



# Azure Networking

LinkMeUp #69

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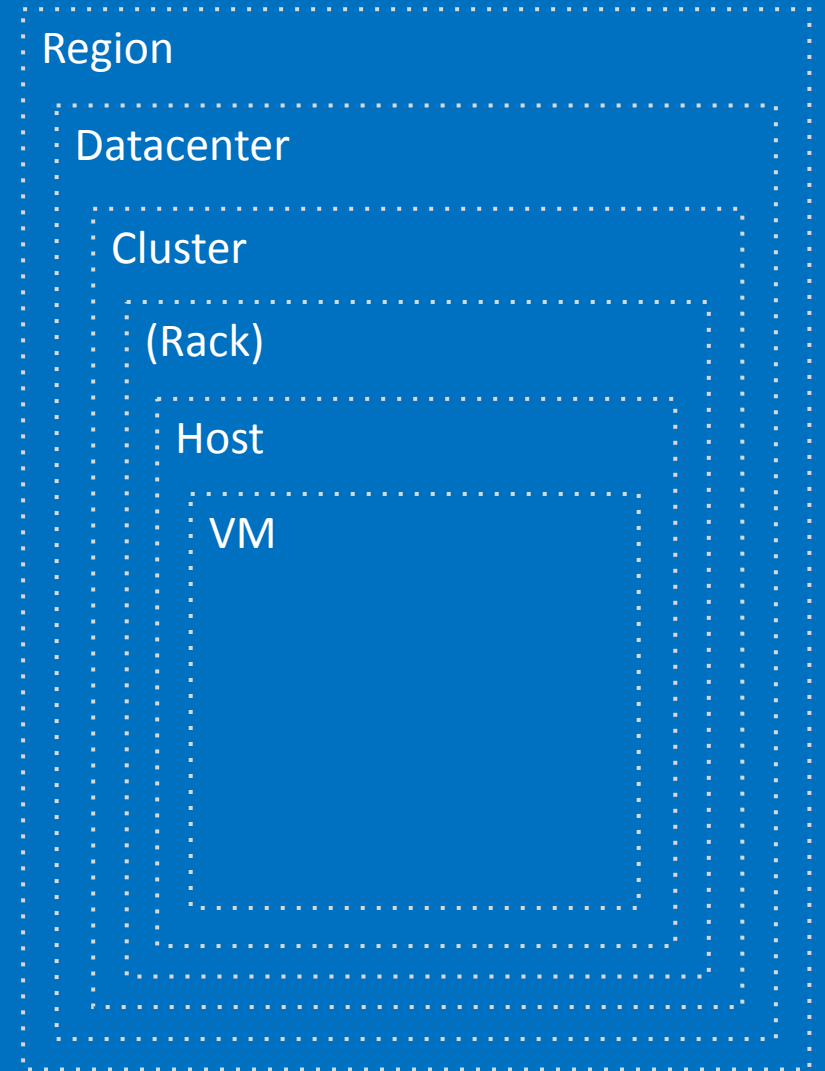
# Что такое облако

