

ORACLE

Red Hot Dosed Business Continuity and Disaster Recovery

Part 6: Network for HA/DR

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OCI Specialist – Network

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Speaker



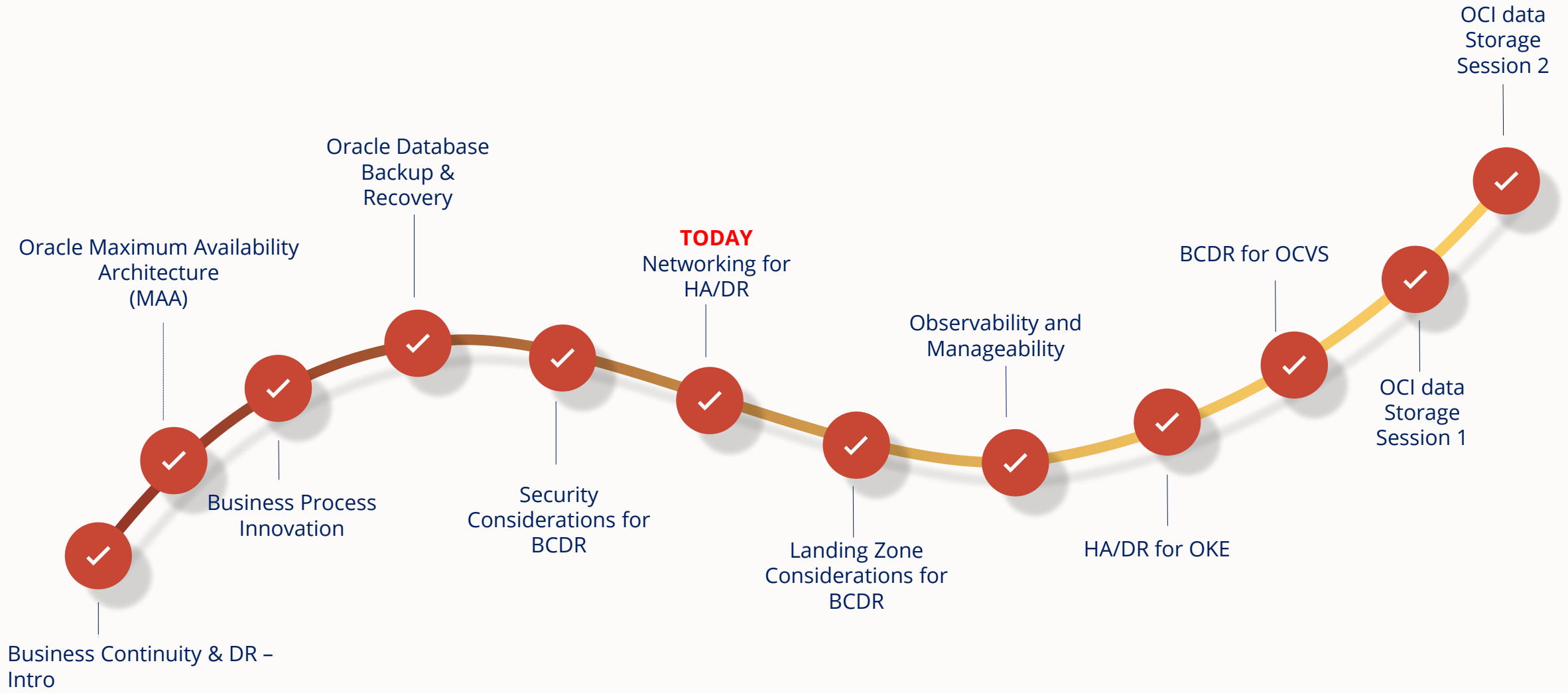
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Safe harbor statement

The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, timing, and pricing of any features or functionality described for Oracle's products may change and remains at the sole discretion of Oracle Corporation.



BCDR Redhot Dosed – Sessions



Business Continuity and Disaster Recovery

Oracle Cloud Infrastructure Network Services

- **Introduction**
- Network HA/DR within an application
- Network HA/DR connectivity from On-Premises to OCI
- Further reading



