

Overview OCI: Oracle Cloud Infrastructure

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do 6-12-2018 13:03

Fwd: Welcome to Oracle Cloud. Your Oracle Public Cloud Services are ready for use.

Van: Douwes, Ise; Ise Douwes

Hello [REDACTED]

Thank you for signing up for Oracle Cloud. Use the information in this email to log in to your new account.

As the primary administrator, you can create additional users and assign those users specific roles and responsibilities within your Cloud Account. For more information, see [Adding Users and Assigning Roles](#).

Access Details for My Services

Username:

[REDACTED]

Temporary Password:

Otrpw16od4nk

Cloud Account:

[REDACTED]

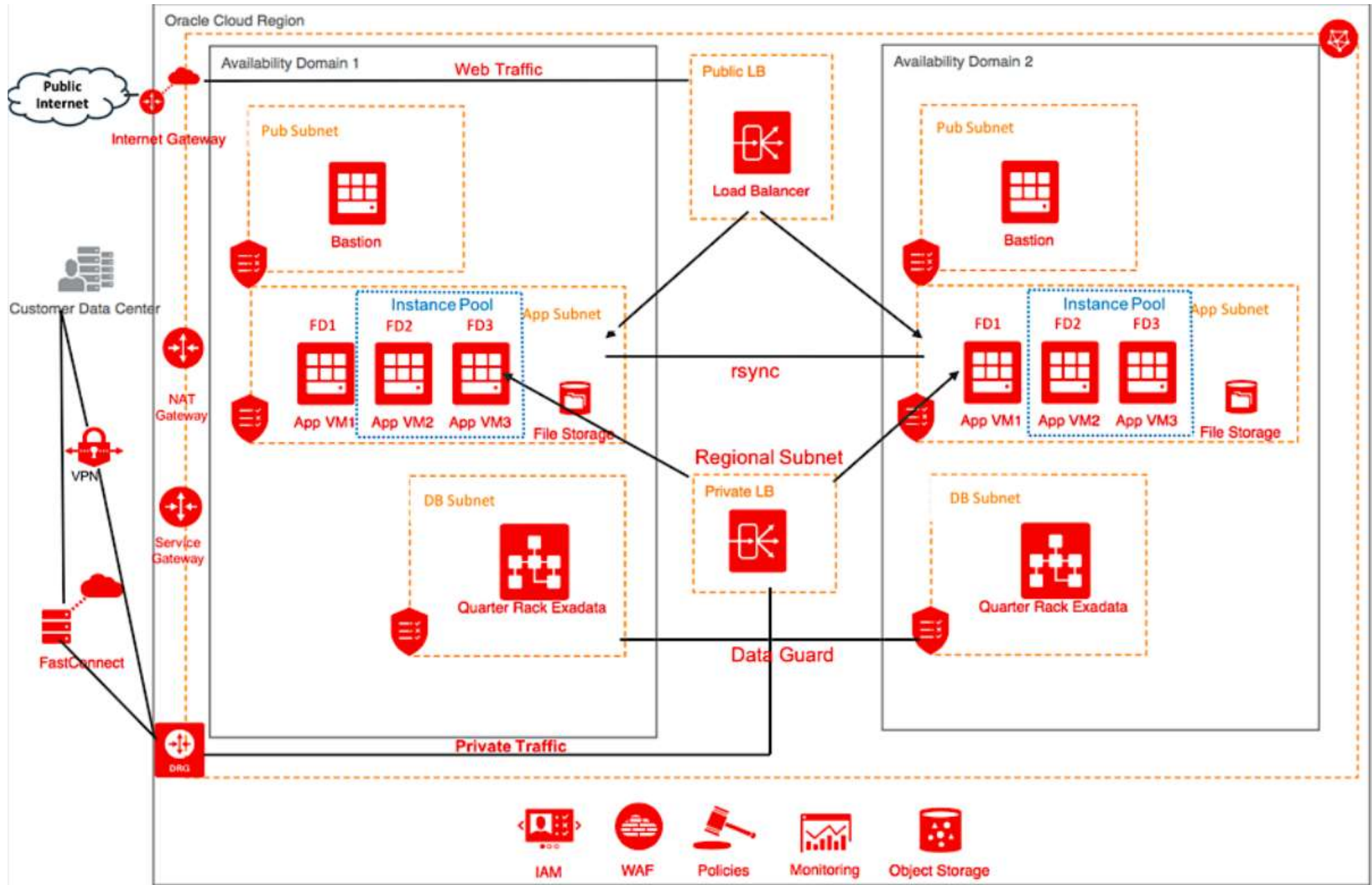
[Get Started with Oracle Cloud](#)

