

GlusterFS

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Como funciona o Gluster File System:

- Agrega múltiplas unidades de armazenamento remotas em um único volume.
- As unidades de armazenamento (bricks) são distribuídas pela rede em um único sistema de arquivos paralelo;
- Os clientes, que também podem ser simultaneamente servidores de dados, montam os diretórios compartilhados pelos servidores, tendo assim acesso a uma parte ou a todo o conteúdo compartilhado.

O que o Gluster File System oferece:

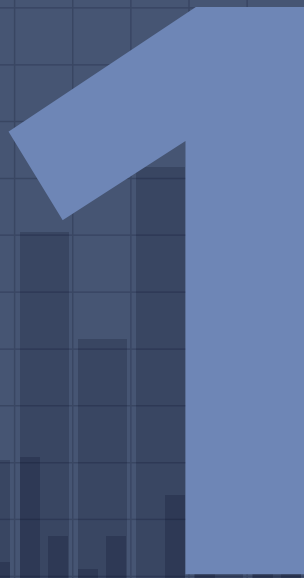
- Principal objetivo é a escalabilidade;
- Flexibilidade adaptativa à crescimento/redução de dados;
- Adiciona e deleta volumes e usuários com facilidade;
- Fácil de gerenciar;




O que veremos:

- ▣ Como instalar;
- ▣ Como configurar;
- ▣ Como criar um volume no GlusterFS.

Como instalar?




Instalando o repositório



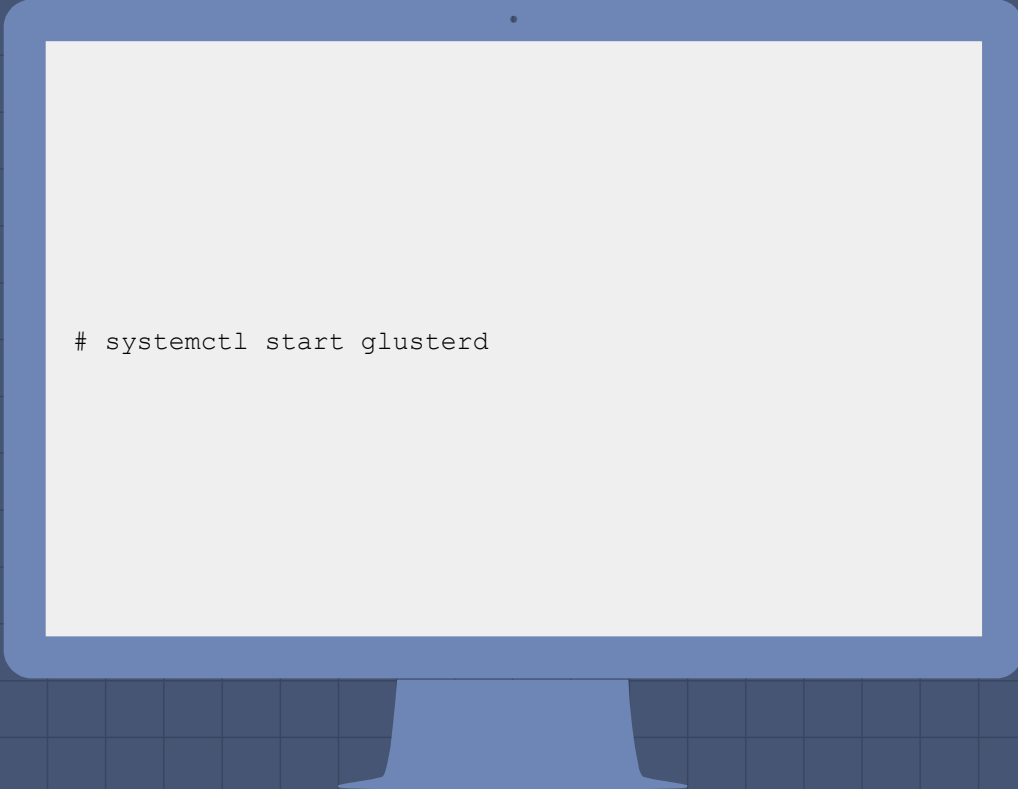
```
# sudo add-apt-repository ppa:gluster/glusterfs-3.10  
  
# sudo apt-get update
```

Instalando o GlusterFS




```
# sudo apt-get install -y glusterfs-server
```


Iniciando o serviço



```
# systemctl start glusterd
```

Habilitando o início automático durante o boot



```
# systemctl enable glusterd
```

Como configurar?

