

Road to *Transit Gateway*



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Agenda

- **Networking an Empire**
- **Hybrid Connectivity** (*Get to Cloud*)
- **Cloud Routing** (*I'm in the Cloud*)
- **Transit Gateway** (*Cloud Grade Networking*)

Networking *an Empire*

Episode X

The sprawling digital infrastructure of the Galactic Empire has become a complicated beast to manage.

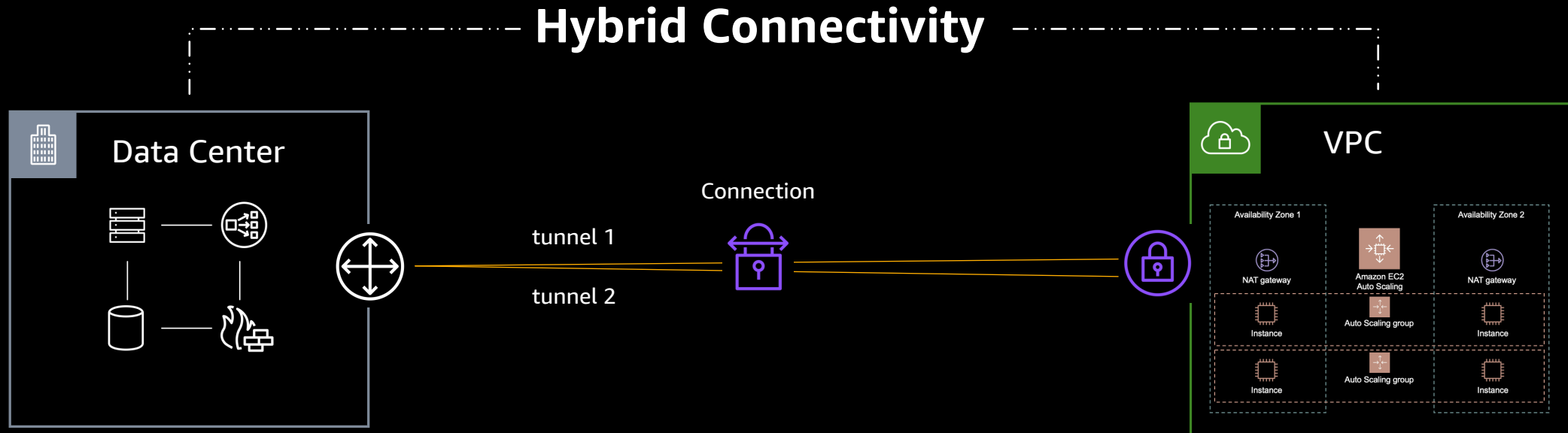
Communication between different star systems, resources, trooper stations, and data centers is complex and now impacts the whole empire.

Decentralized data and lack of uniform security protocols are opening up vulnerabilities that the Rebellion could exploit.

The Empire needs a solution...