Business Continuity and Disaster Recovery

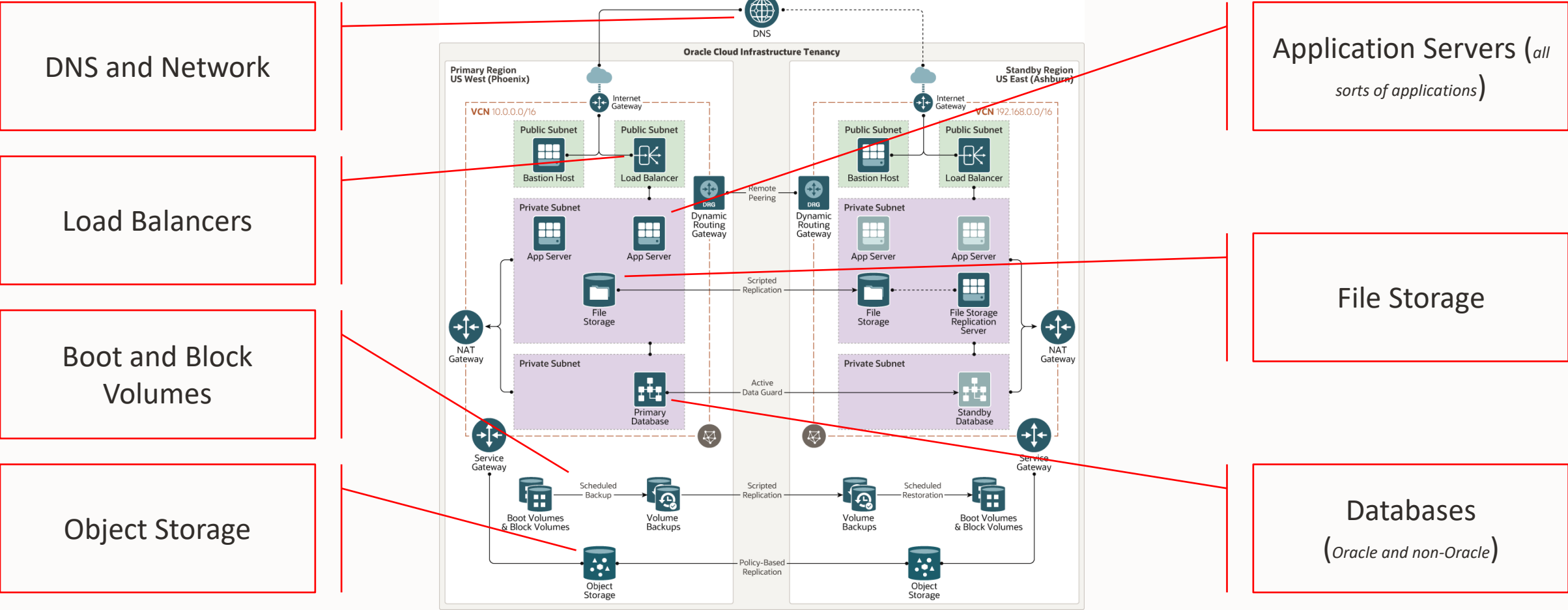
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Network HA/DR within an application

Customer Example Environment based on [Disaster Recovery: Pilot Light - App & DB](#)



Business Continuity and Disaster Recovery

Customer Example Environment based on Disaster Recovery: Pilot Light - App & DB

DNS and Network

Load Balancers

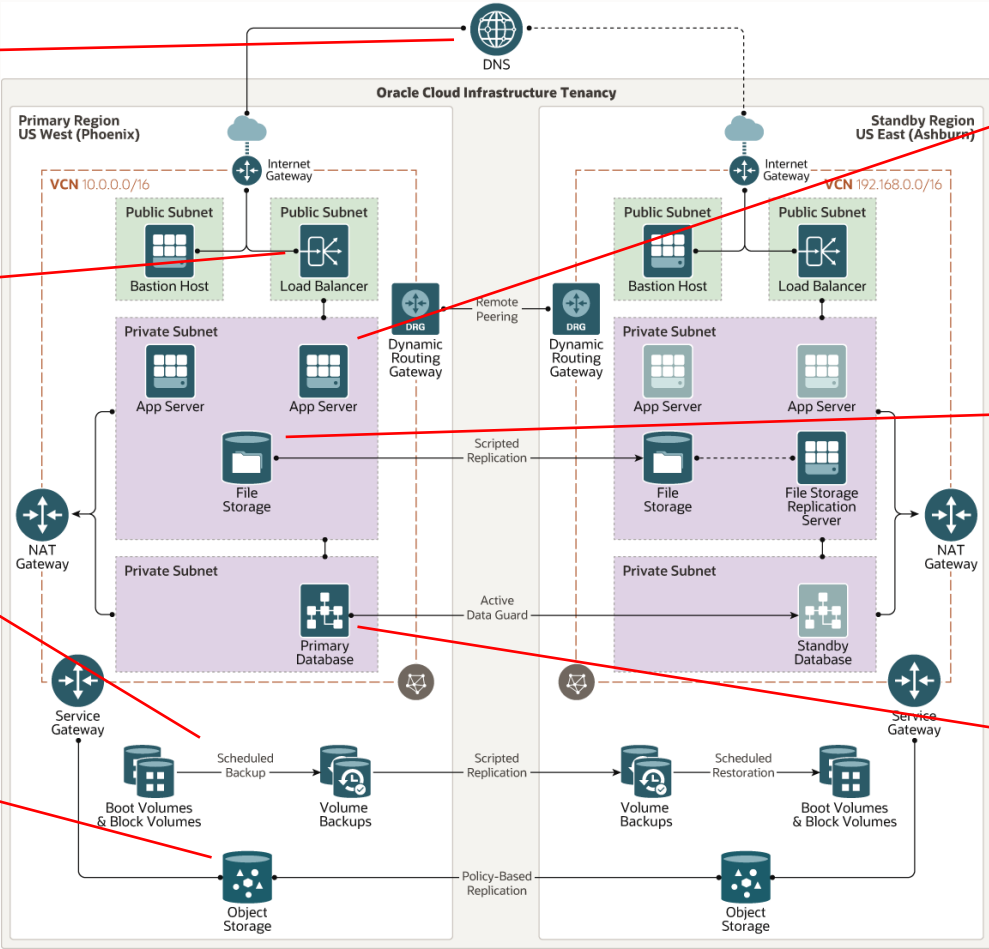
Boot and Block Volumes

Object Storage

Application Servers (all sorts of applications)

