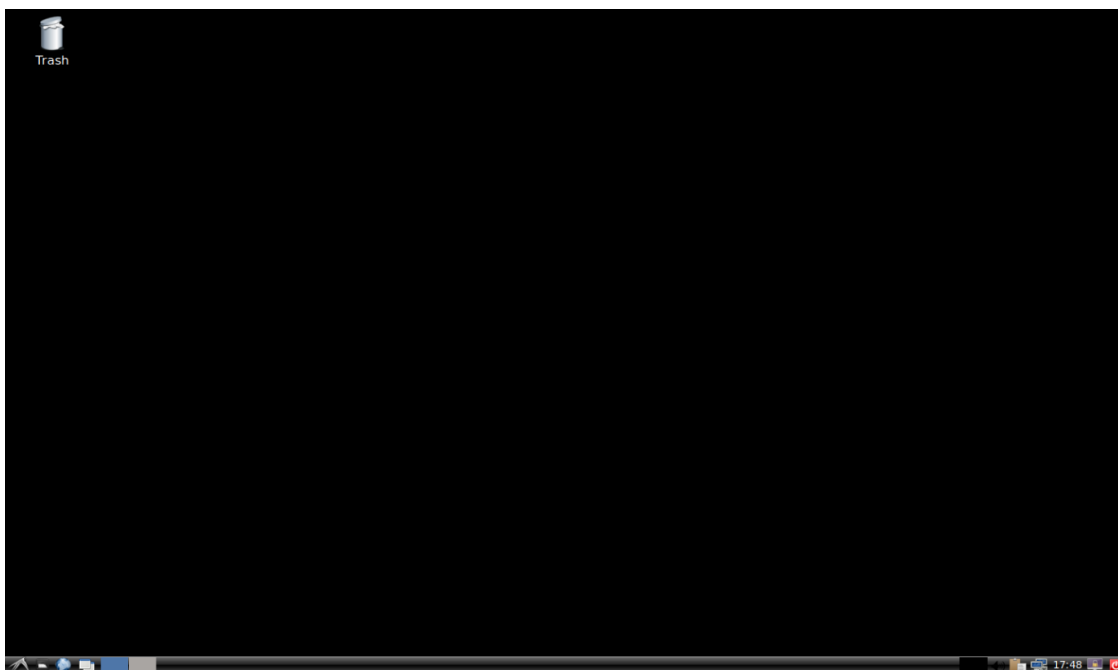


Figura 20 - Login para acesso remoto

11. Pronto sua GUI.



Referências

<https://packages.debian.org/stretch/tigervnc-standalone-server>

<https://packages.debian.org/stretch/lxde-core>

<http://www.lxde.org/>

<http://xrdp.org/>

https://install.appcenter.ms/orgs/rdmacios-k2vy/apps/microsoft-remote-desktop-for-mac/distribution_groups/all-users-of-microsoft-remote-desktop-for-mac