Hybrid Connectivity *(Get to Cloud)*

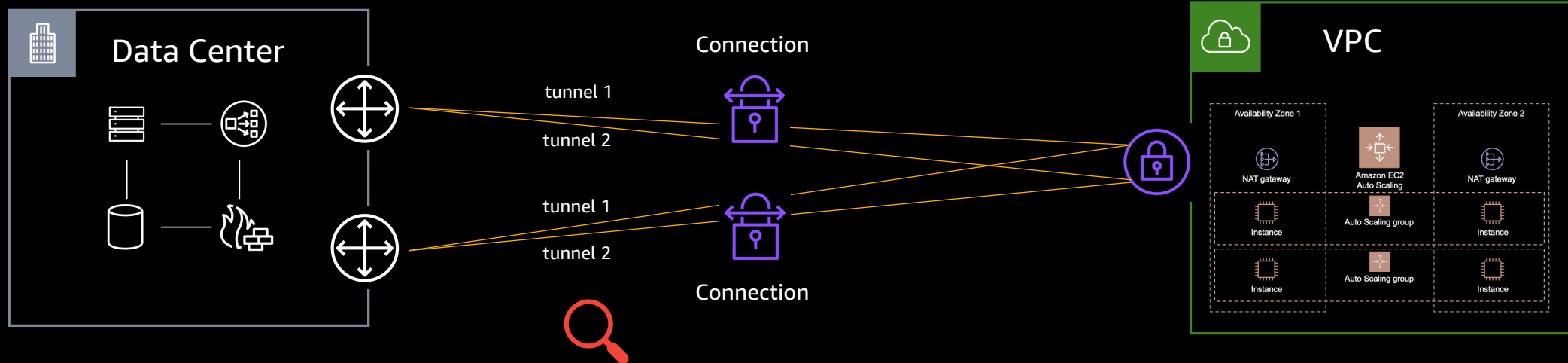


Site-to-Site VPN with ***Virtual Private Gateway***
spans from the Empire's routers to redundant
public endpoints in different availability zones

Hybrid Connectivity (*Get to Cloud*)

