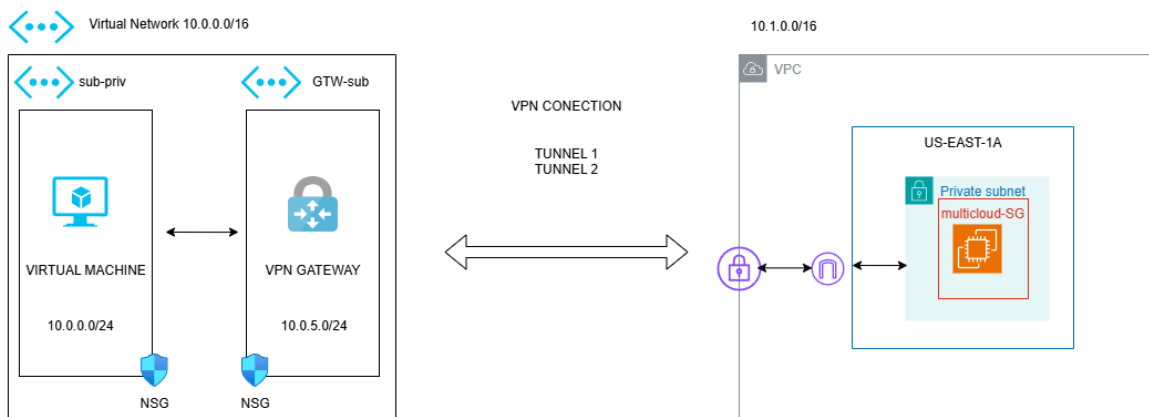


PROJETO MULTI CLOUD AZURE & AWS

DAVI CIRINEU DOS SANTOS

1. Diagrama da Arquitetura

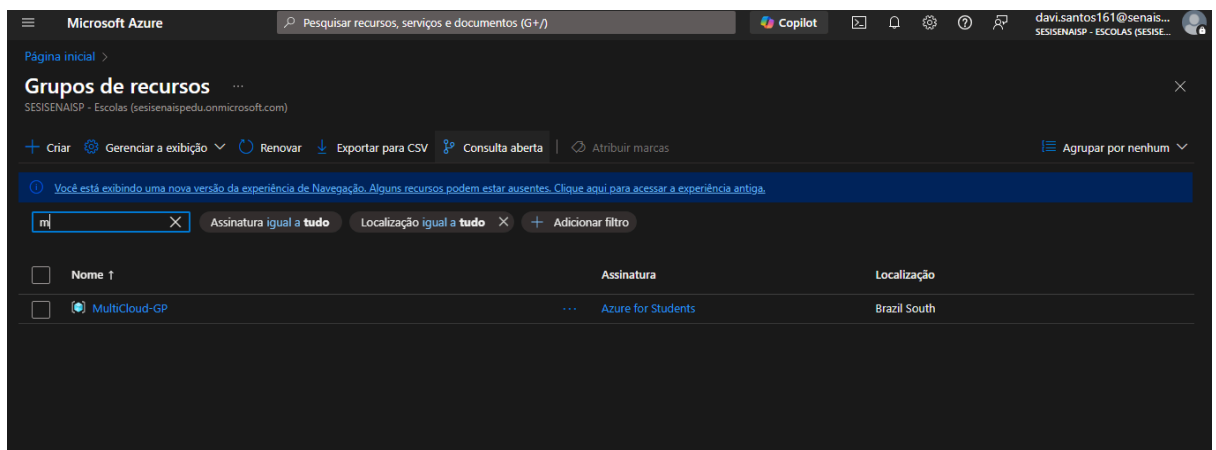


2. Passo a passo da configuração da VPN

◆ ETAPA 1: CONFIGURAÇÃO NO AZURE

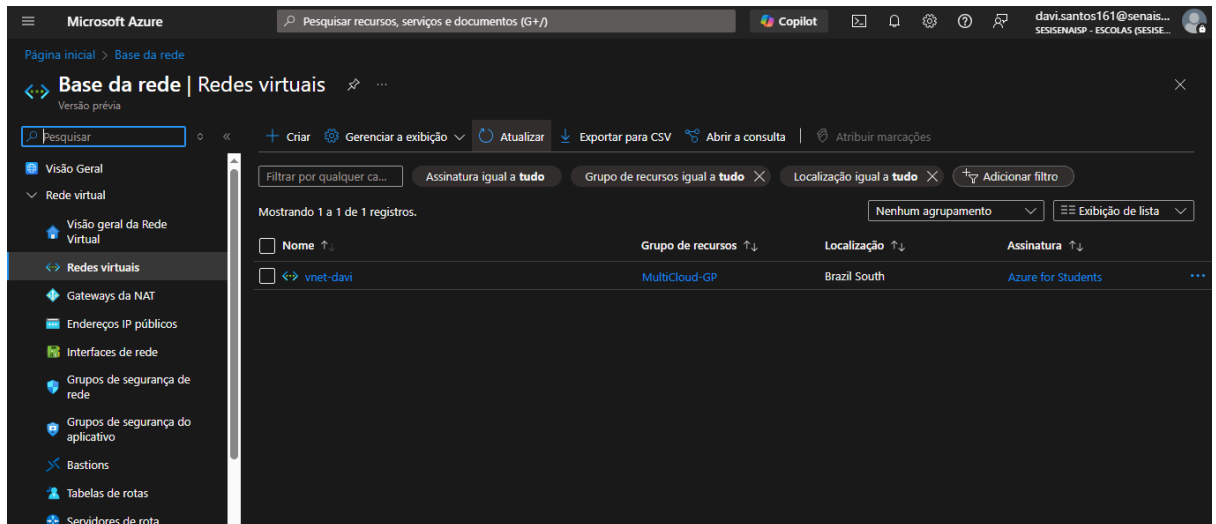
Criar um Grupo de Recursos:

- Nome: **MultiCloud-GP**
- Região: **Brazil South**



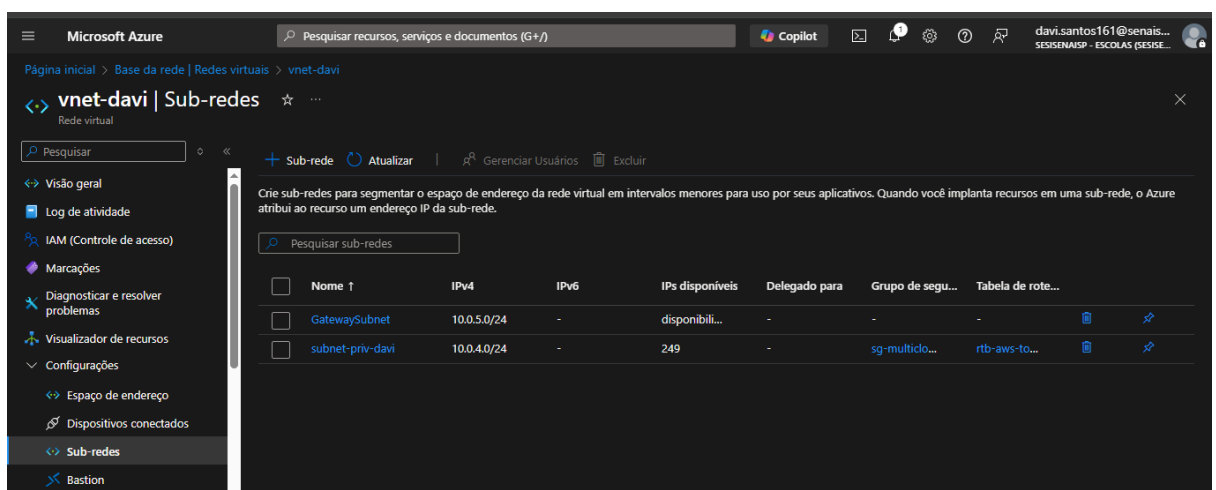
Criar a Virtual Network (VNet):

- Nome da VNet: **vnet-azure**
- Espaço de endereços: **10.0.0.0/16** (*rede principal Azure*)



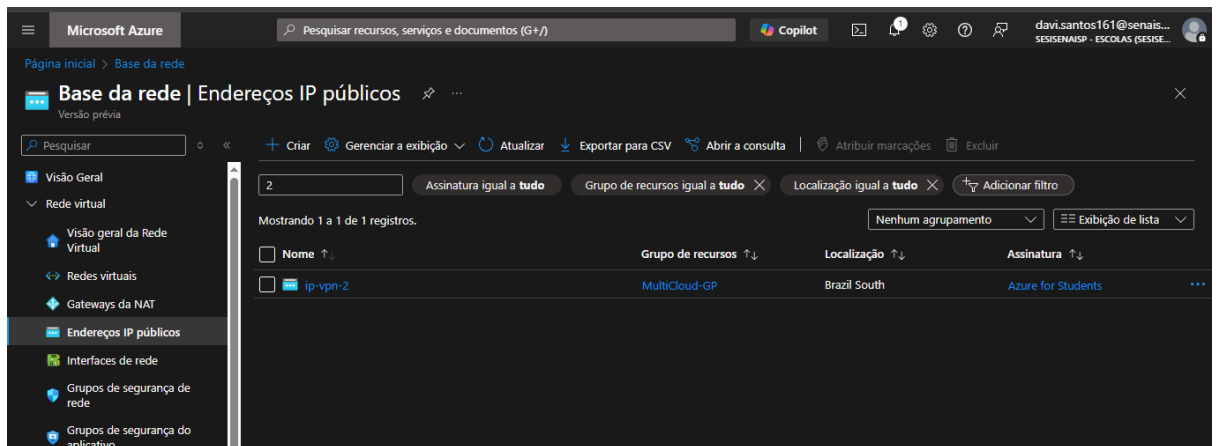
Criar sub-redes na VNet:

1. **subnet-privada-01 - 10.0.4.0/24** (*sub-rede privada para VMs*)
2. **GatewaySubnet - 10.0.5.0/24** (*obrigatória para o VPN Gateway*)



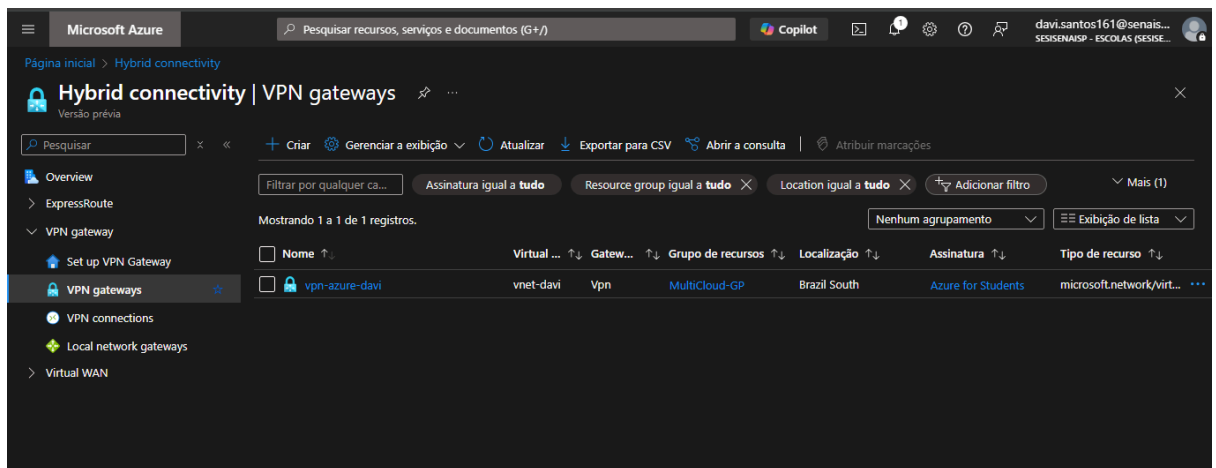
Criar IP Público para o VPN Gateway:

- Nome: **ip-vpn-azure**
- Tipo: Básico, atribuição dinâmica



Criar o VPN Gateway:

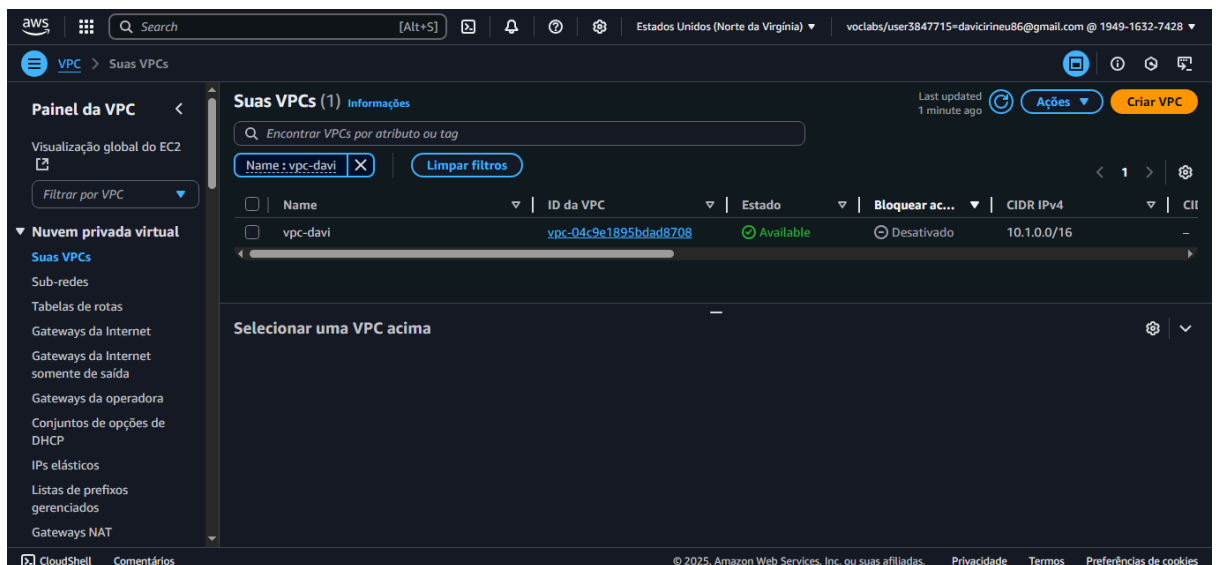
- Nome: **vpn-azure**
- Tipo: VPN
- SKU: **VpnGw1**
- Geração: 1
- VNet: **vnet-azure**
- Sub-rede: **GatewaySubnet**
- IP Público: **ip-vpn-azure**
- BGP: Desabilitado
- Ativo-Ativo: Não habilitado