- SaaS, PaaS, IaaS
- ЦОДы



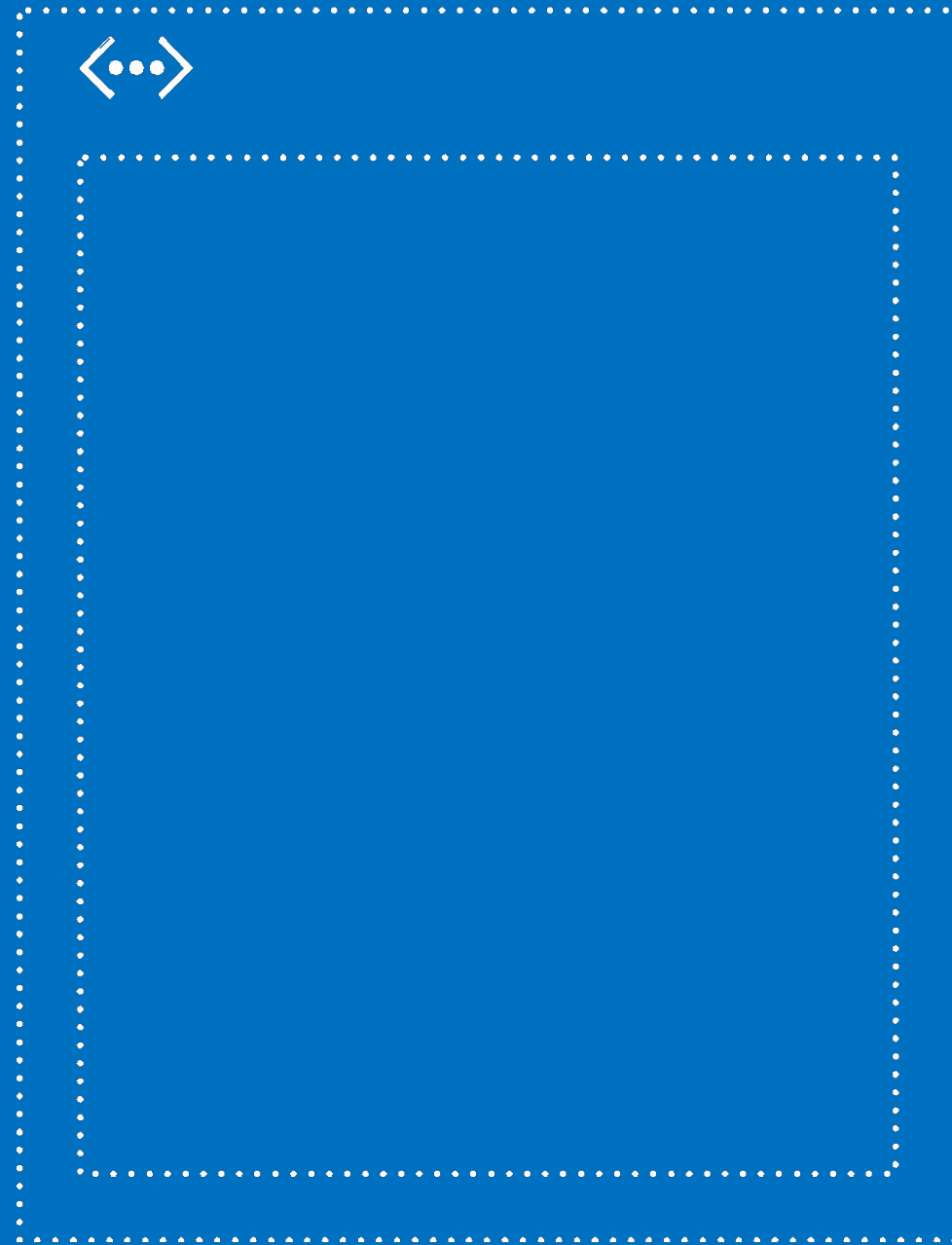
# Physical Infrastructure

- Region - Страна, город
- DataCenter (независимое электричество, сеть, охлаждение)
- Cluster (одинаковые серверы Hyper-V, сетевая инфраструктура, отдельные контроллеры)
- (Rack) (разные фазы, TOR switches)
- Host (несколько VM похожего типа, резервное электричество и сеть)
- VM



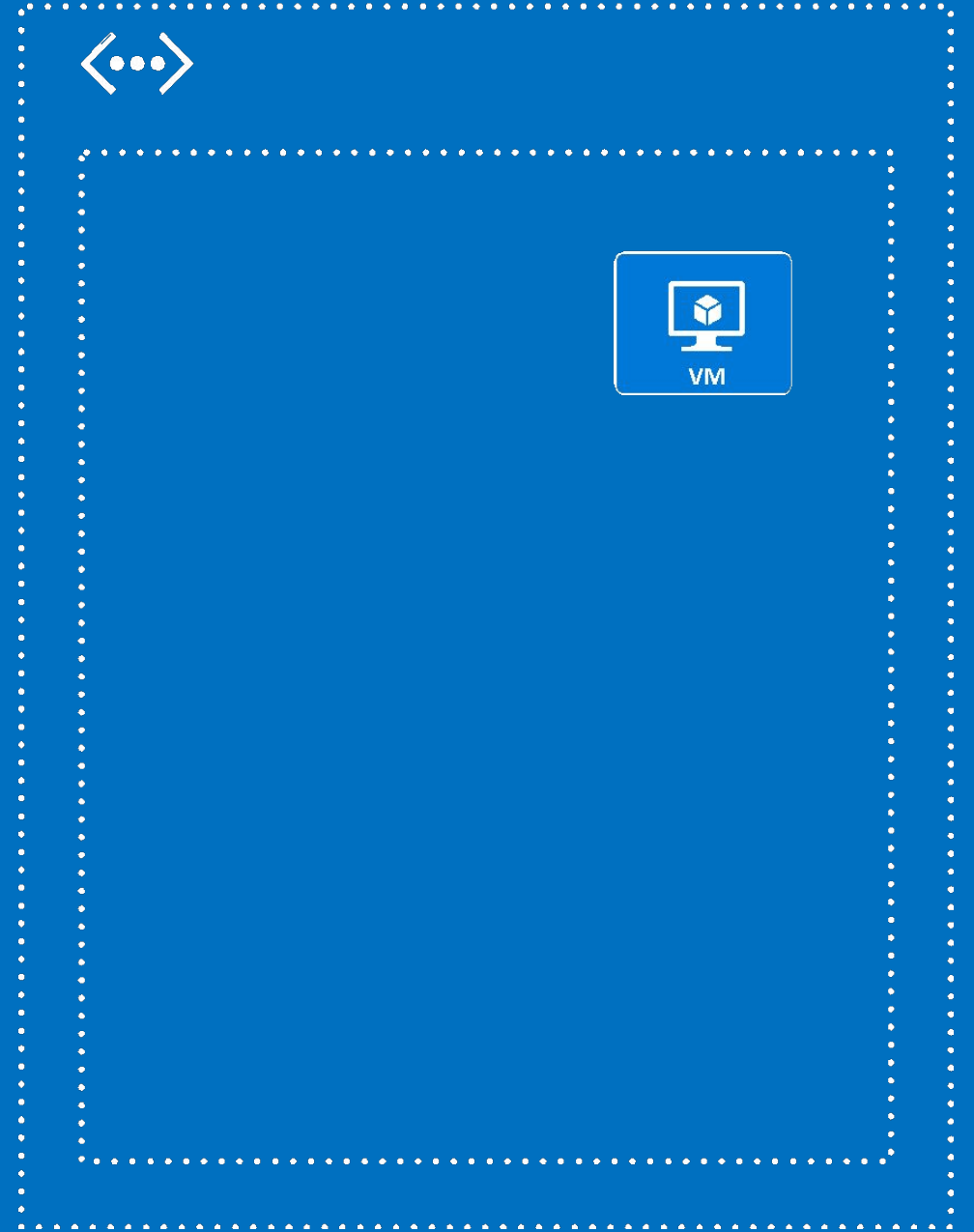
# Vnet (виртуальная сеть)