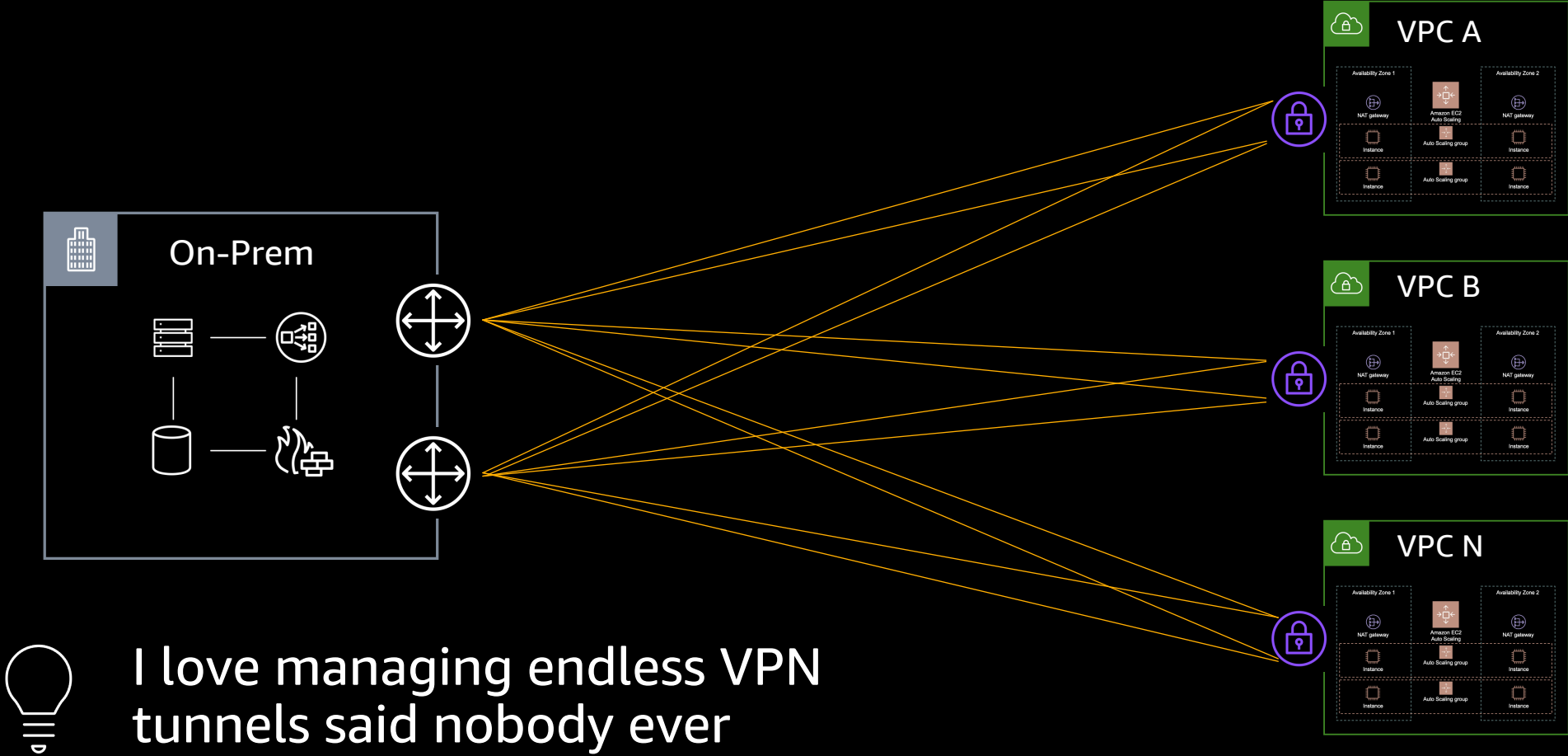


High Availability protects against loss of connectivity!