◆ ETAPA 2: CONFIGURAÇÃO NA AWS

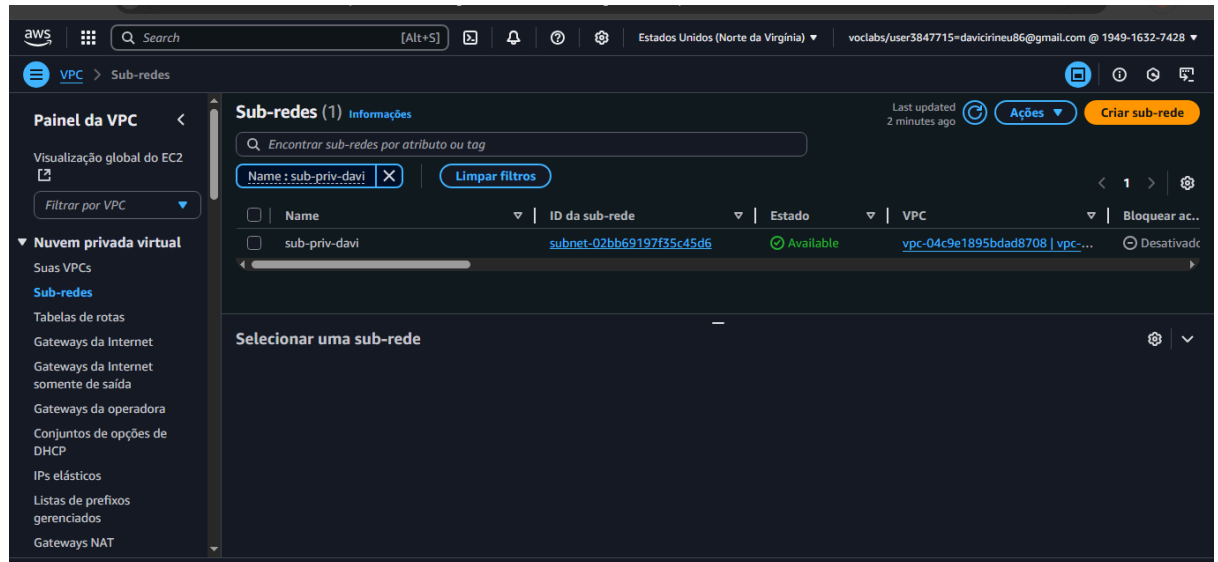
Criar a VPC:

- Nome: **vpc-aws**
- CIDR IPv4: **10.1.0.0/16** (rede principal AWS)