Utilizando o **GDeploy**



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Configurando o GlusterFS

Utilizando o GDeploy*

> Inicie o script e acesse o endereço;

* Disponível em:
<https://github.com/gluster/gdeploy>



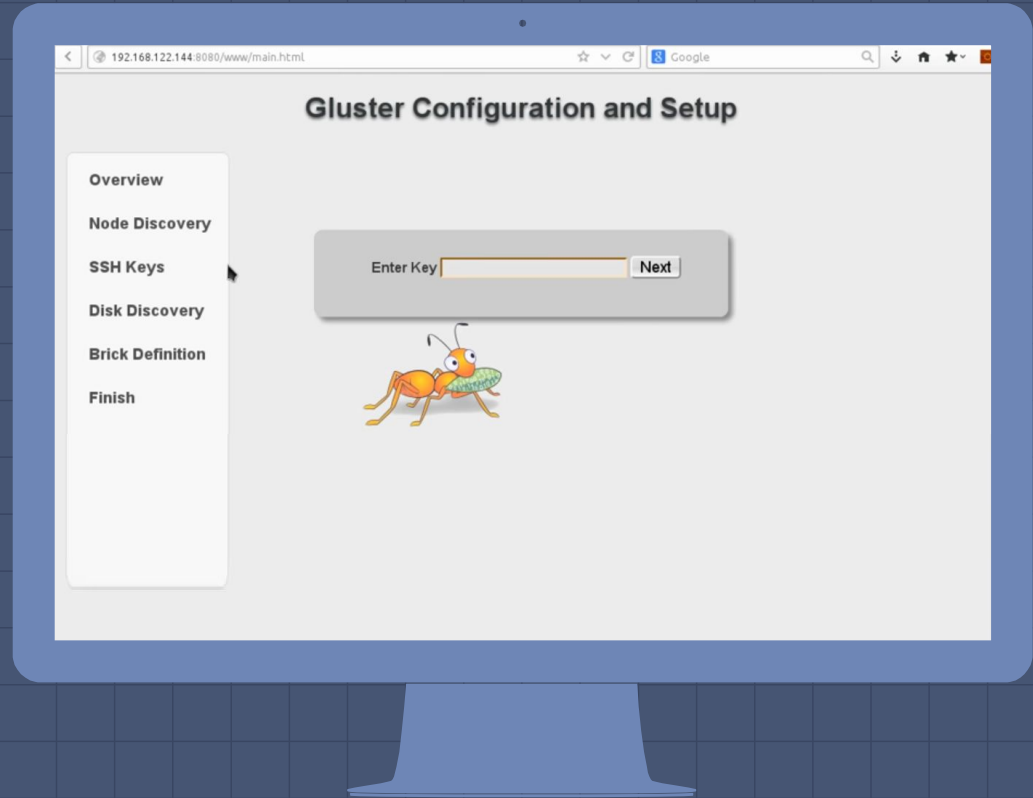
```
[root@rhs1-1 gluster-deploy]# ./gluster-deploy.py  
gluster-deploy starting  
  
Web server details:  
Access key - hIPVr1gasH1VHAIL6Y6DgSrpPj  
Web Address -  
http://192.168.122.144:8080/
```

Configurando o GlusterFS

Utilizando o
GDeploy*

> Insira a chave de acesso;