Please Note: For the following services you will be prompted for an additional sign in.

- **Oracle Cloud Infrastructure:**

Use the Get Started link and credentials provided above to sign in to **My Services**. From the Guided Journey select **Create Infrastructure**, then access Oracle Cloud Infrastructure service by clicking **Create Compute Instance**. If you're prompted to sign in, use the credentials provided below.

- Cloud Tenant: [REDACTED]
- Temporary Password: [Otrpw16od4nk](#) (This password will expire in 7 days)





I

RTFM
Read The Fucking Manual

WTBV
Watch The Boring Video

DWYT
Document What You do

My Safe Harbor Statement

Change

*Everything I tell can change and will change if not already changed
without any notification*

Free trial or free trail for developers?

For managing OCI you need to be:

- Systemadministrator
- Network administrator
- Security officer
- (Database administrator)
- Controller

Dev / Test

- Test customizations and new app versions
- Validate Patches
- Test cloud-native technologies and frameworks like containers and CI/CD

Production

- Utilize bare metal for consistency and industry-leading price/performance
- Use multiple Availability Domains, load balancing and RAC for HA

ORACLE
Cloud Infrastructure

Backup & DR

- Take advantage of built-in storage resiliency, availability and security
- Use automation to back up and restore key files and archive infrequently accessed files

Extend Data Center

- Connect on-premises data center to cloud using VPN or FastConnect
- Reduce risk of technology obsolescence by accessing latest infrastructure

Topics

- 1) Identity and Access Management (IAM)
- 2) Networking
- 3) Connectivity
- 4) Storage
- 5) Compute
- 6) (autonomous) Database



Keep your portal in English

PaaS ≠ IaaS only DBaaS = IaaS

Don't use classic services

Monitor your costs on the portal

<https://www.oracle.com/cloud/ucpricing.html>

<http://www.oracle.com/us/corporate/contracts/paas-iaas-universal-credits-3940775.pdf>



II

Identity and Access Management (IAM)

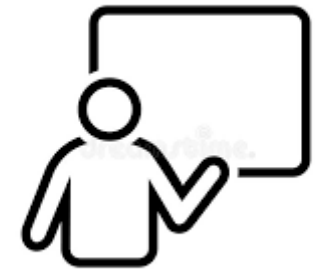
- Tenancy (fysical)
- Region (fyscial)
- Home Region \neq
- Availability domain
- Fault domain
- OCID Oracle Cloud Identifier





Identity and Access Management (IAM)

- Cloud account ≠ Oracle account
- Users (fysical)
- Roles (logical)
- Policy's (logical) RTFM!
- Compartement (logical)
- Tagging





IV

OCI is multi-user, use that

Use Compartments

In larger implementations use tagging!