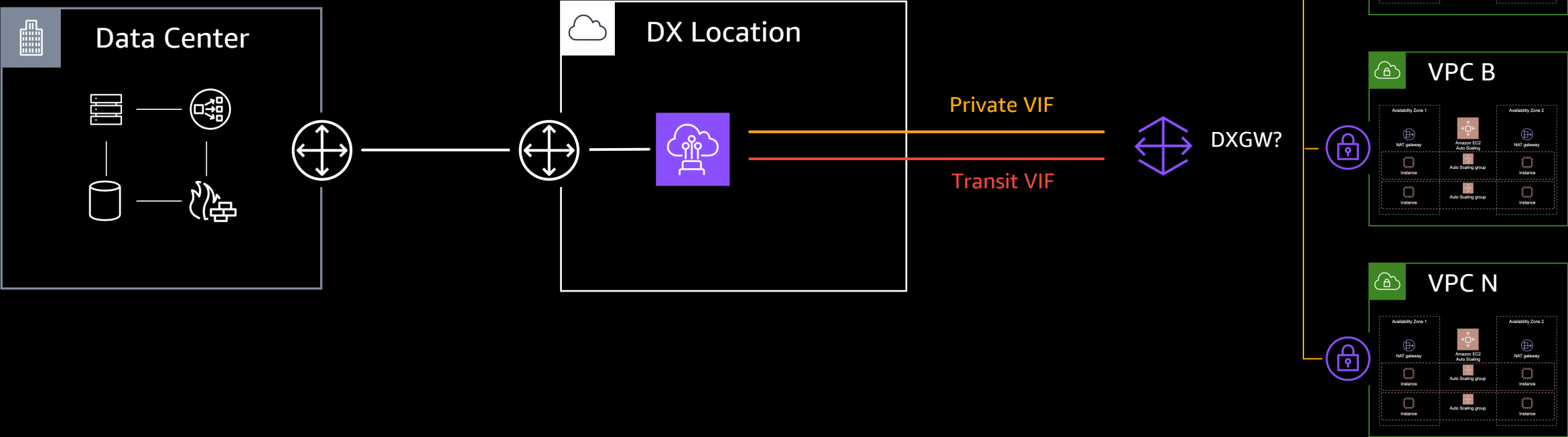


Only one tunnel forwarding traffic at a time ~1.25 Gbps limit

Hybrid Connectivity *(Get to Cloud)*