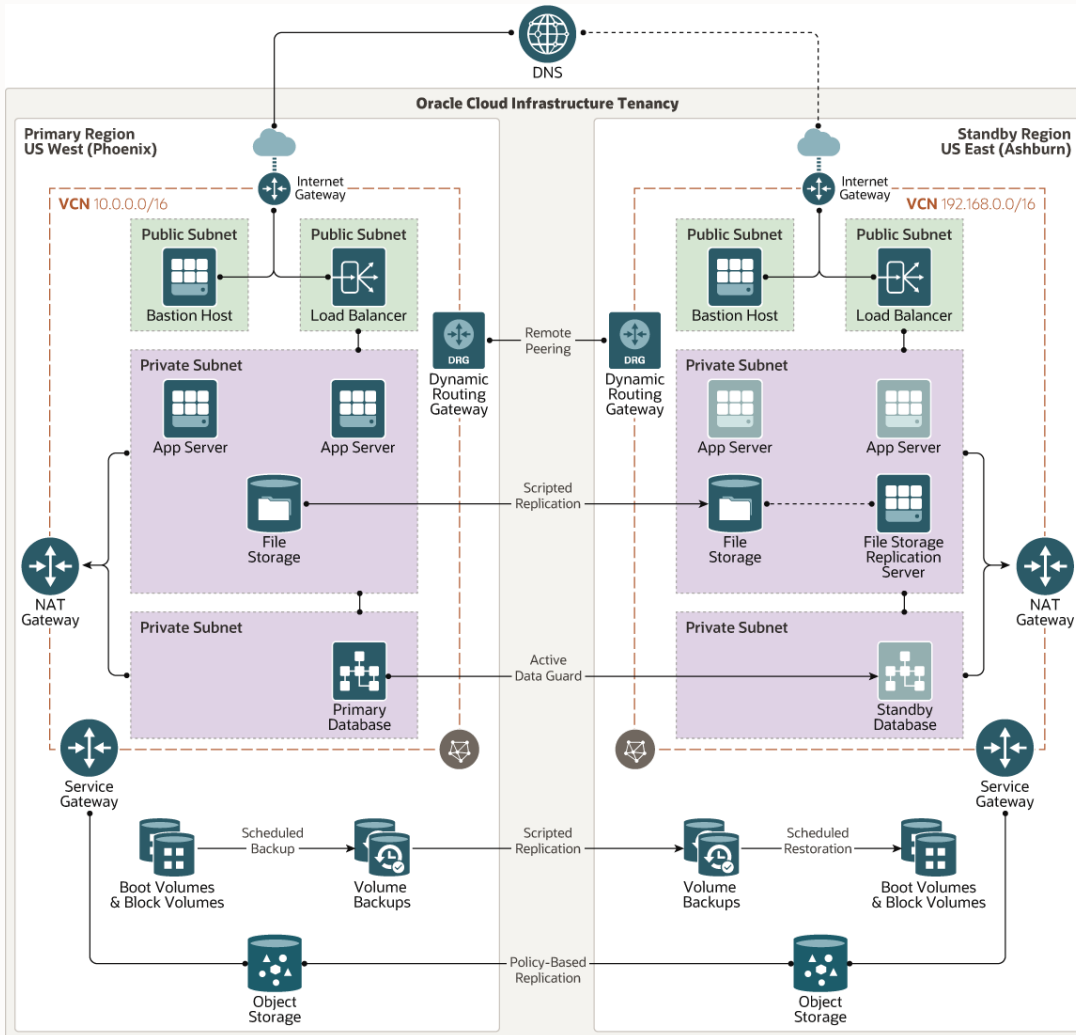
File Storage

Databases (Oracle and non-Oracle)