Networking

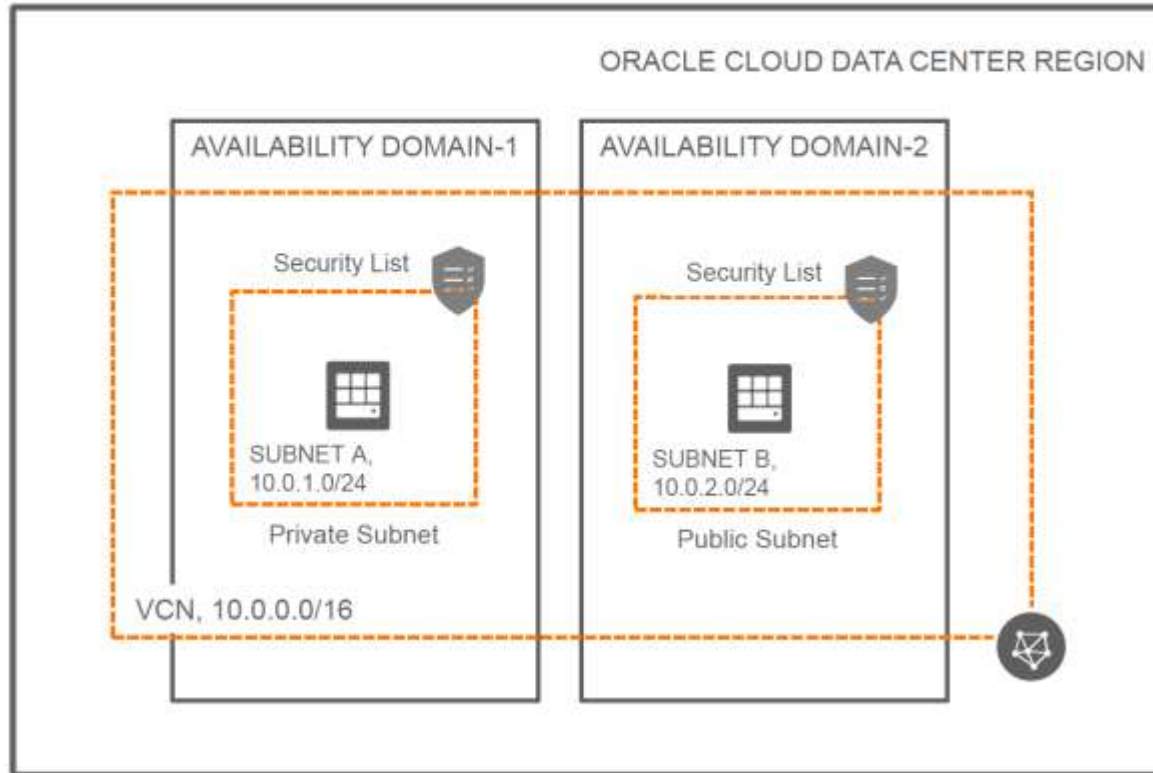


- Virtual Cloud Network VCN
- Subnets: private/public,
- CIDR Blocks
- Virtual Network Internet Cards VNIC / public IP addresses



- Security List

Security Lists



A common set of firewall rules associated with a subnet and applied to all instances launched inside the subnet

- Security lists provide ingress and egress rules that specify the types of traffic allowed in and out of the instances
- Security lists apply to a given instance whether it's talking with another instance in the VCN or a host outside the VCN
- You can choose whether a given rule is stateful or stateless

Connectivity



- Internet Gateway

- Service Gateway



- NAT Gateway

- Local Peering Gateway



- Dynamic Routing Gateway



- Routing Tables



- VPN IP Sec



- Fastconnect



- Customer Premises Equipment (CPE)

