

ORACLE

Oracle Cloud Winter Camp

Efficiency in Cloud Management

12 Febrero 2020

Speakers

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Safe harbor statement

A decorative graphic on the right side of the slide, featuring a stylized fingerprint pattern in a light gray color.

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.

Oracle Cloud in 8 Steps | Agenda

- 4th Feb **Immersion in the 2nd Generation Cloud**
Borja Gómez, Jesús Brasero
- 5th Feb **High-reliability architectures for mission-critical applications**
Alejandro de Fuenmayor, Raúl de Diego
- 11th Feb **Forecasting, optimization and cost management in the Cloud**
José Criado, Sergio Álvarez
- 12th Feb **Efficiency in Cloud management**
David Simón, David Mauri
- 18th Feb **How to protect critical data in the Cloud**
David Núñez, Juan Carlos Diaz
- 19th Feb **AI & Machine Learning: Migrating your data to the Cloud**
Andrés Araujo, Serena Pérez
- 24th Feb **How to migrate enterprise applications to the Cloud**
Mariano Jimenez, Guillermo Best
- 26th Feb **Cloud-Native development with Oracle Cloud**
Iván Sampedro, Victor Mendo



Scan to see all events

Format

Day of the event

1. Topic Presentation
2. Demo
3. Live Q&A Chat

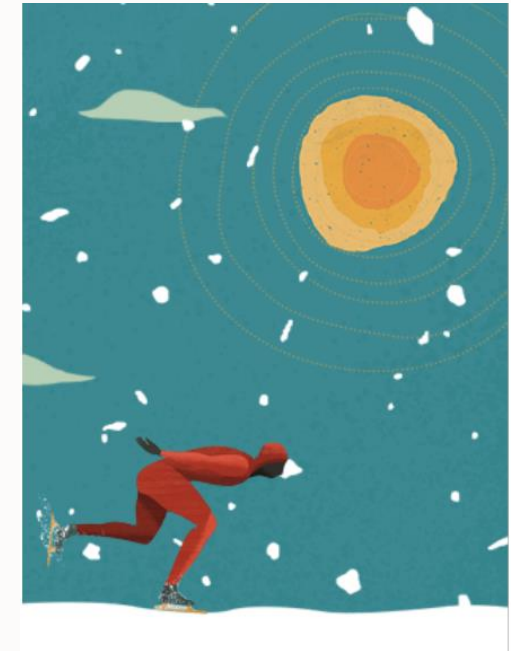
Post event | During the week

4. Hands-on @home
5. Need help? Dedicated group on LinkedIn (<https://bit.ly/2NCCp7P>)



Efficiency in Cloud Management | Agenda

10:00 – 10:10	Welcome
10:10 – 10:20	Introduction to Operations in the Cloud
10:20 – 10:25	Governance and Administration
10:25 – 10:30	Logging, Monitoring & Diagnostics
10:30 – 10:40	Automatic Control of your Infrastructure and Applications
10:40 – 10:50	Evolution of your Infrastructure and Applications
10:50 – 11:20	Demostración



“Effective operation as measured by a comparison of production with cost (as in energy, time, and money)”