- Region
- Address Space
- Subnets
  - Gateway Subnet



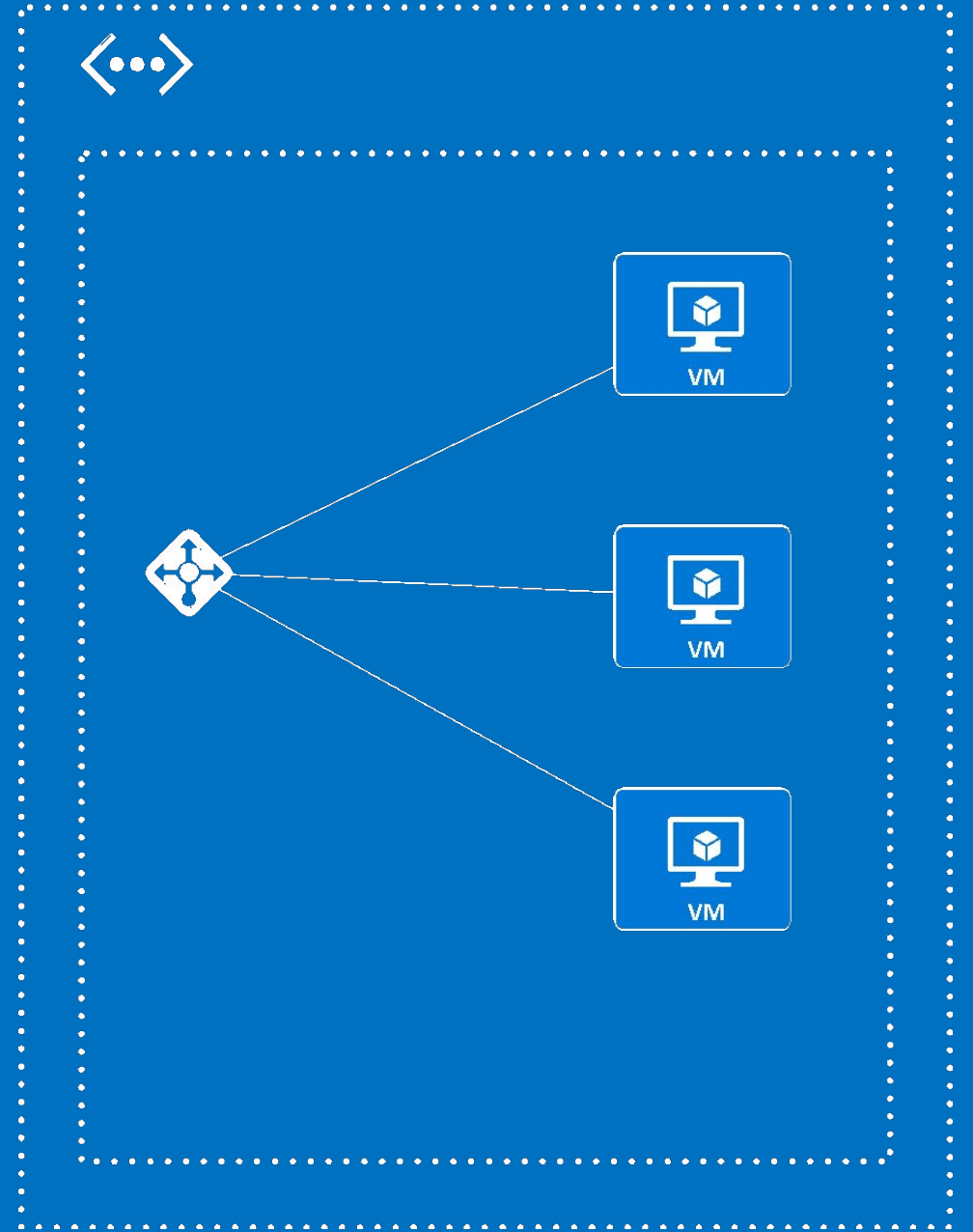
# VM

- NIC
- Subnet
  
- DHCP
- ARP
- Default Gateway
- Broadcast



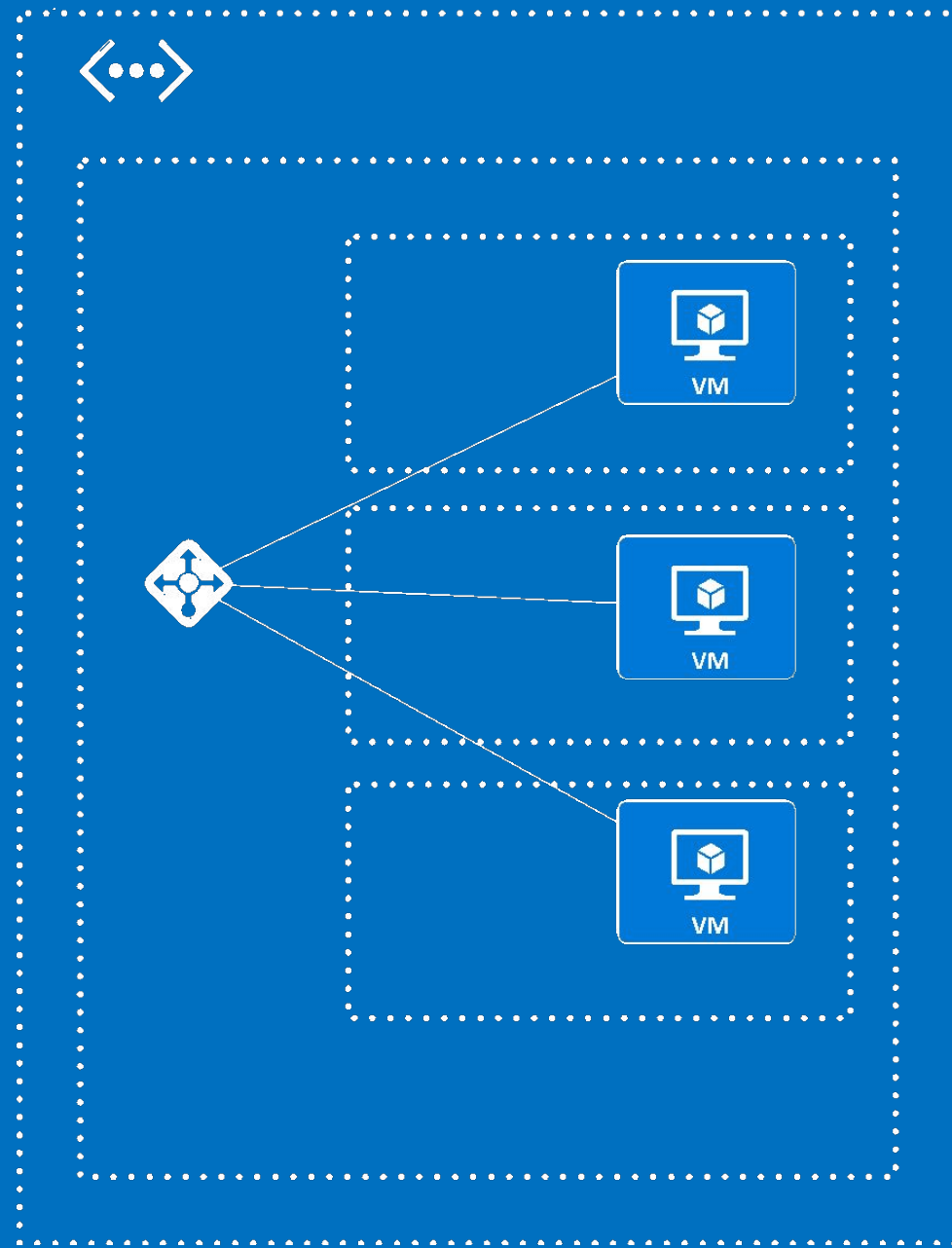
# Load Balancer

- FrontEnd