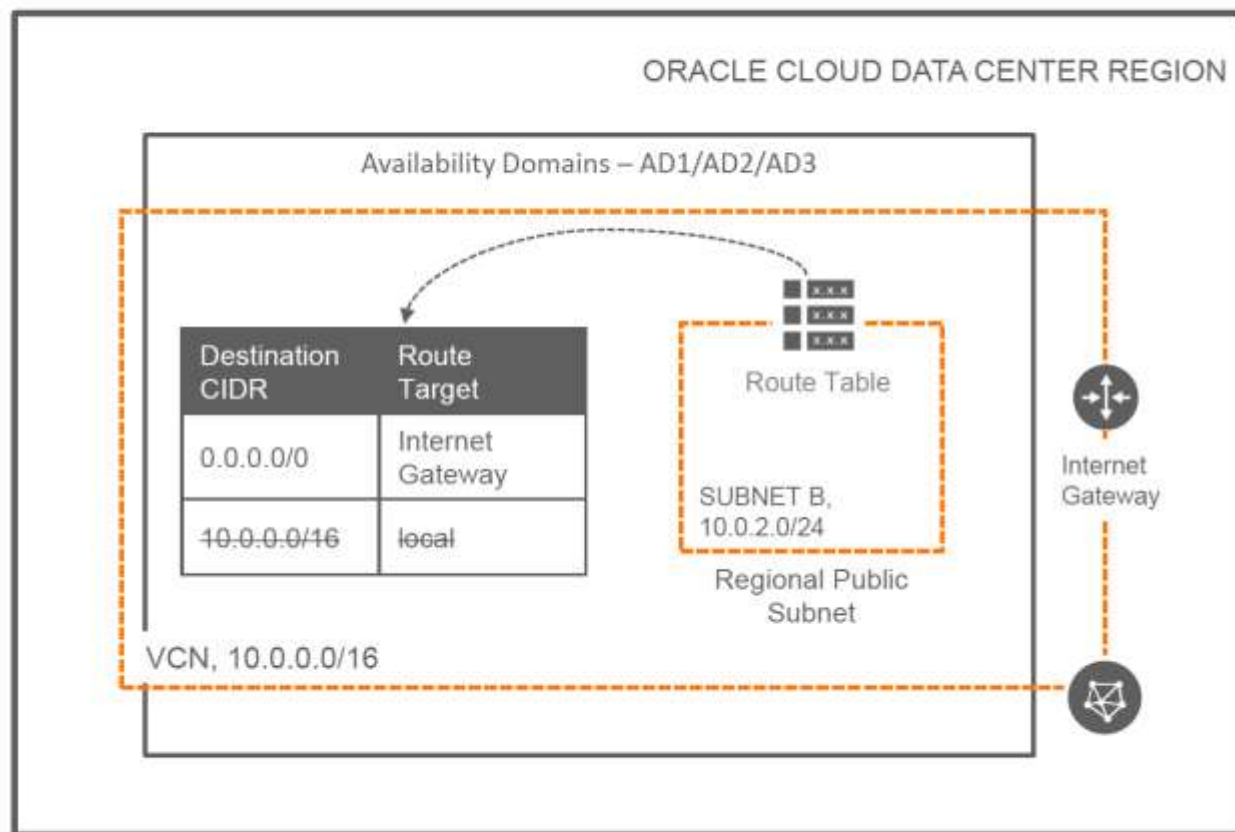


Summary of OCI network connectivity options

Scenario	Solution
Let instances connect to the Internet, and receive connections from it	Internet Gateway
Let instances reach the Internet without receiving connections from it	NAT Gateway
Let VCN hosts privately connect to object storage, bypassing the internet	Service Gateway
Make an OCI extend an on-premise network, with easy connectivity in both directions	IPsec VPN (DRG) FastConnect
Privately connect two VCNs in a region	Local Peering Gateway
Privately connect two VCNs in different regions	Remote Peering Connection (DRG)

DRG Dynamic Routing Gateway

Route Table



- Each subnet uses a single route table specified at time of subnet creation, but can be edited later
- Route table is used only if the destination IP address is not within the VCN's CIDR block
- No route rules are required in order to enable traffic within the VCN itself
- When you add an internet gateway, NAT gateway, service gateway, dynamic routing gateway or a peering connection, you must update the route table for any subnet that uses these gateways or connections



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For trial purposes : use the wizard to create
VCN, subnets, securitylist, routing tables

Storage



1) Object Storage

2) Archive Storage



3) Block volumes:

4) Local NVMe



5) File storage



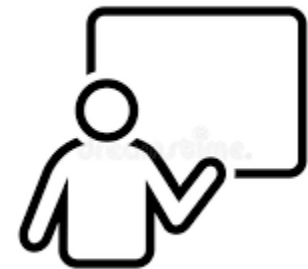
OCI Storage Services

	Local NVMe	Block Volume	File Storage	Object Storage	Archive Storage
Type	NVMe SSD based temporary storage	NVMe SSD based block storage	NFSv3 compatible file system	Highly durable Object storage	Long-term archival and backup
Durability	Non-persistent; survives reboots	Durable (multiple copies in an AD)	Durable (multiple copies in an AD)	Highly durable (multiple copies across ADs)	Highly durable (multiple copies across ADs)
Capacity	Terabytes+	Petabytes+	Exabytes+	Petabytes+	Petabytes+
Unit Size	51.2 TB for BM, 6.4-25.6 TB for VM	50 GB to 32 TB/vol 32 vols/instance	Up to 8 Exabyte	10 TB/object	10 TB/object
Use cases	Big Data, OLTP, high performance workloads	Apps that require SAN like features (Oracle DB, VMW, Exchange)	Apps that require shared file system (EBS, HPC)	Unstructured data incl. logs, images, videos	Long term archival and backups (Oracle DB backups)