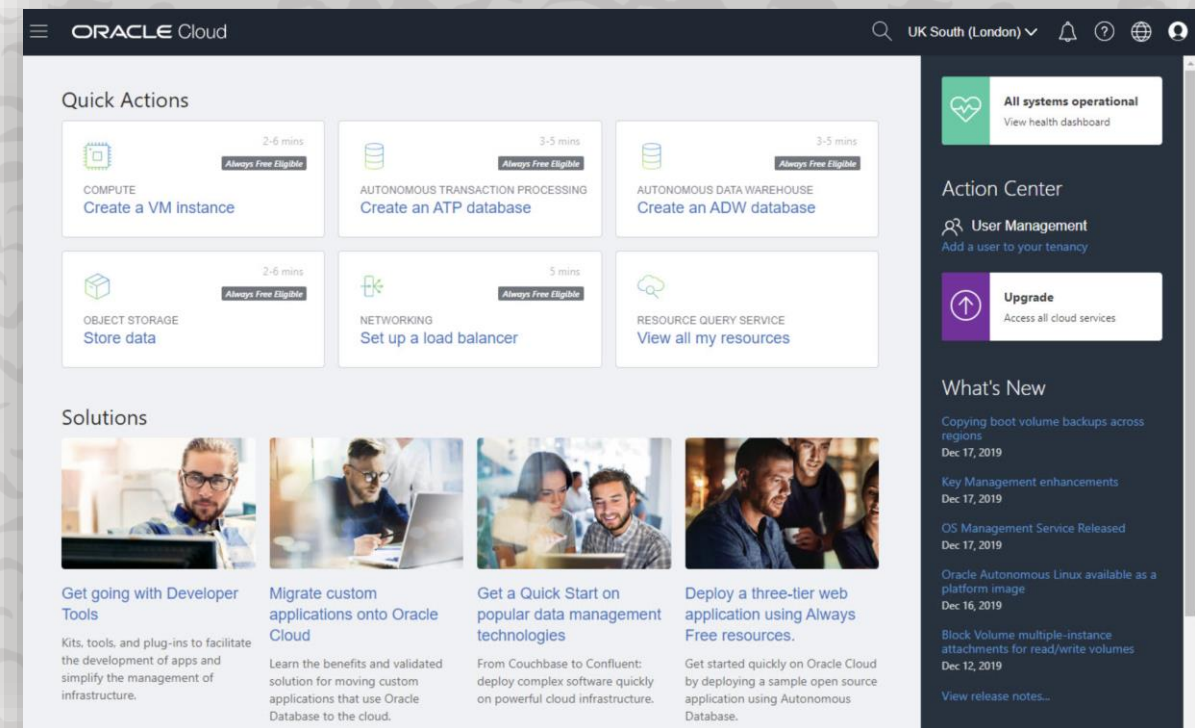
Merriam-Webster Dictionary

Definition of “efficiency”

2. a : efficient operation

Introduction to Operations in Cloud

- Operations
- Automation Tools



Operations on Oracle Cloud



ON-PREMISES

- Manual deployments
- Repeatable tasks
- Multiple tools
- Software and hardware upgrade

MANUAL

- Log into OCI Console
- Click Process
- Console Management

SCRIPTING

- Controlling deployments
- Creating central repository
- Command-line tool for scripting of repeatable tasks

AUTOMATION

- Using Infrastructure as Code and deployments palybooks
- Combination of scripting and other tool to achieve cloud scaling
- Adoption of event-driven architectures



Oracle Cloud – Automation Tools



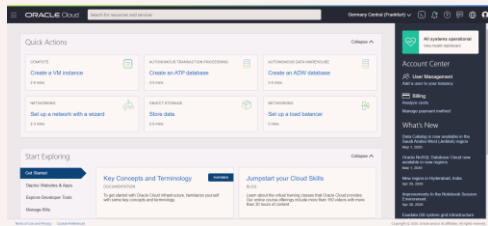
APIs
REST endpoints



SDKs
Java, Python, Ruby, Go,
TypeScript, PL/SQL, CLI



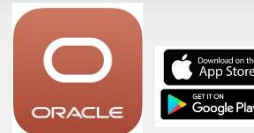
Ansible
Deployment Playbooks



OCI Console



**Resource Manager -
Terraform**
Infrastructure as code



Oracle Cloud Infrastructure



Oracle Cloud Rest API

Requirements:

- A user in your OCI tenancy that is allowed to make API calls
- A RSA key pair in PEM format
- Upload your public RSA PEM key to your OCI user
- You will need to know the OCID of your tenancy, user, and compartment you want to work in at a minimum. Other OCID's may be required depending on which REST calls you make.

REST
Endpoint

```
curl -v -X GET -sS https://iaas.eu-frankfurt-1.oraclecloud.com/20160918/instances?compartmentId=ocid1.compartment.oc1..aaaaaaaaxjdxgyjxqxoiiv7yyb2zgez4pxaubsee4oguejnggwzhokqzxxx -H "date: Tue, 22 Jan 2019 19:11:56 GMT" -H "Authorization: Signature version=\"1\",keyId=\"ocid1.tenancy.oc1..aaaaaaaawpqbIfemtluwXipipubxhioptheej2r32gvf7em7iftkr3vd2xxx/ocid1.user.oc1..aaaaaaaadz34xoz4dxx2ix3tobcmfqtWf65jzesp5qfqjd24hykt46nphxxx/96:71:88:02:48:ab:4a:0c:25:10:ca:f0:b3:75:1e:df\",algorithm=\"rsa-sha256\",headers=\"(request-target) date host\",signature=\"AfM67Km9eon93LQqz4HfHn9YwVUhAcxj48ZlXkFGJe0J5CSVfHJ3hZwUouPEN5Q1G7Nujz/hdMK6sldklg7lkTuhDajR4JqjSvseHgjEOsNdhGcZo1dZu9xf215ULTy6eezi1veViXn3vlu87XcBv9kSfHSNNzw9gh3HygjBcB8kW4MBwIVaNNkkyRs4pH469kbhYPaZRuUsP+ErYK5bKptlcWaml/8eVmbfDzkQwi9ccepCFIz5q0MtnzWNS3sEWSro6WgpJrKrZhFJbAkBLPG7NpxAbczdW5C09Xtv/tph5n+Rc6XMlyqu/1DIOvlqapF4yldlGbYdRLmL/srJxw==\""
```

API +
Parameter

Auth
Signature

Oracle Cloud SDK

- SDK for Java: <https://github.com/oracle/oci-java-sdk>
- SDK for Python: <https://github.com/oracle/oci-python-sdk>
- SDK for Ruby: <https://github.com/oracle/oci-ruby-sdk>
- SDK for Go: <https://github.com/oracle/oci-go-sdk>
- SDK for .NET: <https://github.com/oracle/oci-dotnet-sdk>
- SDK for TypeScript and JavaScript: <https://github.com/oracle/oci-typescript-sdk>
- PL/SQL SDK: <https://docs.oracle.com/en-us/iaas/Content/API/SDKDocs/plsqlsdk.htm>
 - The latest version of the SDK is pre-installed by Oracle for all Autonomous Databases using shared Exadata infrastructure.