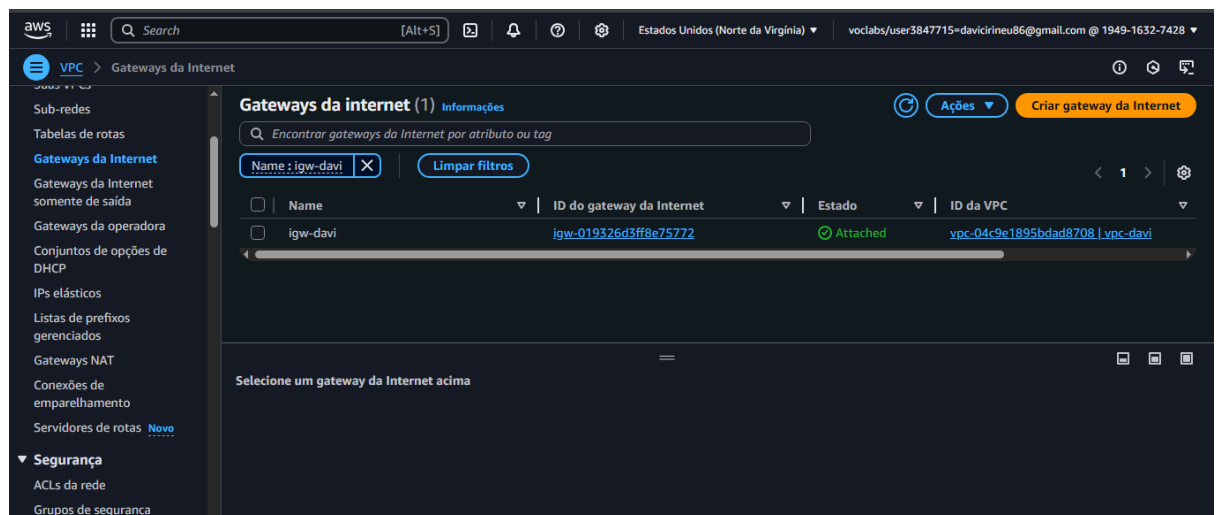
Criar sub-redes:

1. `subnet-privada-aws - 10.1.0.0/24`
2. (opcional) `subnet-publica-aws - 10.1.1.0/24`



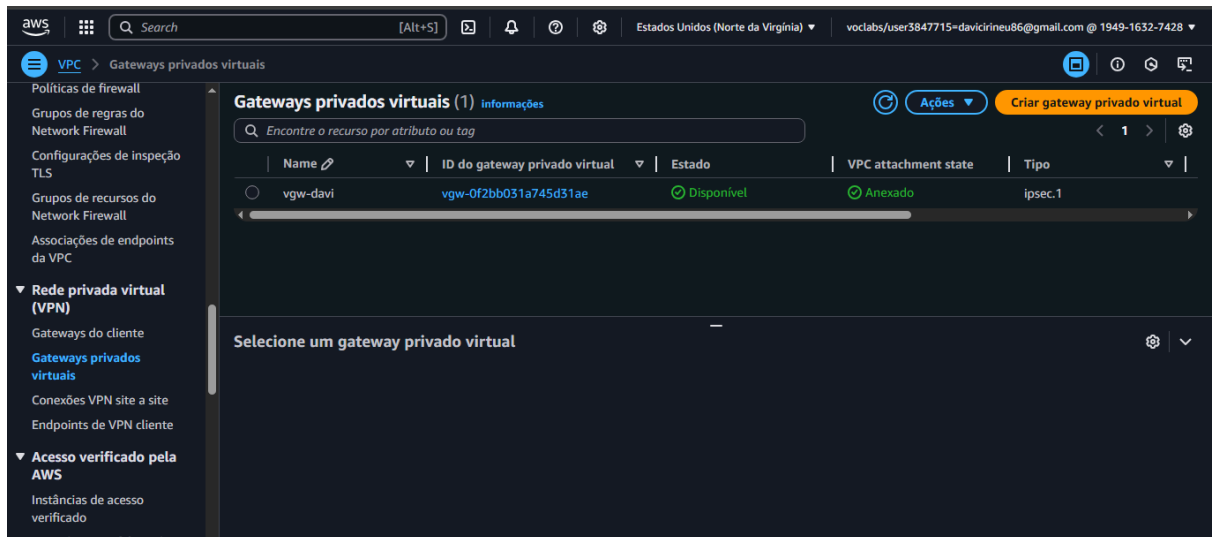
Criar o Internet Gateway:

- Nome: `igw-aws`
- Anexar à VPC `vpc-aws`



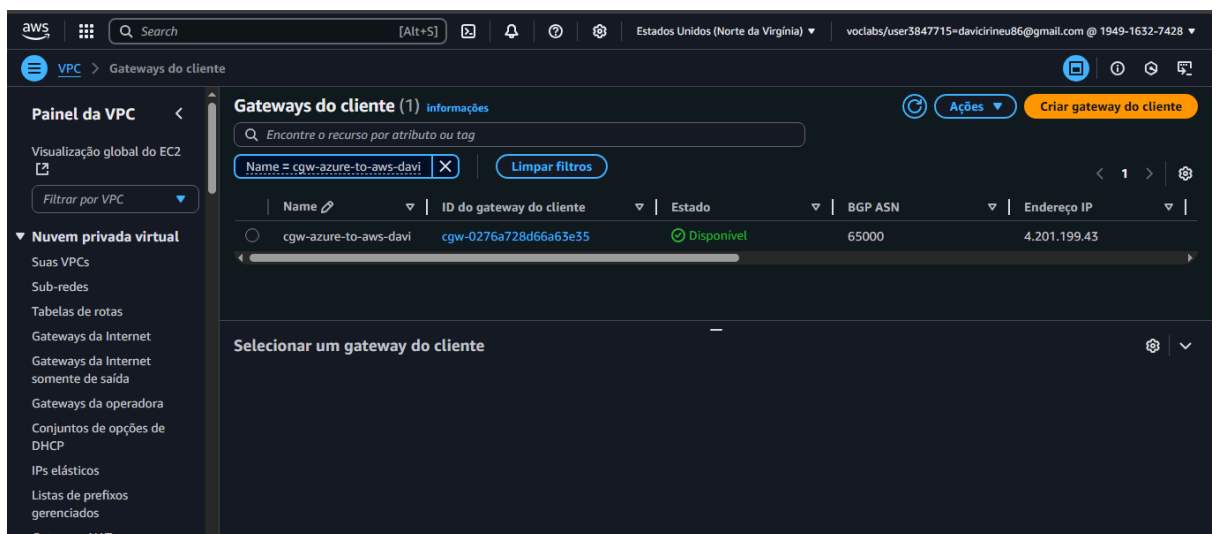
Criar o Virtual Private Gateway:

- Nome: **vgw-aws**
- Anexar à VPC **vpc-aws**



Criar o Customer Gateway:

- Nome: **cgw-azure**
- IP: *(usar IP público do Azure VPN Gateway)*
- ASN: 65000 (ou padrão)
- Tipo: Estático



Criar a Conexão VPN:

- Nome: **vpn-aws-azure**
- Tipo: Site-to-Site
- Gateway: **vgw-aws**
- Customer Gateway: **cgw-azure**
- Roteamento: Estático
- Prefixo da rede Azure: **10.0.0.0/24**
- Baixar o arquivo de configuração (Fornecedor: Genérico)

The screenshot displays the AWS Management Console interface for VPN Connections. The top navigation bar includes the AWS logo, a search bar, and user information. The left sidebar contains a menu with categories like 'Rede privada virtual (VPN)', 'Acesso verificado pela AWS', and 'Gateways de trânsito'. The main content area is titled 'Conexões VPN (1/1) Informações' and features a table of VPN connections. The table has columns for Name, ID da VPN, Estado, Gateway privado virtual, and Gateway de trânsito. One connection, 'vpn-aws-davi', is listed with ID 'vpn-0f4259e9acece9ffb' and a status of 'Disponível'. Below the table, the 'Detalhes do túnel' section provides a detailed view of the connection's tunnels. It includes a table with columns for Número do túnel, Endereço IP externo, CIDR IPv4 interno, CIDR IPv6 interno, Status, and Status de provisionamento. Two tunnels are shown, both with a status of 'Disponível'.

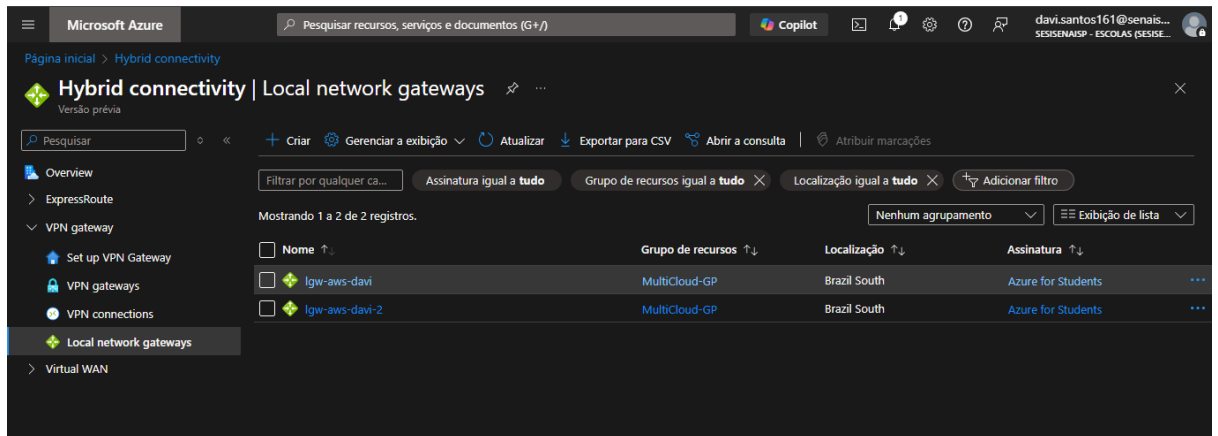
| Name | ID da VPN | Estado | Gateway privado virtual | Gateway de trânsito |
|--------------|-----------------------|------------|-------------------------|---------------------|
| vpn-aws-davi | vpn-0f4259e9acece9ffb | Disponível | vgw-0f2bb031a745d31ae | - |