Compute



- Instances
- VM shapes
- OS
- CLI Command Line Interface
- SSH keys
- BareMetal / Dedicated VM hosts
- Load Balancer



Instance Configuration and Pool

Instance Configurations

- Define the configuration information to launch a compute instance
- Include parameters (OS image, metadata, shape) and related resources as a single configuration entity, so you don't have to specify them every time you launch a new instance
- Configure attached storage volumes; VNIC, Subnets and AD placements all with a single request

Instance Pools

- Provision and create multiple compute instances based off of the same instance configuration, within the same region
- Scale up/down
- 1 pool:1 configuration, but 1 configuration: n pools

Start with the lightest VM Shapes (micro of E)

Use if possible (autonomous) Linux

If not 'always free'

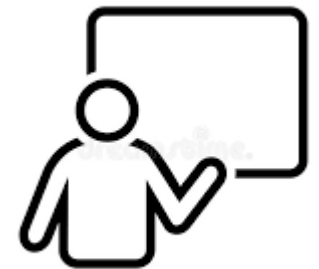
Stop and restart to save money!





Database

- DBsystems (VM shape / Storage) & Database
- DBCLI DataBase Command Line Interface
- Backups (automatic / manual)
- Patching
- VM / Bare metal / Exadata



DB Systems – VM, BM, Exadata

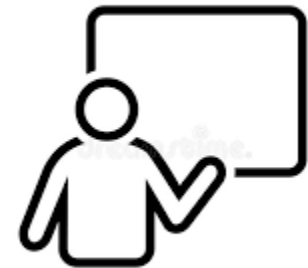
	Virtual Machine (VM)	Bare Metal (BM)	Exadata
Scaling	Storage (number of CPU cores on VM DB cannot be changed)	CPU (amount of available storage cannot be changed)	CPU can be scaled within a ¼ , ½ and Full rack. Storage cannot be scaled
Multiple Homes/Databases	No, single DB and Home only	Yes (one edition, but different versions possible)	Yes
Storage	Block Storage	Local NVMe disks	Local spinning disks and NVMe flash cards
Real Application Clusters (RAC)	Available (2-node)	Not Available	Available
Data Guard	Not Available	Available	Available*

*You can manually configure Data Guard on Exadata DB systems using native Oracle Database utilities and commands. dbcli is not available on Exadata DB systems



Autonomous Database

- Is a PDB within a CDB managed by Oracle
- ATP (Transaction Processing) or ADW (Dataware housing)
- No root or OS access and DB Restrictions
- Outside your VCN!
- Available within Always Free
- Available dedicated