- Backend
- Rules
- Probes



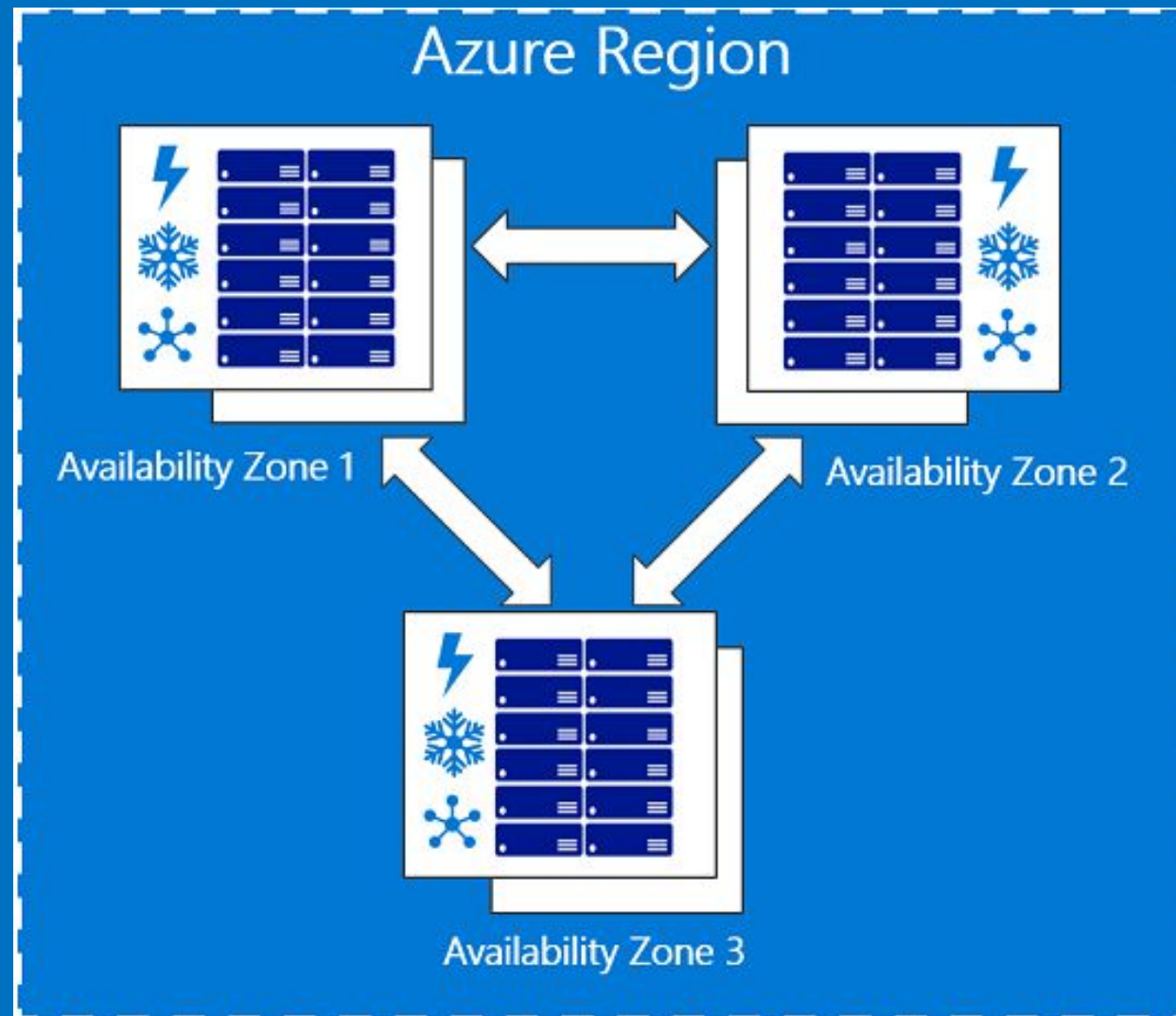
# Availability Set

- Update Domain (это про хост!)
- Failure Domain
- SLA 99,95%



# Availability Zones

- 100+ км
- Независимое управление
- 3 DC