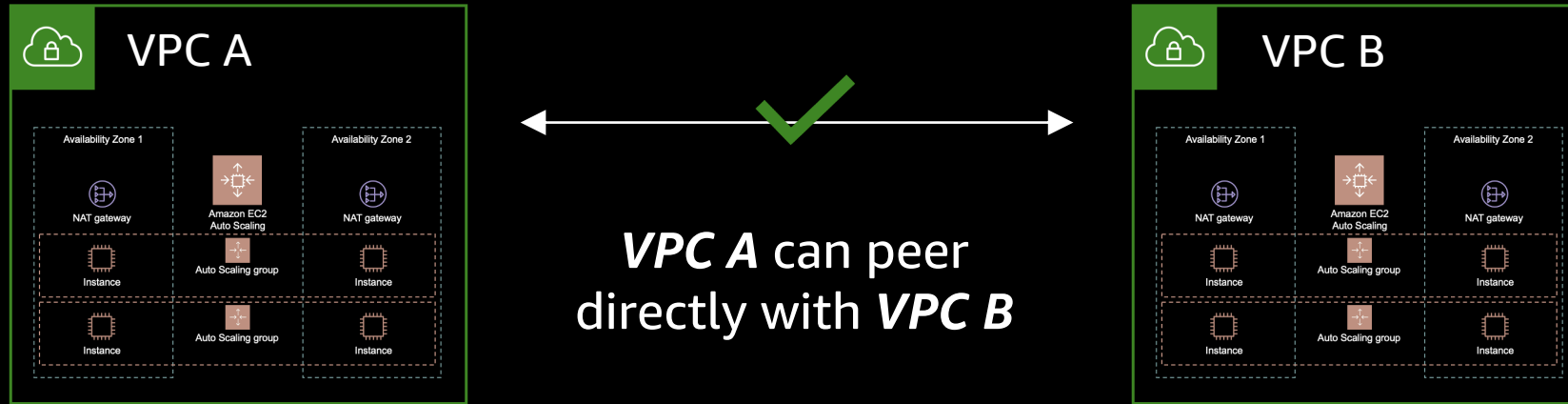


Hybrid Connectivity *(Get to Cloud)*



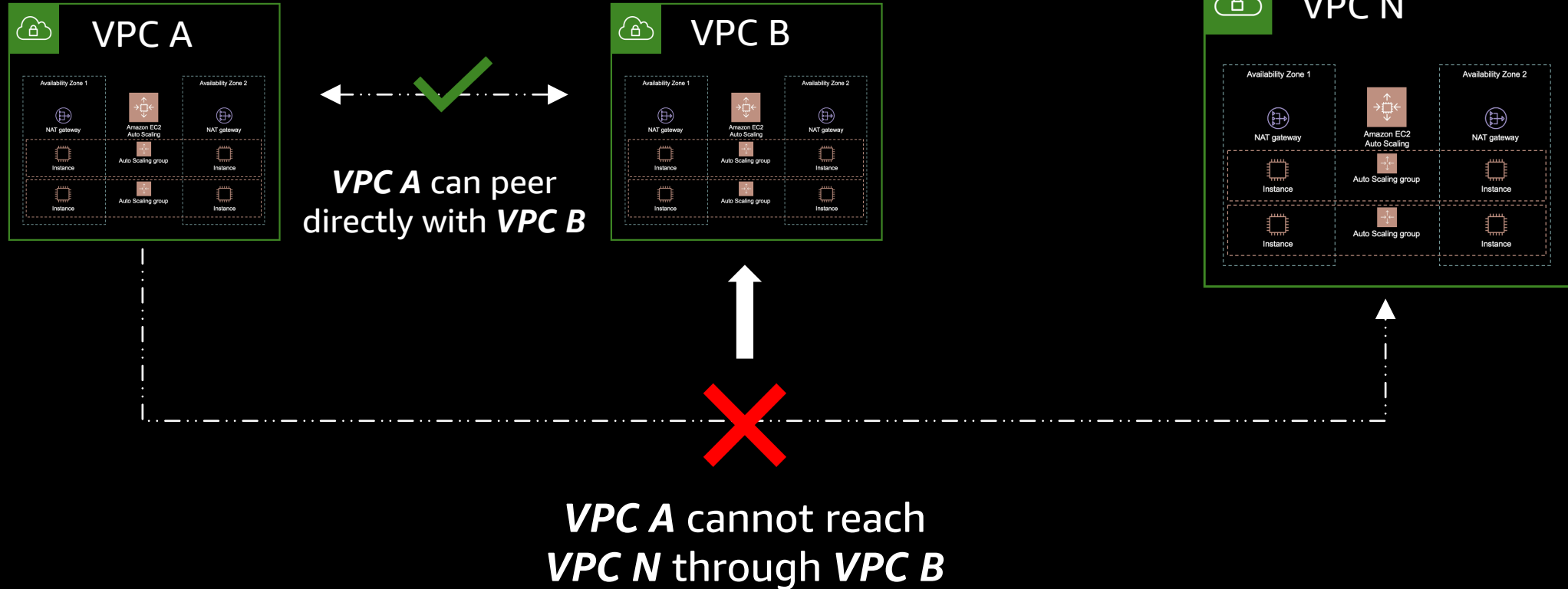
Cloud Routing (*I'm in the Cloud*)