Business Continuity and Disaster Recovery

DNS Steering Management for HA & Disaster Recovery



DNS Steering management gives you the possibility to configure policies to have

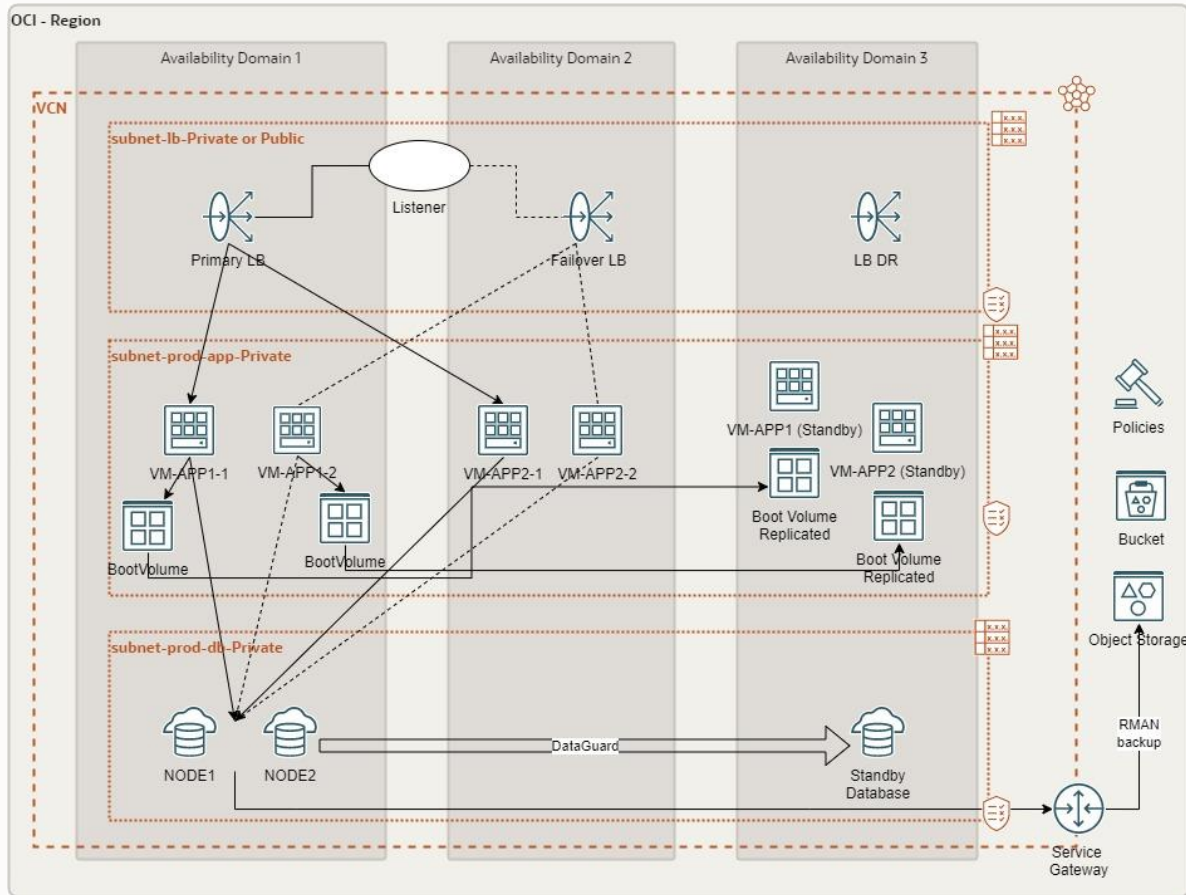
- Load Balancer
- Failover
- Geolocation Steering
- ASN Steering
- IP Prefix Steering

for multiple OCI regions, Monitored by Oracle Health Check



Business Continuity and Disaster Recovery

Load Balancers in HA & Disaster Recovery



You can create a Private or Public Load Balancer with HA in two ADs and a third Load Balancer for Disaster Recovery

OCI will create a Failover Load Balancer for Disaster Recovery

Load Balancer Policy will distribute the incoming traffic based on the configuration

- **Weighted round robin**
- **IP hash**
- **Least connections**

From a security point of view, it is a best practice to only expose the load balancer for public access