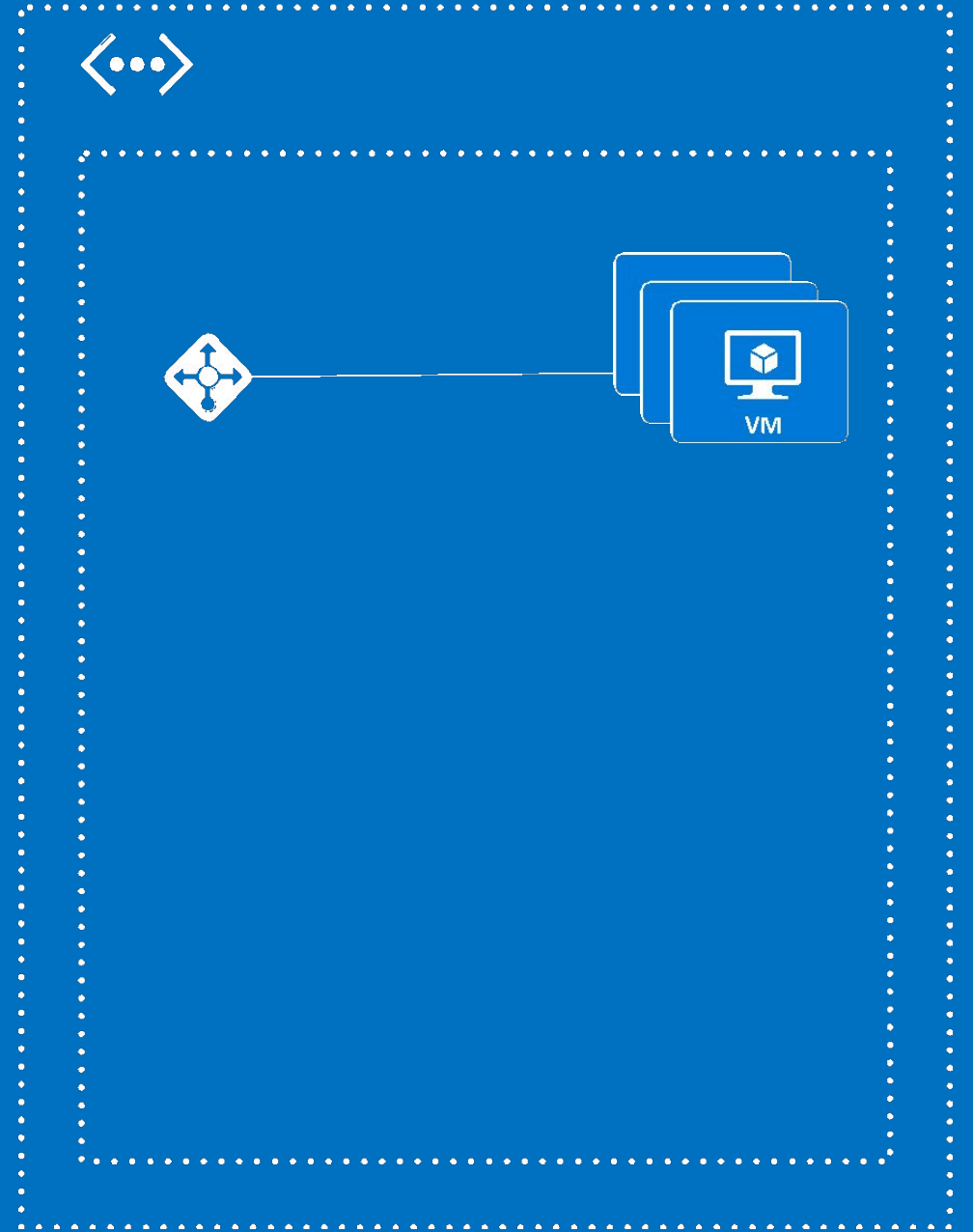




# VM Scale Set

## AV-Set + More

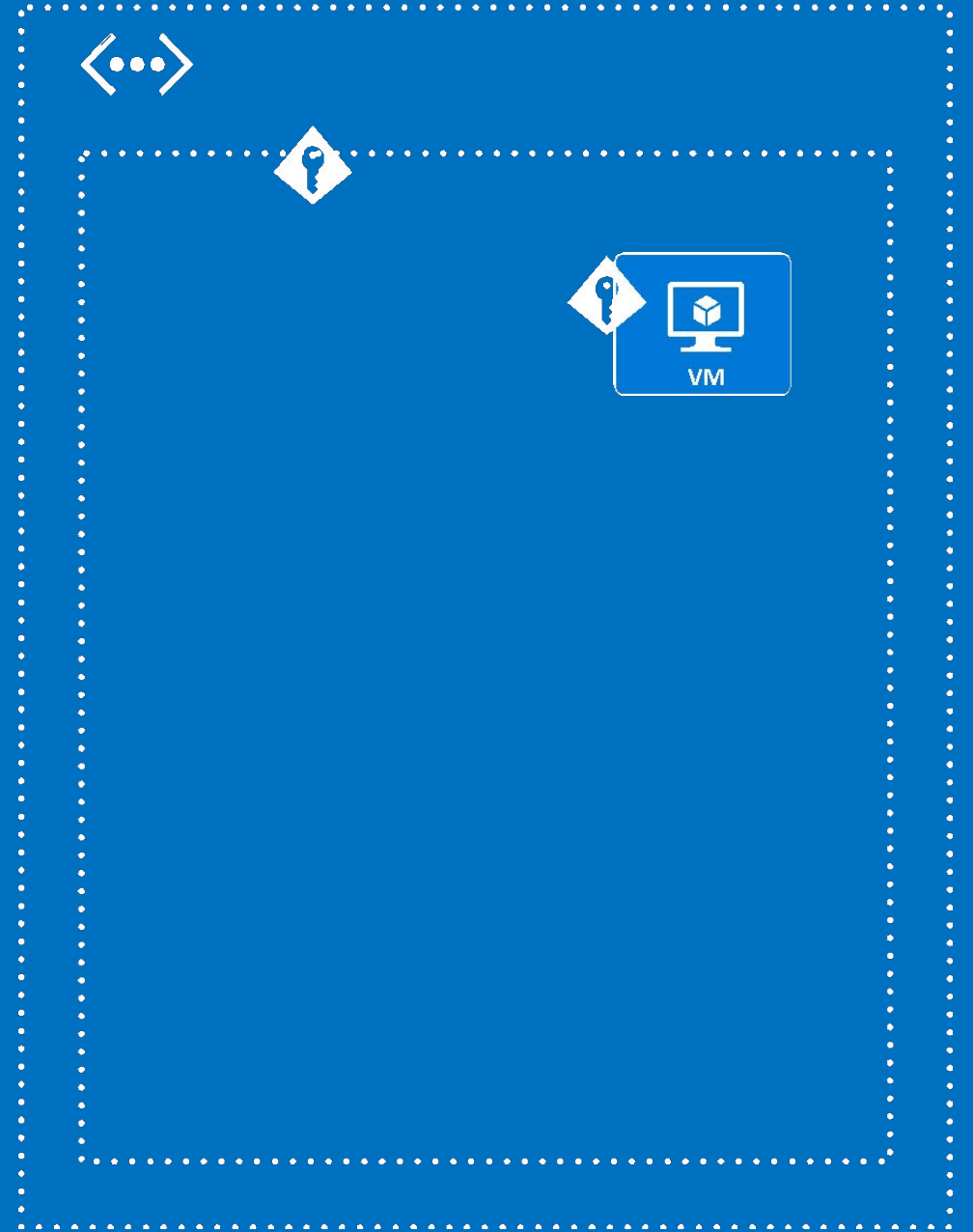
- Развертывание
- Обновление
- Масштабирование
  - До 1000 VM
  - Автоматическое
    - Нагрузка
    - Время
    - Свои правила