* Disponível em:
<https://github.com/gluster/gdeploy>

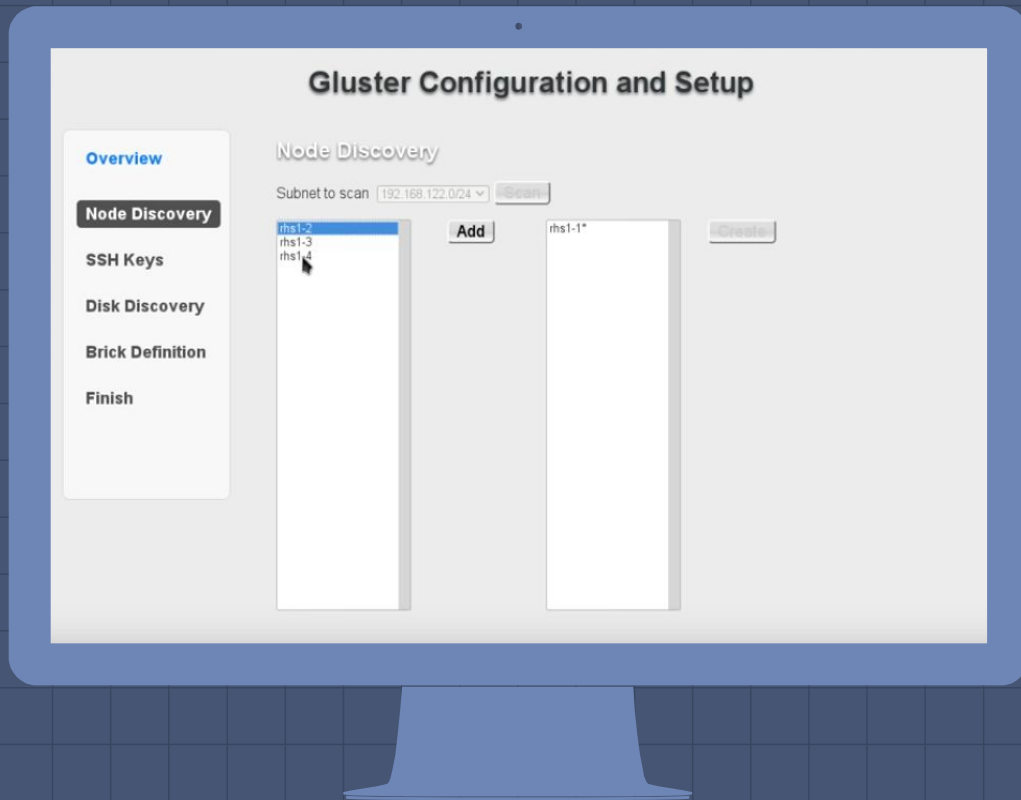


Configurando o GlusterFS

Utilizando o
GDeploy*

> Faça o scan dos *nós* na rede;