| Número do túnel | Endereço IP externo | CIDR IPv4 interno | CIDR IPv6 interno | Status | Status de provisionamento |
|-----------------|---------------------|-------------------|-------------------|-----------|---------------------------|
| Tunnel 1 | 3.217.115.102 | 169.254.53.92/30 | - | Para cima | Disponível |
| Tunnel 2 | 3.230.59.49 | 169.254.95.32/30 | - | Para cima | Disponível |

◆ ETAPA 3: CONEXÃO NO AZURE

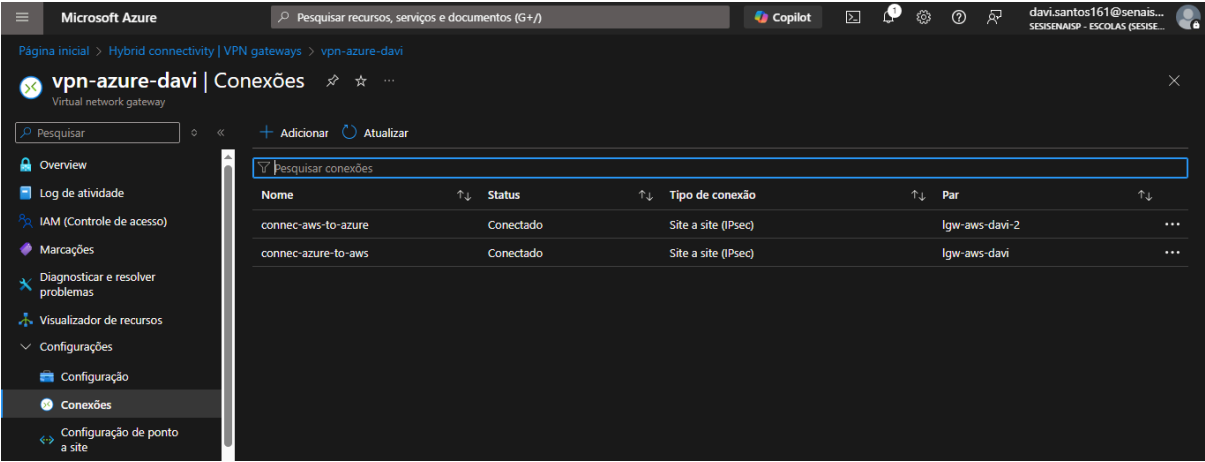
Criar Local Network Gateway:

- Nome: **lng-aws**
- IP remoto: *(pegar no arquivo da VPN gerada na AWS)*
- Prefixos: **10.1.0.0/16** *(rede da AWS)*



Criar a Conexão Site-to-Site:

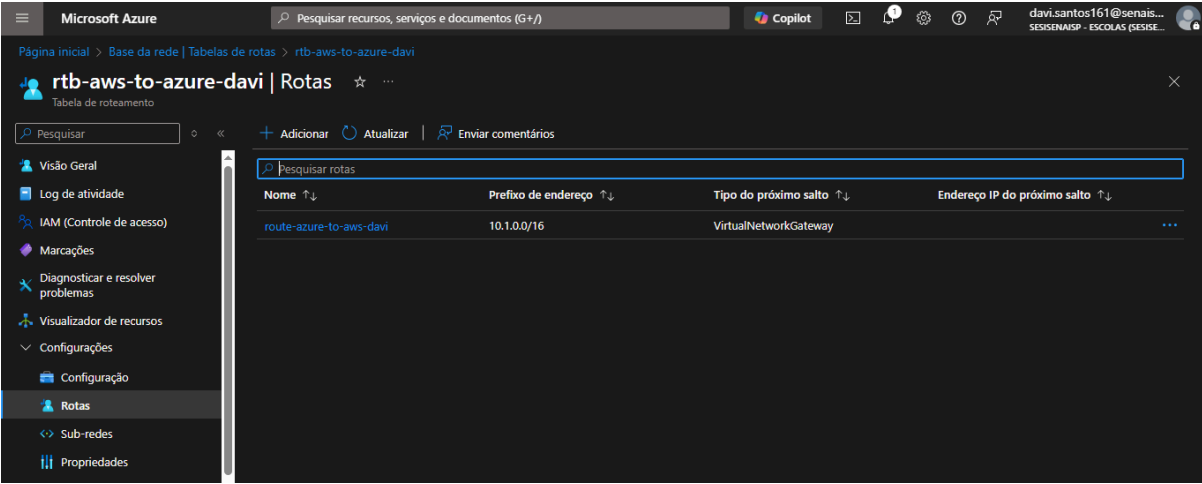
- Nome: **connection-azure-aws**
- Gateway: **vpn-gateway-azure**
- Tipo: Site-to-Site (IPSec)
- Local Network Gateway: **lng-aws**
- Chave compartilhada: *(definida ou vinda do arquivo da AWS)*
- Esperar o status "Conectado"