# NSG

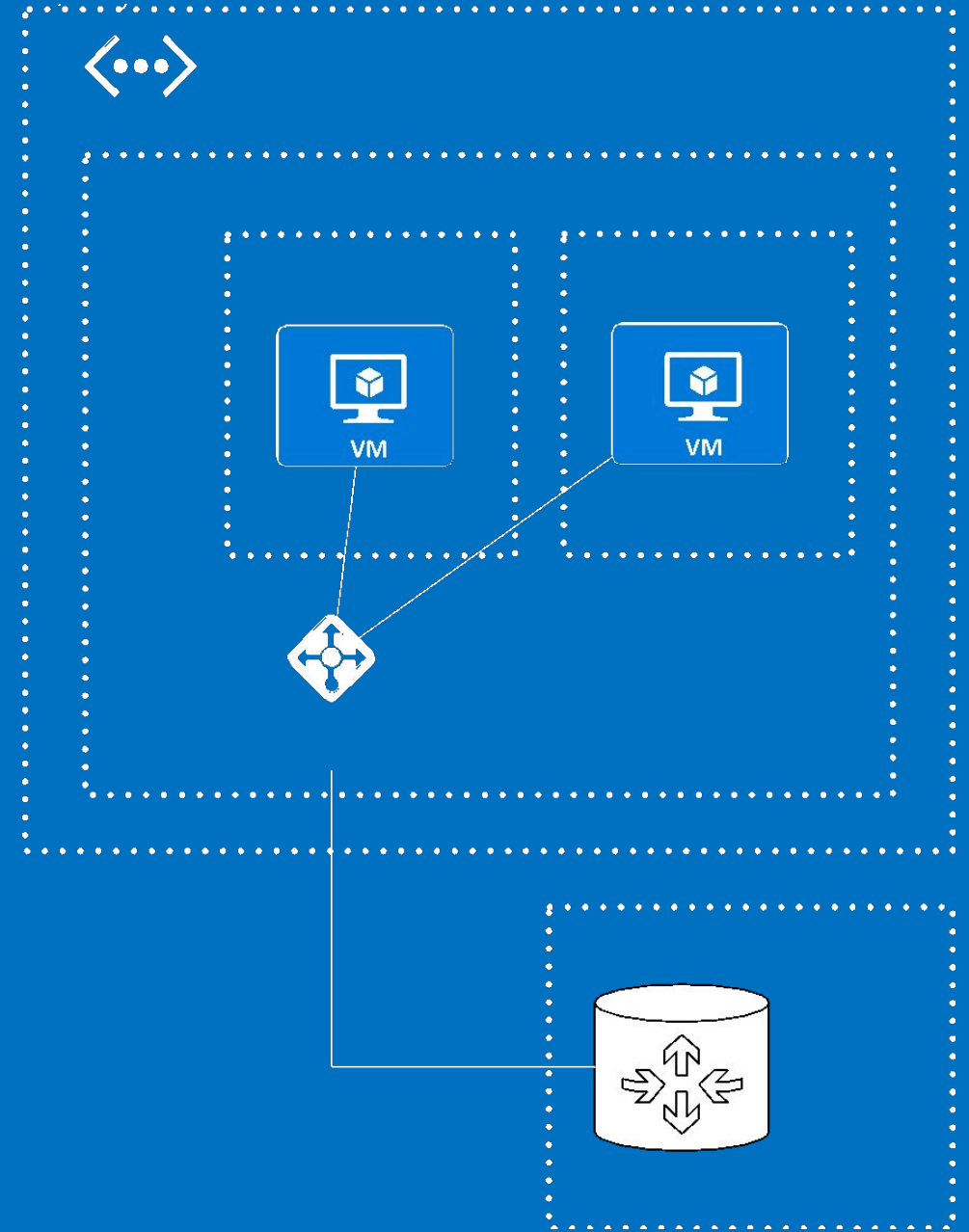
## Network Security Groups

- TCP, UDP, ICMP
- Stateful
- Subnet & VM



# VPN Gateway

- IPsec
- Site-to-site & Point-to-site
- Специально настроенные, но обычные VM
- BGP
- Active-Active