* Disponível em:
<https://github.com/gluster/gdeploy>

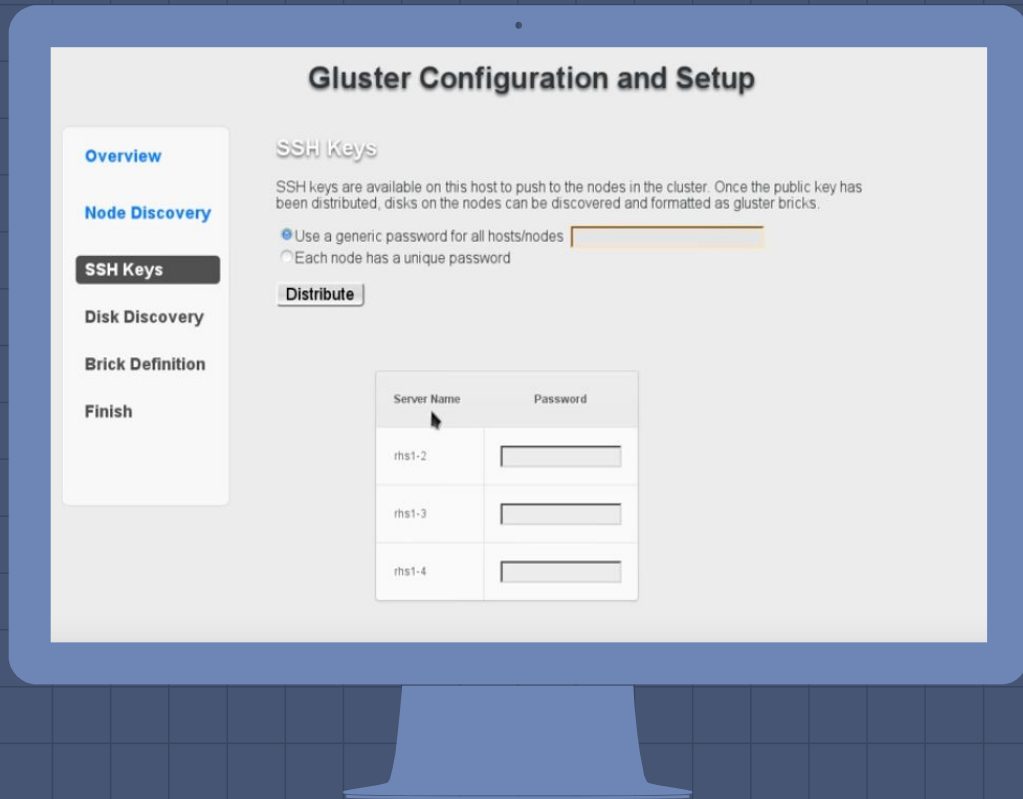


Configurando o GlusterFS

Utilizando o GDeploy*

> Configure a segurança para os nós;

* Disponível em:
<https://github.com/gluster/gdeploy>



The screenshot displays the 'Gluster Configuration and Setup' web interface. On the left, a sidebar contains navigation links: 'Overview', 'Node Discovery', 'SSH Keys' (highlighted), 'Disk Discovery', 'Brick Definition', and 'Finish'. The main content area is titled 'SSH Keys' and includes a descriptive paragraph about SSH key distribution. Below the text are two radio button options: 'Use a generic password for all hosts/nodes' (selected) and 'Each node has a unique password'. A 'Distribute' button is positioned below these options. At the bottom, a table with two columns, 'Server Name' and 'Password', lists three nodes: 'rhs1-2', 'rhs1-3', and 'rhs1-4', each with an adjacent password input field.

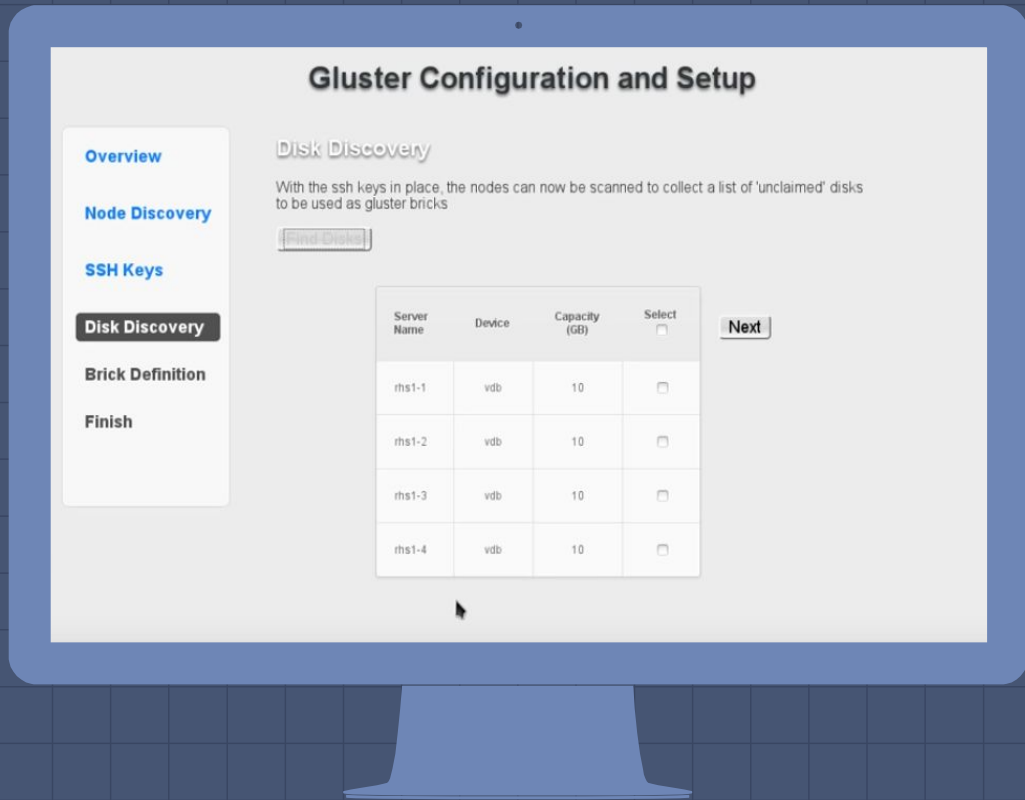
Server Name	Password
rhs1-2	<input type="password"/>
rhs1-3	<input type="password"/>
rhs1-4	<input type="password"/>