◆ ETAPA 4: CONFIGURAÇÕES DE ROTA

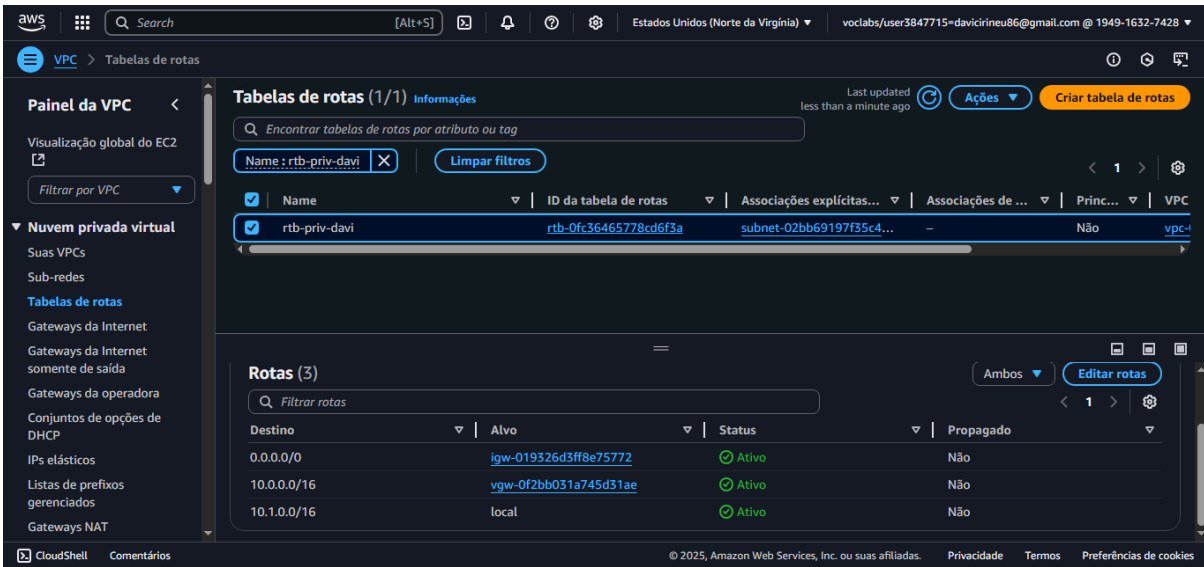
Rotas no Azure:

- Sub-rede **subnet-privada-01**: criar UDR com:
 - Destino: **10.1.0.0/16** → Próximo salto: Gateway de rede virtual



Rotas na AWS:

- Tabela de rotas da subnet **subnet-privada-aws**:
 - Destino: **10.0.0.0/24** → Target: Virtual Private Gateway **vgw-aws**
 - Destino: **0.0.0.0/0** → Target: Internet Gateway (caso queira acesso à Internet)



3. Tabela de endereços IP, gateways, sub-redes e serviços

| Recurso | IP / CIDR | Descrição |
|-----------------------------|------------------------|---------------------------------|
| Azure Virtual Network | 10.0.0.0/16 | Rede virtual principal Azure |
| Azure Subnet VM | 10.0.4.0/24 | Subnet da VM no Azure |
| Azure VPN Gateway IP | 4.201.199.43 | IP público VPN Gateway Azure |
| AWS VPC | 10.1.0.0/16 | Rede virtual principal AWS |
| AWS Subnet VM | 10.1.1.0/24 | Subnet da VM na AWS |
| AWS Virtual Private Gateway | (sem IP público) | Gateway VPN AWS |
| AWS Customer Gateway IP | 4.201.199.43 (Azure) | IP público Azure para VPN |
| Serviços liberados | ICMP, TCP 22, TCP 3389 | Regras de firewall configuradas |