Cheat Sheet for comprehensive Oracle Cloud Infrastructure 2021 Certified Architect Associate

Identity and Access Management (IAM)

Users and Groups

- **Users**: Individual accounts for OCI users.

- **Groups**: Collections of users with shared permissions.

  - **Example**: `Developers` group with `DevOps` users.

Policies

- **Policy Syntax**: `Allow group <group-name> to <verb> <resource-type> in <location> where <condition>`.

  - **Example**: `Allow group Developers to manage instances in compartment DevCompartment`.

- **Common Verbs**: `manage`, `use`, `inspect`, `read`.

Compartments

- **Compartments**: Logical containers for organizing resources.

  - **Example**: `FinanceCompartment` for finance-related resources.

- **Hierarchical**: Compartments can be nested.

Compute

Instances

- **Instance Types**:

  - **Standard**: General-purpose.

  - **DenseIO**: High I/O performance.

  - **GPU**: Graphics processing units.

- **Boot Volumes**: Persistent storage for instances.

- **Block Volumes**: Additional storage.

Instance Configurations and Pools

- **Instance Configuration**: Template for creating instances.

- **Instance Pool**: Group of identical instances.

 - **Auto Scaling**: Automatically adjust pool size based on load.

Networking

Virtual Cloud Networks (VCNs)
- **VCN Components**:

 - **Subnets**: IP address ranges.

 - **Route Tables**: Define traffic routes.

 - **Security Lists**: Control inbound/outbound traffic.

- **Internet Gateway**: Allows access to the internet.

- **NAT Gateway**: Provides outbound internet access without exposing instances.

Load Balancing
- **Types**:

 - **Public**: Accessible from the internet.

 - **Private**: Internal to the VCN.

- **Health Checks**: Monitor instance health.

Storage

Block Storage
- **Block Volumes**: Persistent, high-performance storage.

 - **Snapshots**: Point-in-time copies.

- **Volume Groups**: Combine multiple volumes.

Object Storage
- **Buckets**: Containers for storing objects.

 - **Storage Tiers**: Standard, Infrequent Access, Archive.

- **Pre-Authenticated Requests (PARs)**: Temporary access to objects.

File Storage
- **File Systems**: Network file storage.

 - **Mount Targets**: Endpoints for accessing file systems.

Database

Autonomous Database
- **Types**:

  - **Autonomous Data Warehouse (ADW)**: Data warehousing.

  - **Autonomous Transaction Processing (ATP)**: Transaction processing.

- **Auto Scaling**: Automatically adjust resources.

Exadata Cloud Service
- **Exadata**: High-performance database platform.

  - **Dedicated**: Full Exadata hardware.

  - **Virtual**: Exadata in a virtual environment.

Security

Key Management
- **Vault**: Securely store encryption keys.

- **Key Management Service (KMS)**: Manage encryption keys.

Vault
- **Secret**: Encrypted data stored in Vault.

  - **Example**: Database credentials.

Monitoring and Logging

Monitoring
- **Metrics**: Collected data on resource performance.

  - **Alarms**: Trigger actions based on metrics.

Logging
- **Logs**: Record of events and activities.

  - **Log Groups**: Organize logs.

- **Log Explorer**: Search and analyze logs.

Cost Management

Budgets
- **Budgets**: Set spending limits.

- **Alerts**: Notify when nearing budget limits.

Cost Analysis
- **Cost Tracking**: Analyze spending by service, compartment, etc.

- **Reports**: Detailed cost breakdowns.

Examples and Shortcuts

Quick Start
- **Create VCN**: `oci network vcn create --cidr-block "10.0.0.0/16" --display-name "MyVCN"`.

- **Launch Instance**: `oci compute instance launch --availability-domain "AD1" --shape "VM.Standard2.1" --image-id "ocid1.image.oc1.phx..."`.

Tips and Tricks
- **Use Compartments**: Organize resources logically.

- **Leverage Auto Scaling**: Automatically adjust resources based on demand.

- **Monitor Costs**: Regularly review cost reports.

Summary

- **IAM**: Manage users, groups, and policies.

- **Compute**: Launch and manage instances.

- **Networking**: Configure VCNs and load balancers.

- **Storage**: Utilize block, object, and file storage.

- **Database**: Deploy autonomous and Exadata databases.

- **Security**: Secure resources with KMS and Vault.

- **Monitoring**: Track performance and logs.

- **Cost Management**: Control and analyze spending.

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