Configurando o GlusterFS

Utilizando o GDeploy*

> Faça um scan de discos distribuídos que serão usados como os *bricks*;

* Disponível em:
<https://github.com/gluster/gdeploy>

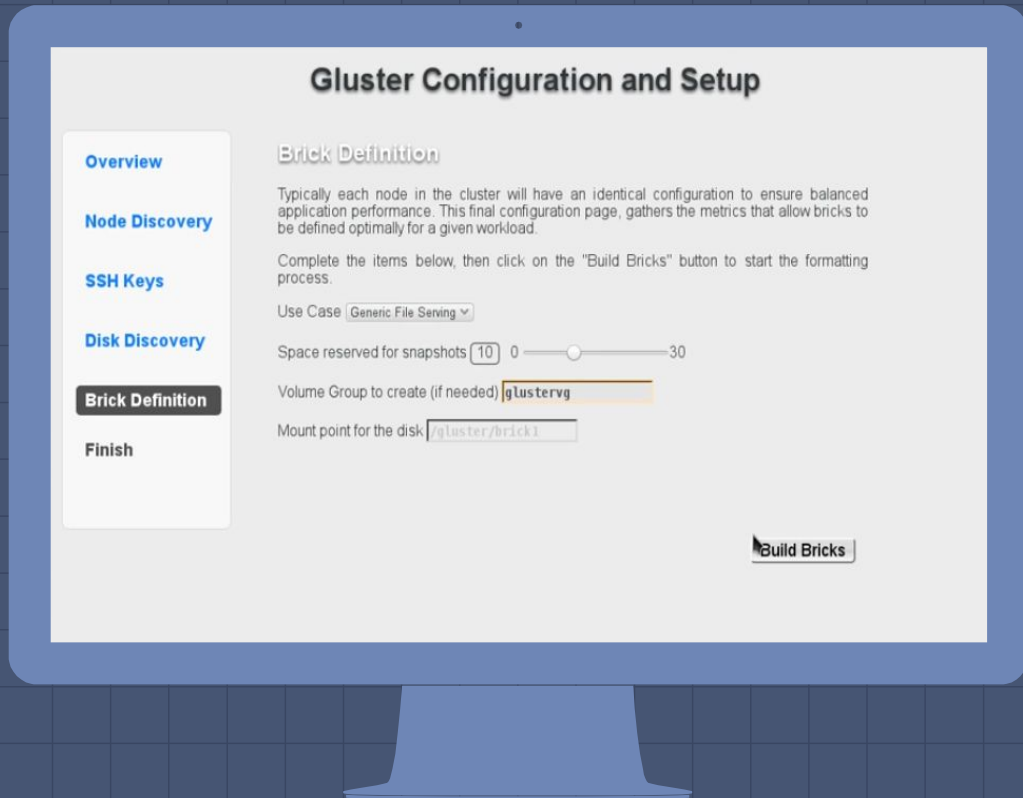


Configurando o GlusterFS

Utilizando o GDeploy*

> Configure e construa os *bricks*;