What is Transitive Routing?



Cloud Routing (*I'm in the Cloud*)

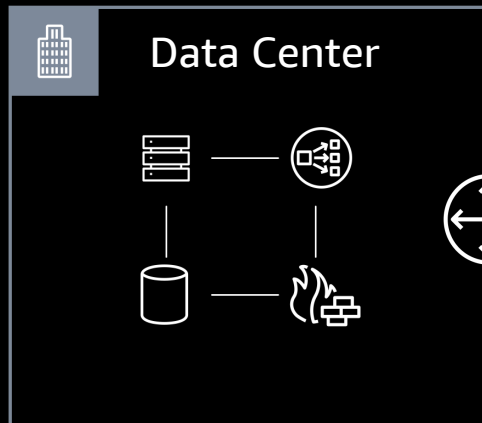
What is Transitive Routing?



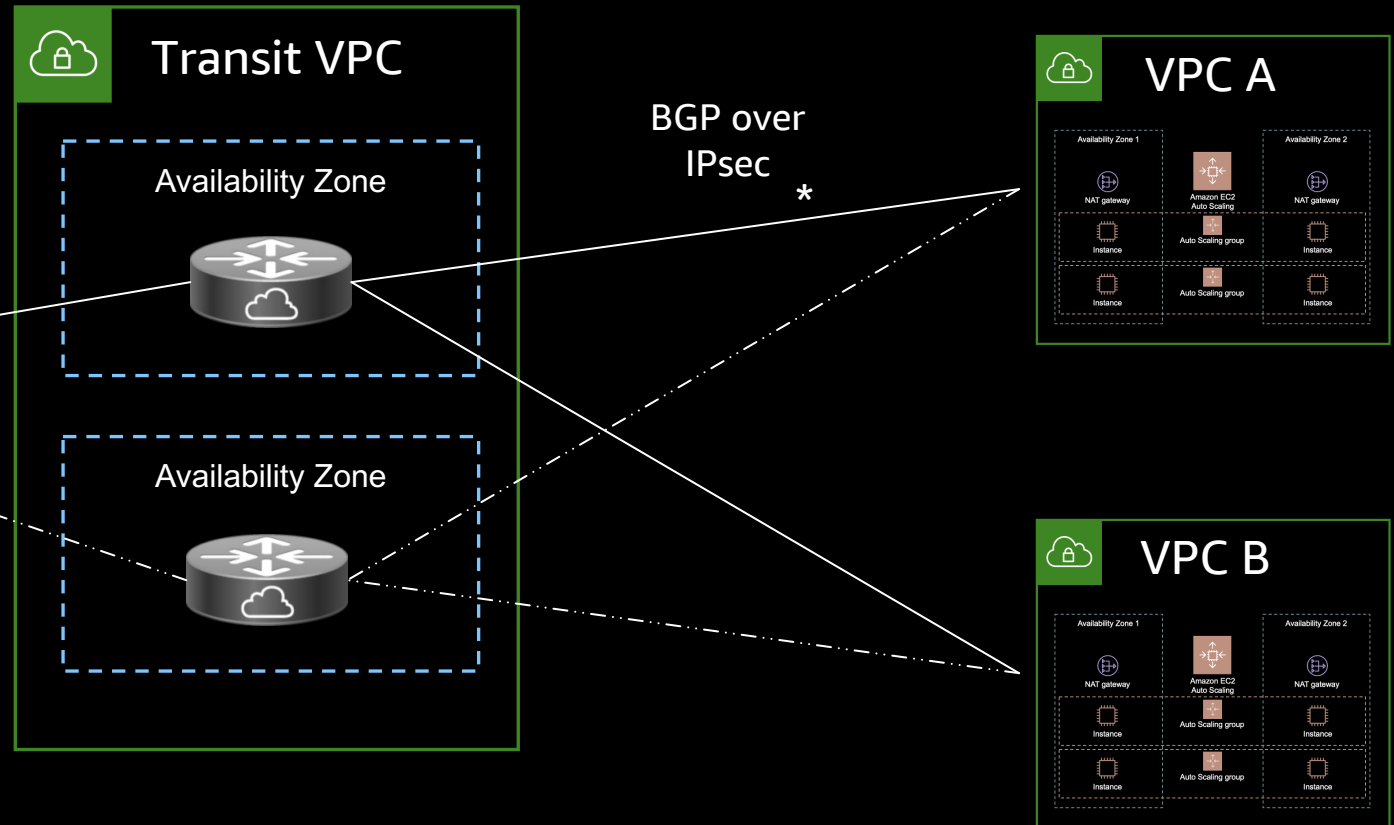
Cloud Routing *(I'm in the Cloud)*

Active ———
Standby - - - - -

Let's lift and shift our networking into AWS!



“ The network has failed me for the last time.



Transit Gateway *(Cloud Grade Networking)*



The ability of Transit VPC is insignificant next to the power of Transit Gateway.

Transit Gateway

We can establish a central hub that connects the Empire's VPCs and on-premises data centers across every star system!

Transit Gateway *(Cloud Grade Networking)*



Create TGW

```
resource "aws_ec2_transit_gateway" "this" {  
  description = "Managed by Terraform"  
  
  tags = {  
    Name = format("tgw-%s", var.region)  
  }  
}
```