Business Continuity and Disaster Recovery

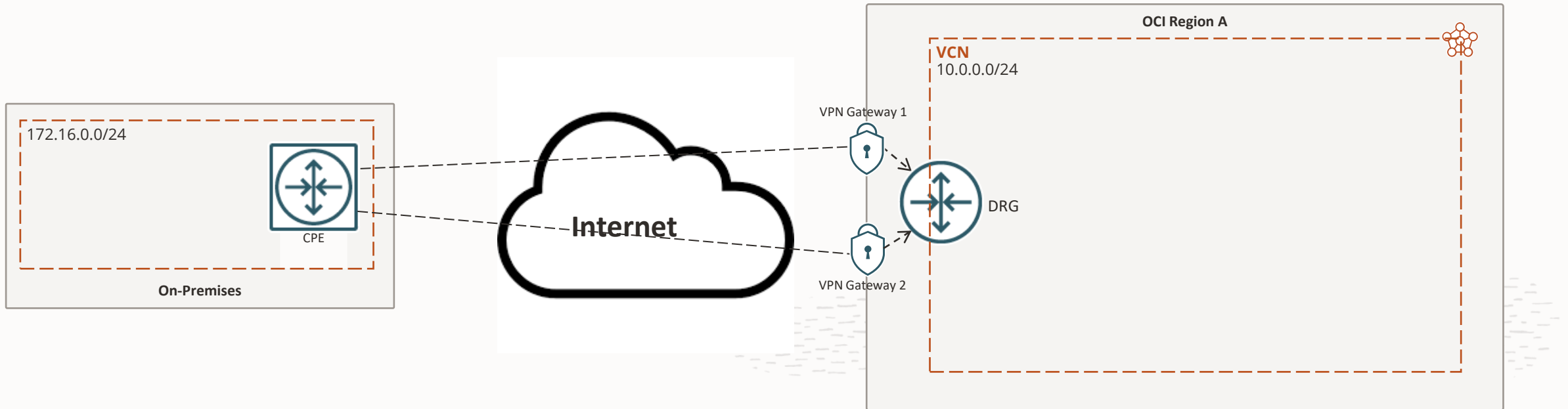
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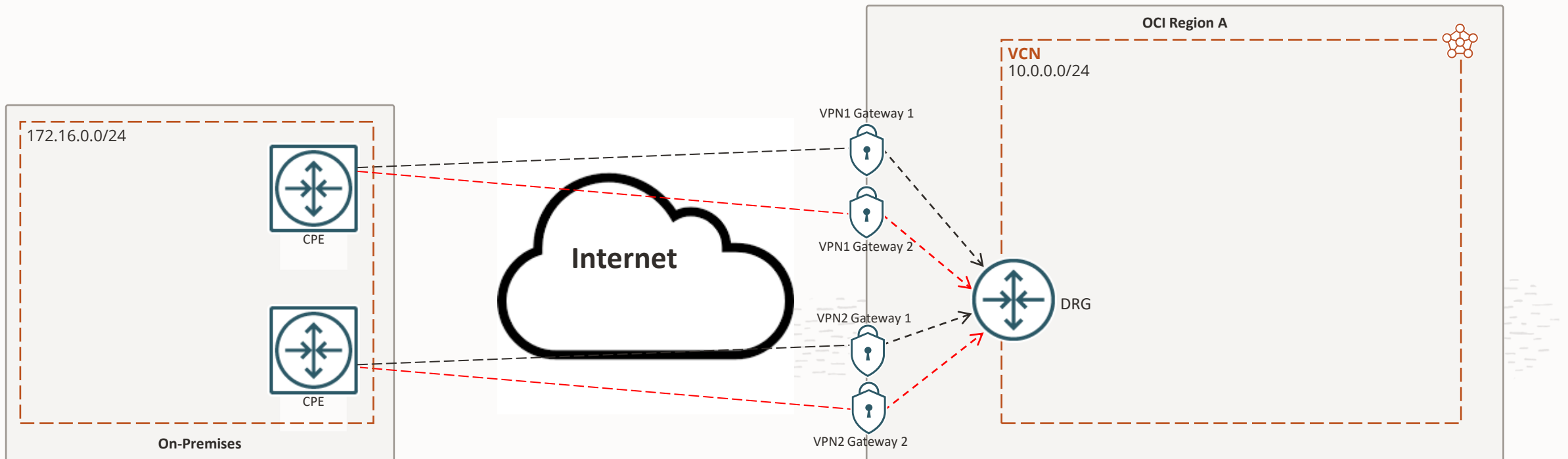
Site-to-Site IPsec VPN Redundancy

- Two redundant tunnels per IPsec connection
- Each tunnel in an IPsec Connection terminates on a different VPN Gateway
- Multiple Ipsec Connections is more than two tunnels are required
- Separate BGP sessions per tunnel to control preferred network path



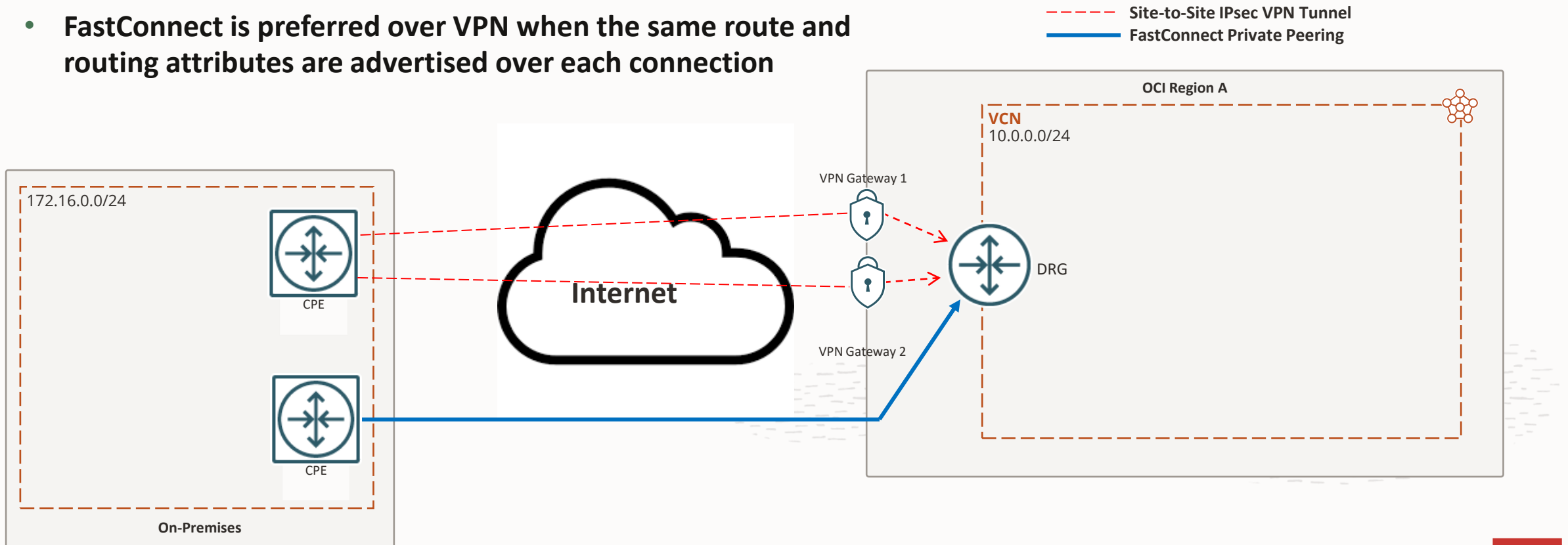
Site-to-Site IPsec VPN Redundancy (Common scenario)