For non autonomous you need DBA knowledge

(Free) Autonomous is fine for try-out purposes



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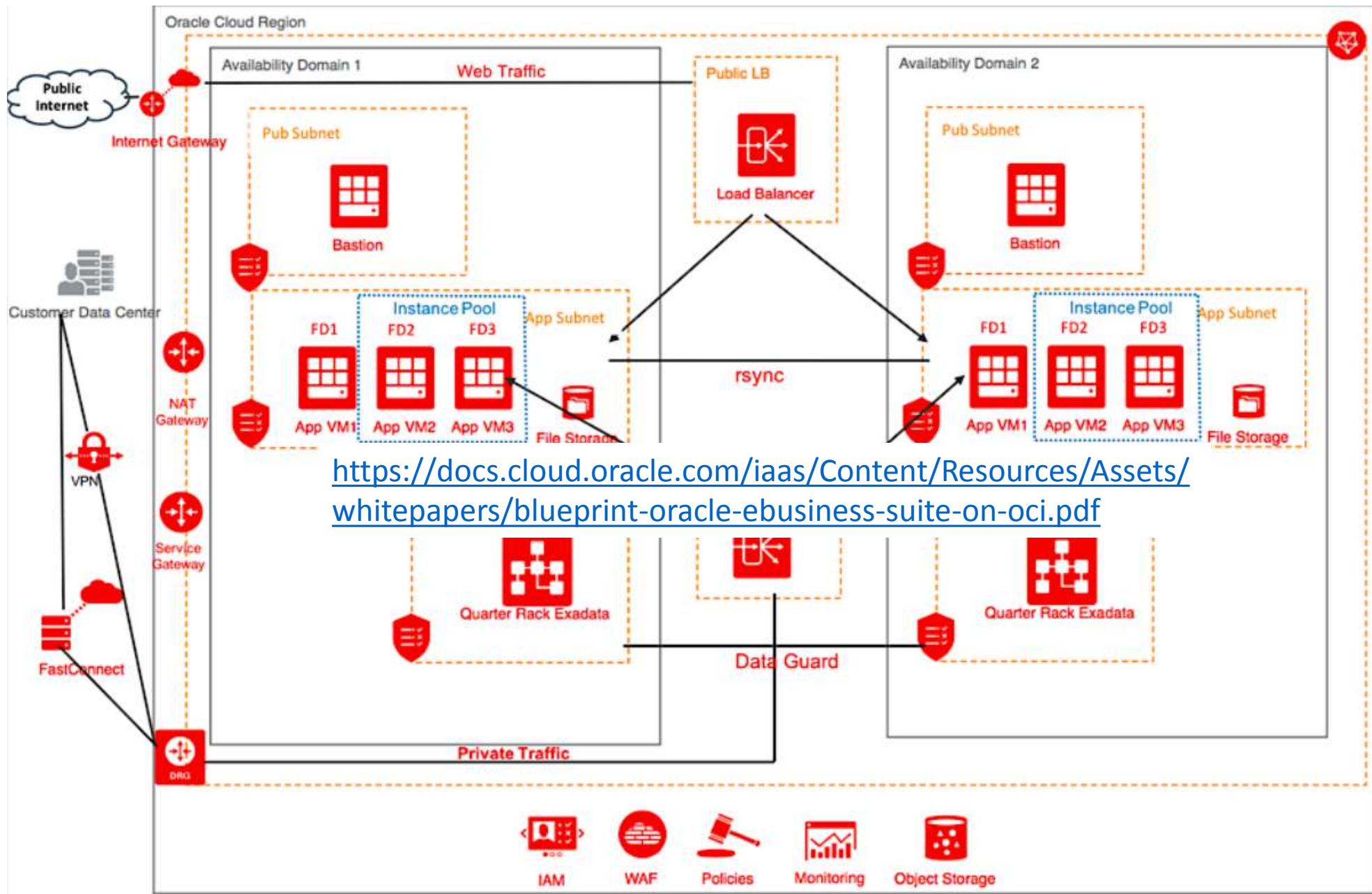
Autonomous for production?

ADWC!

Wrap-Up

- 1) Identity and Access Management (IAM)
- 2) Networking
- 3) Connectivity
- 4) Storage
- 5) Compute
- 6) (autonomous) Database





<https://docs.cloud.oracle.com/iaas/Content/Resources/Assets/whitepapers/blueprint-oracle-ebusiness-suite-on-oci.pdf>

For non trial, consider using Terraform (Infrastructure As Code)
if not DWYD

Design an architecture, document your decisions, make a price calculation
<https://github.com/dbarj/oci360>



VII

Free Videos Available (Level 100)

<https://www.youtube.com/playlist?list=PLgvLoiAxJHJ1IPdOvjUWxsU1BvFSXtGvB>

Practice the hands-on labs

<https://oracle.github.io/learning-library/oci-library/>

For simple APEX deployment on always free

<https://dgielis.blogspot.com/2019/09/best-and-cheapest-oracle-apex-hosting.html>