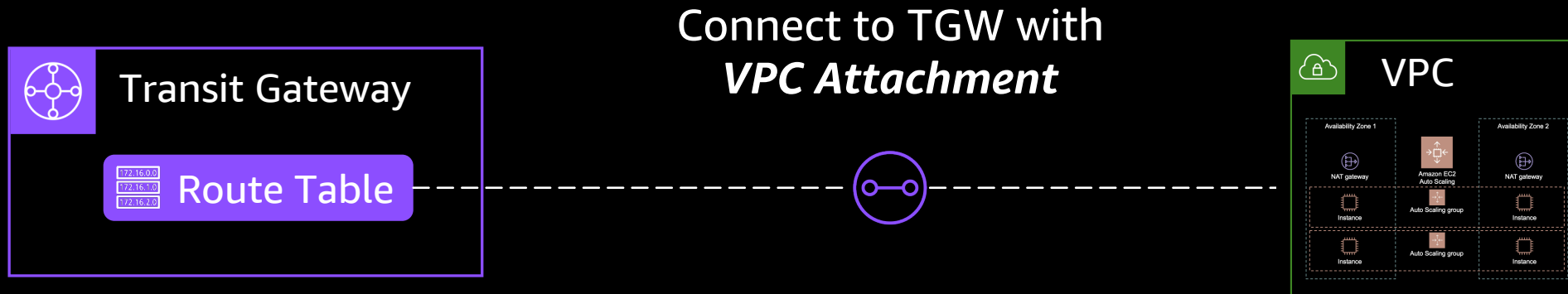


Transit Gateway



Route Table

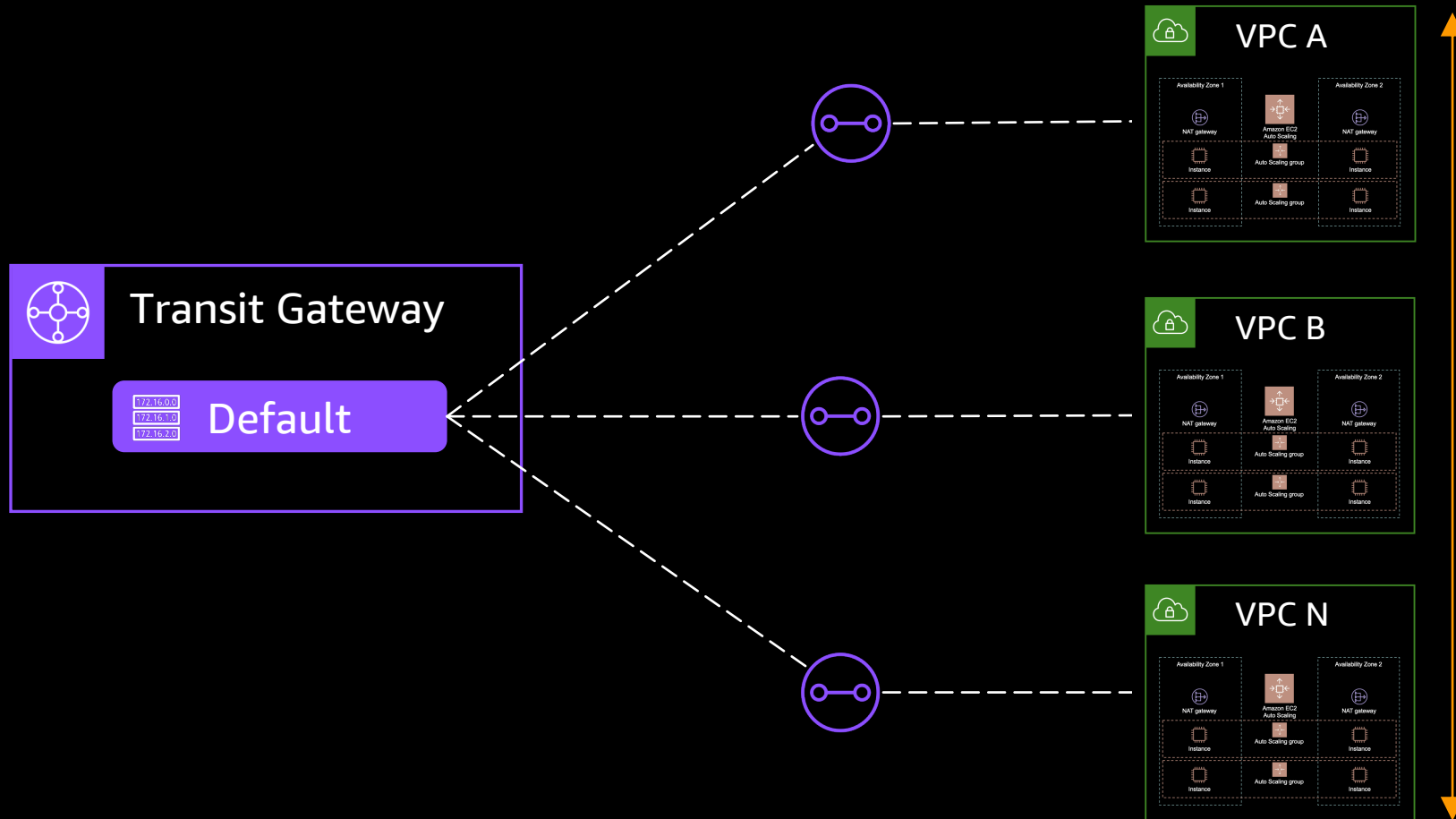
Transit Gateway *(Cloud Grade Networking)*