- One active tunnel per IPsec connection
- Each tunnel in one IPsec Connection
- Two different CPEs On-Premises



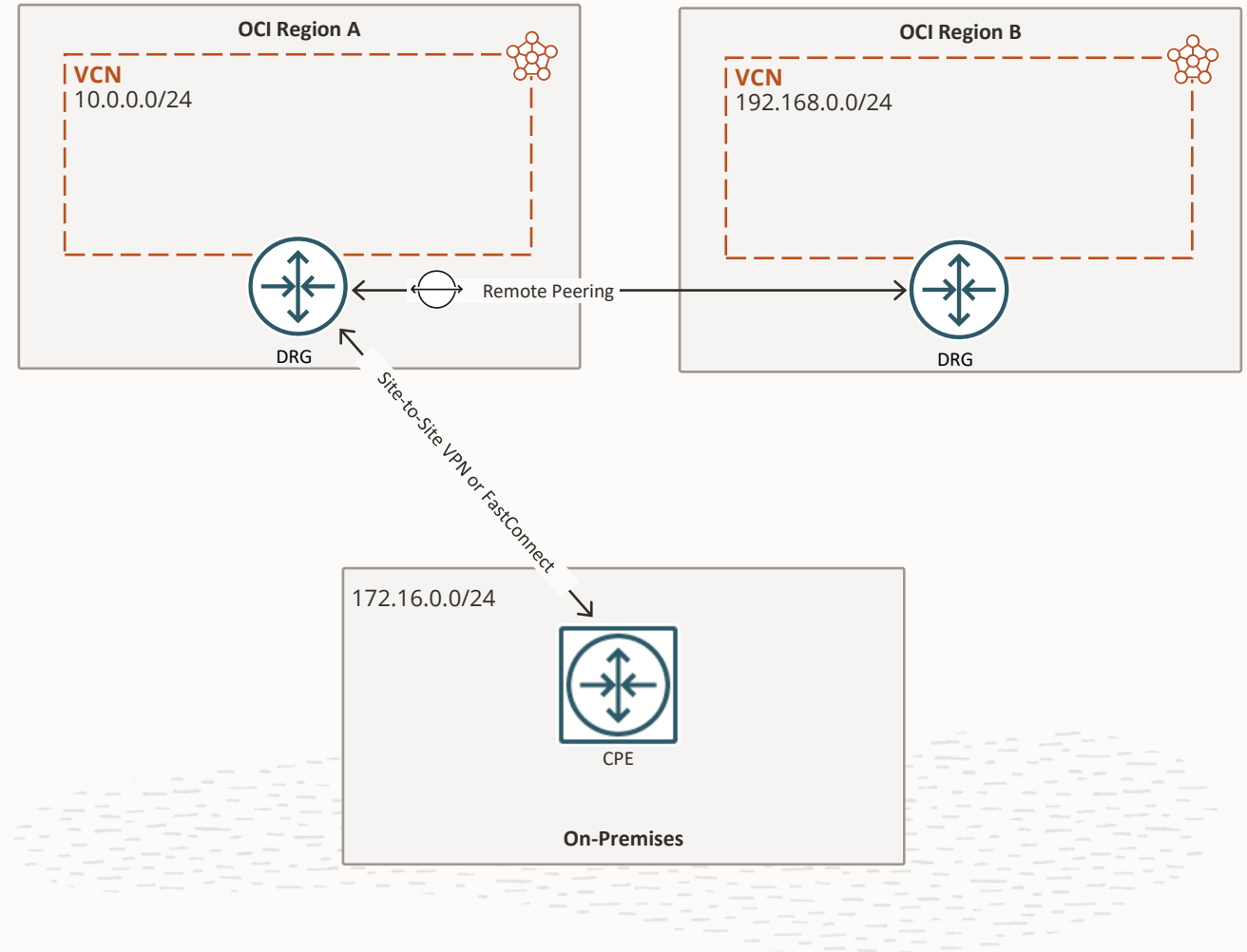
Site-to-Site IPsec VPN Redundancy

- Configure at least one available tunnel
- Use ECMP across multiple tunnels for additional VPN bandwidth
- Prefer FastConnect as primary
- Use BGP for route exchange
- FastConnect is preferred over VPN when the same route and routing attributes are advertised over each connection