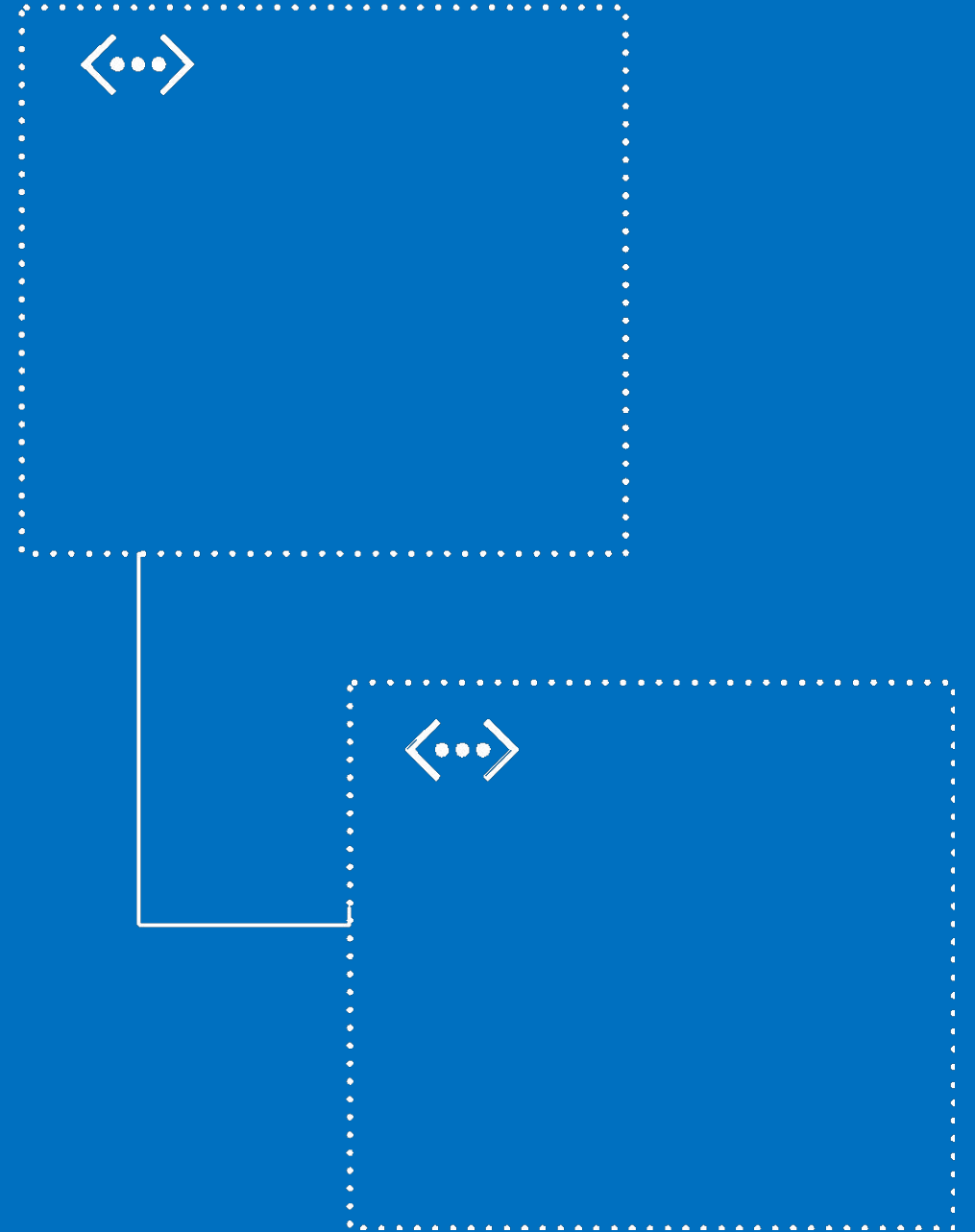


# Interconnecting VNets

- Vnet Peering
- VPN

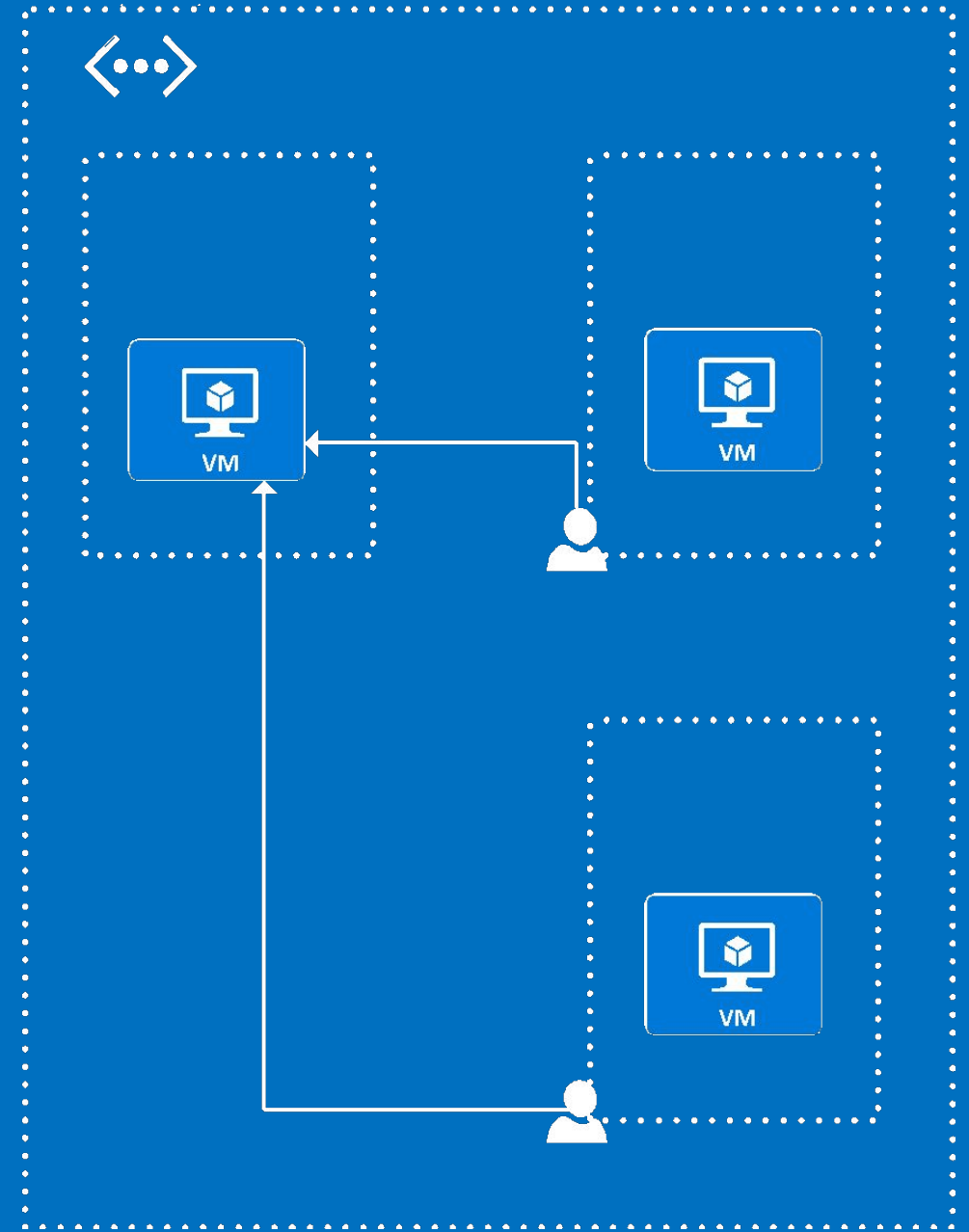
## Internal routing

- BGP



# NVA & UDR

- Network Virtual Appliance – VM с сетевым функционалом
- User-Defined Routes – переопределение стандартных маршрутов для подсети
- Load Balancer – friendly
- Firewall, VPN Gateway



# Управление Azure

- Portal
- PowerShell
- CLI
- REST API
- Шаблоны

Dashboard > Virtual machines

## Virtual machines

Microsoft

+ Add Reservations Edit columns Refresh

Subscriptions: 2 of 3 selected – Don't see a subscription? Open Directory

fe 2 subscriptions

5 items

NAME
fe1
fe101
fe2
fe6
fe7

```
34 New-AzureRmResourceGroup -Name
35
36 #create Vnet
37 $vnet = New-AzureRmVirtualNet
38 $vnet = Get-AzureRmVirtualNet
39
40
41 #create LBs
42 $l1feip = New-AzureRmLoadBal
43 $l1beAddresspool = New-AzureR
44 $l1 = New-AzureRmLoadBalance
45     -FrontendIpConfiguration
46
47 $l2feip = New-AzureRmLoadBalancerFrontendIpCon
48 $l2beAddresspool = New-AzureRmLoadBalancerBacke
49 $l2 = New-AzureRmLoadBalancer -Sku Standard -l
50     -FrontendIpConfiguration $l2feip -Backend
51
52
53 #create VM
54 $nic1 = New-AzureRmNetworkInterface -Name "nic1
55 $nic2 = New-AzureRmNetworkInterface -Name "nic2
56
```

GitHub, Inc. [US] | https://github.com/Azure

Search or jump to... Pull requests

## Microsoft Azure

APIs, SDKs and open source projects from

Redmond, WA & the cloud https://doc

Repositories 1,012 People 1,595 Projects

### Pinned repositories

azure-quickstart-templates  
Azure Quickstart Templates  
Shell 4.3k 6.3k

azure .NET L# C#