Attach VPC

```
resource "aws_ec2_transit_gateway_vpc_attachment" "this" {  
  vpc_id = aws_vpc.this.id  
  subnet_ids = [aws_subnet.this.id]  
  transit_gateway_id = aws_ec2_transit_gateway.this.id  
  
  tags = {  
    Name = format("attachment-%s", var.vpc_name)  
  }  
}
```

Transit Gateway *(Cloud Grade Networking)*



Scale

Provision **5+** Transit Gateways per account with up to **5,000** attachments each

Transit Gateway (Cloud Grade Networking)

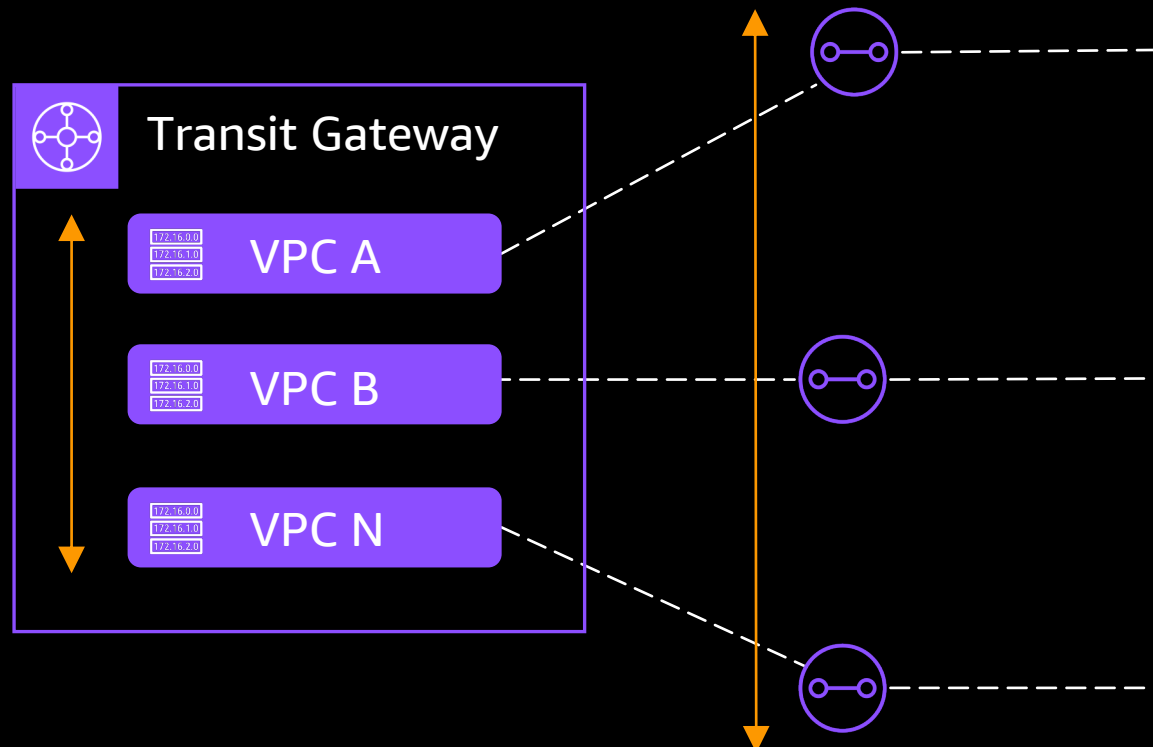
Use custom TGW route tables for traffic segmentation

```
resource "aws_ec2_transit_gateway_route_table" "this" {
  transit_gateway_id = aws_ec2_transit_gateway.this.id

  tags = {
    Name = "tgw-rtb-custom"
  }
}
```



Uniform routing policies limit the potential for internal rebellions.



Selectively propagate routes

```
resource "aws_ec2_transit_gateway_route_table_propagation" "this_to_that" {
  transit_gateway_attachment_id = aws_ec2_transit_gateway_vpc_attachment.that.id
  transit_gateway_route_table_id = aws_ec2_transit_gateway_route_table.this.id
}
```

Thank You!



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