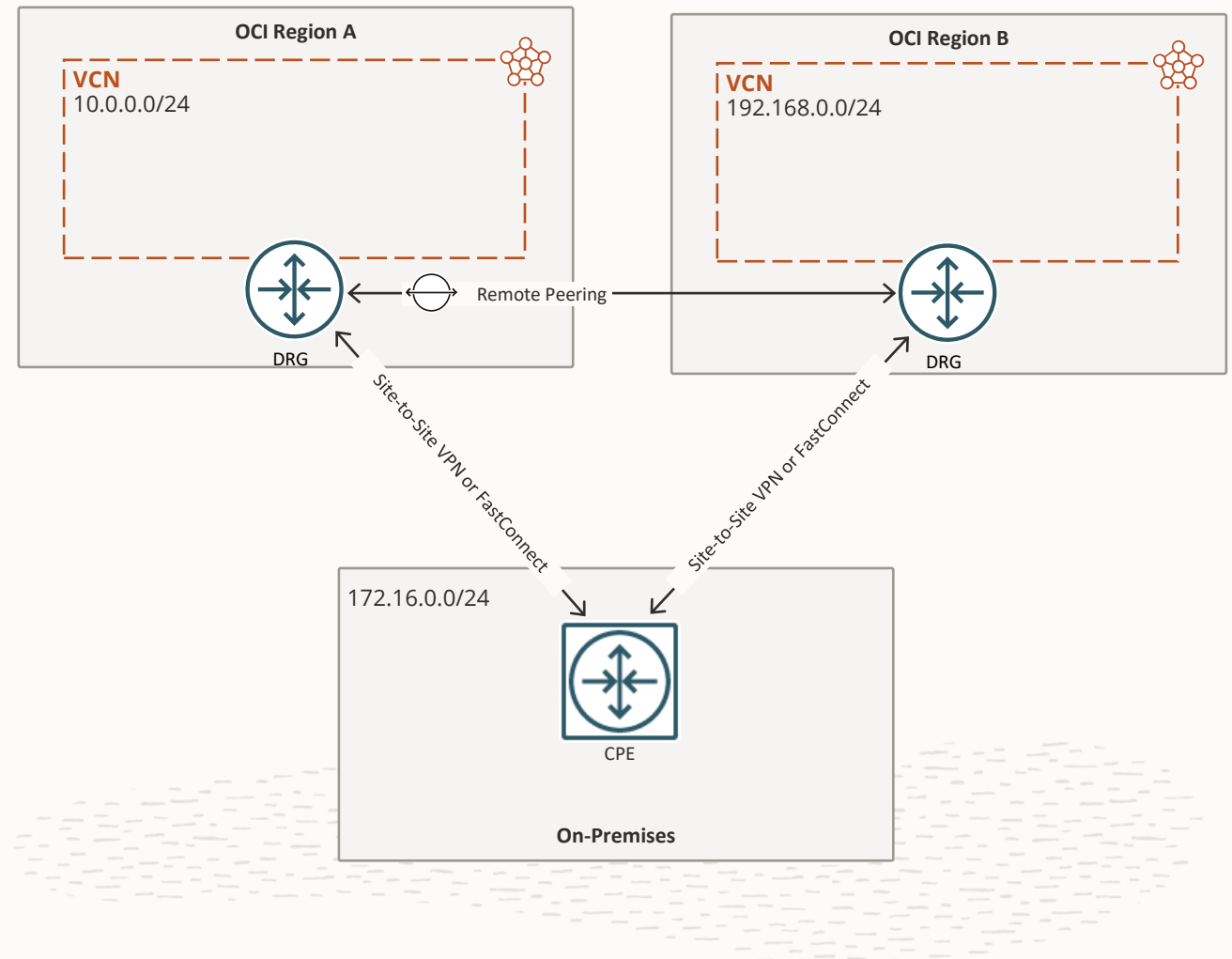
Remote Onramp

- **FastConnect or Site-to-Site IPsec VPN in Region A**
- **Access resources in Region A and Region B**
- **Uses the OCI private Backbone**