* Disponível em:
<https://github.com/gluster/gdeploy>

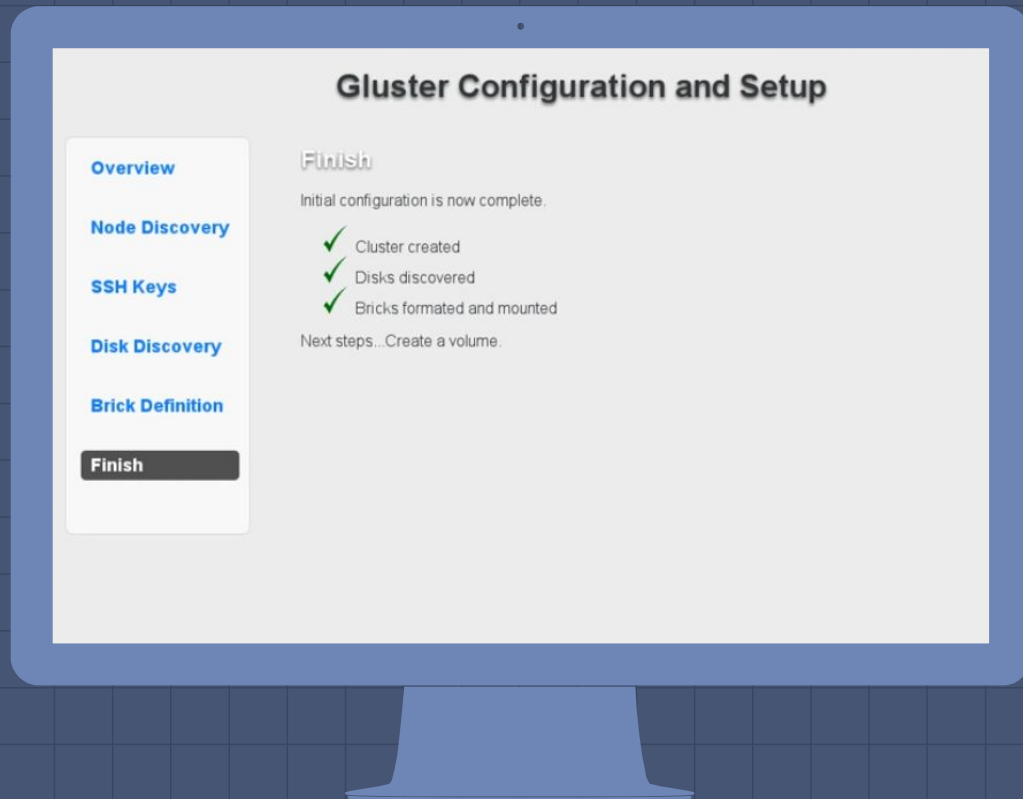


The screenshot shows a web browser window displaying the "Gluster Configuration and Setup" interface. On the left is a sidebar with navigation links: "Overview", "Node Discovery", "SSH Keys", "Disk Discovery", "Brick Definition" (which is highlighted with a dark background), and "Finish". The main content area is titled "Brick Definition" and contains the following text: "Typically each node in the cluster will have an identical configuration to ensure balanced application performance. This final configuration page, gathers the metrics that allow bricks to be defined optimally for a given workload." Below this, it says "Complete the items below, then click on the 'Build Bricks' button to start the formatting process." The form includes: a "Use Case" dropdown menu set to "Generic File Serving"; a "Space reserved for snapshots" slider set to 10, with a range from 0 to 30; a "Volume Group to create (if needed)" text input field containing "glustervg"; and a "Mount point for the disk" text input field containing "/gluster/brick1". At the bottom right of the form is a "Build Bricks" button with a mouse cursor icon pointing at it.

Configurando o GlusterFS

Utilizando o GDeploy*

* Disponível em:
<https://github.com/gluster/gdeploy>



Como criar um volume?

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Criando um volume GlusterFS

> Crie o diretório **vol01** em */gluster/bricks/brick1/*



```
# mkdir /gluster/bricks/brick1/vol1
```

Criando um volume GlusterFS

> Insira o comando ***gluster volume create novovolume*** para criar o volume;

```
# gluster volume create novovolume  
glusterfs01:/gluster/bricks/brick1/vol1
```

```
Creation of novovolume has been successful  
Please start the volume to access data.
```

Criando um volume GlusterFS

> Inicie o volume usando o comando ***gluster volume start novovolume***,

```
# gluster volume start novovolume
```

```
Starting novovolume has been successful.
```

Criando um volume GlusterFS

> **Volume criado!**

> Para exibir as informações do volume recém criado, execute o comando ***gluster volume info novovolume***.

```
# gluster volume info novovolume

Volume Name: novovolume
Type: Distribute
Volume ID: 85eb66b3-5860-4b09-8d37-78eec98b622d
Status: Started
Snapshot Count: 0
Number of Bricks: 1 x 1 = 1
Transport-type: tcp
Bricks:
Brick1: glusterfs01:/bricks/brick1/vol1
Options Reconfigured:
nfs.disable: on
transport.address-family: inet
```

É isso aí!