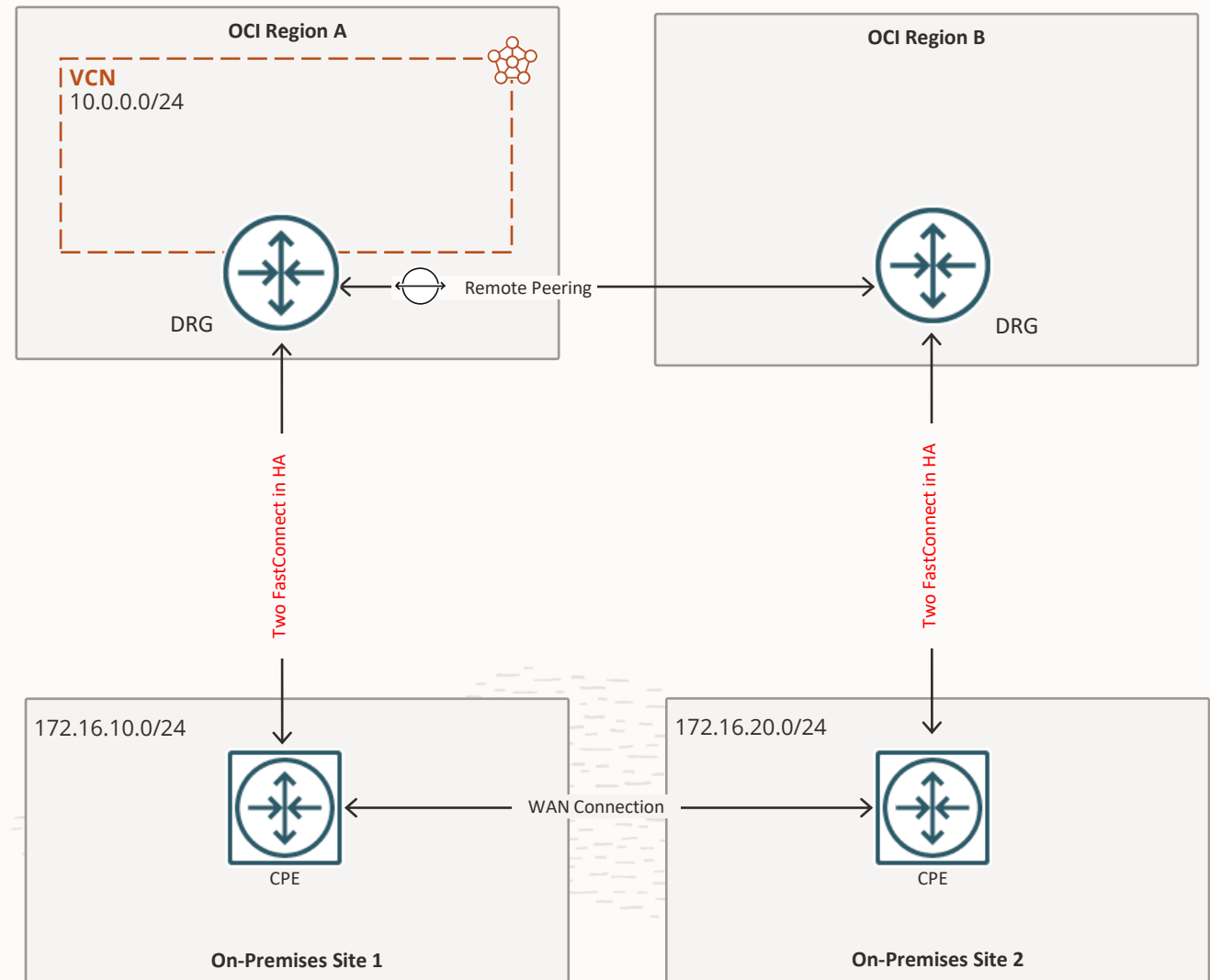
Multiple Region Redundancy

- **FastConnect or Site-to-Site IPsec VPN in both regions**
- **Uses the OCI private backbone**
- **Use BGP attributes like local preference and AS PATH prepending to influence egress/ingress routing**
- **Oracle will prefer local region egress in case of routing tiebreaks**



Multiple Region Redundancy HA (Common Scenario)

- Two FastConnect in HA in both regions
- Uses the OCI private backbone in HA
- Use BGP attributes like local preference and AS PATH prepending to influence egress/ingress routing
- No Network configuration needed in Region B, just the DRG
- Configure DRG routing to advertised routes for RPC to On-premises Sites



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Learn more (Public perspective)

Find specialist curated content here

- ✓ [Disaster Recovery](#) in the OCI documentation provide a topic centric technical view in the topic. In a more detailed view [Best practices for protecting your cloud topology against disasters](#) OCI DR capabilities are listed.
- ✓ [Best practices framework for Oracle Cloud Infrastructure](#) (e.g. [Reliability and resilience](#))
- ✓ [Pradeep Vincent](#) (SVP, Chief Technical Architect OCI) held a famous talk ([Resiliency in the cloud: Separating myth from fact](#)) on CloudWorld 2022 regarding Resiliency in the cloud.

- ✓ [Oracle Blog: OCI provides native high availability and data resilience](#)

- ✓ [Next-Generation Cloud](#)

- ✓ [Cloud Resilience](#) (find a backup & Recovery showcase fully scripted and automated here)
- ✓ [Cloud Resilience by default](#) (find a “Make your Cloud resilient against regional outages” showcase fully scripted and automated here)



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