Branch: master | oci-go-sdk / autoscaling | Go to file

pelliu committed 3c1711b 9 days ago | History

..		
action.go	Releasing Version 20.1.0	23 days ago
auto_scaling_configuration.go	Releasing Version 21.1.0	9 days ago
auto_scaling_configuration_summary.go	Releasing Version 21.1.0	9 days ago
auto_scaling_policy.go	Releasing Version 20.1.0	23 days ago
auto_scaling_policy_summary.go	Releasing Version 20.1.0	23 days ago
autoscaling_client.go	Releasing Version 20.1.0	23 days ago



ANSIBLE

Oracle OCI CLI and Ansible

Command Line Interface

- Small footprint tool built on the Oracle Cloud Infrastructure SDK for Python available on Mac, Windows or Linux

```
oci <service> <type> <action> <options>
```


- `compute` is the <service>
 - `instance` is the resource <type>
 - `launch` is the <action>, and
 - the rest of the command string consists of <options>
-
- <https://docs.oracle.com/en-us/iaas/Content/API/Concepts/cliconcepts.htm>

Ansible Playbook for OCI






- <https://github.com/oracle/oci-ansible-collection>

🔑 master ▾

oci-ansible-collection / samples / compute / launch_compute_instance /

 AmeyaLokre and Oracle Public Cloud User Releasing version 2.13.0 (#42) ...

..

 templates	Releasing version 2.13.0 (#42)
 README.md	Releasing version 2.1.0-beta
 sample.yaml	Releasing version 2.13.0 (#42)
 setup.yaml	Releasing version 2.13.0 (#42)
 teardown.yaml	Releasing version 2.13.0 (#42)

- <https://docs.oracle.com/en-us/iaas/Content/API/SDKDocs/ansiblesamples.htm>

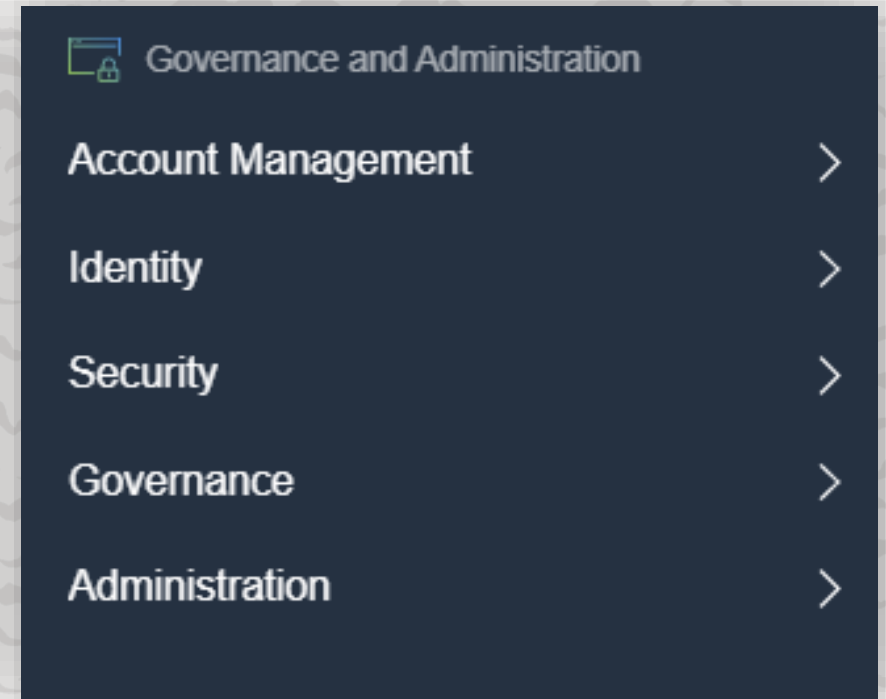


Poll 1

- ¿Cual es tu método favorito para interactuar con Oracle Cloud?
 - 1-. OCI Console
 - 2-. API Rest
 - 3-. SDK
 - 4-. Ansible y/o Terraform
 - 5-. Depende de las operaciones que quiera realizar

Governance & Administration

- Compartments
- Tagging
- Audit



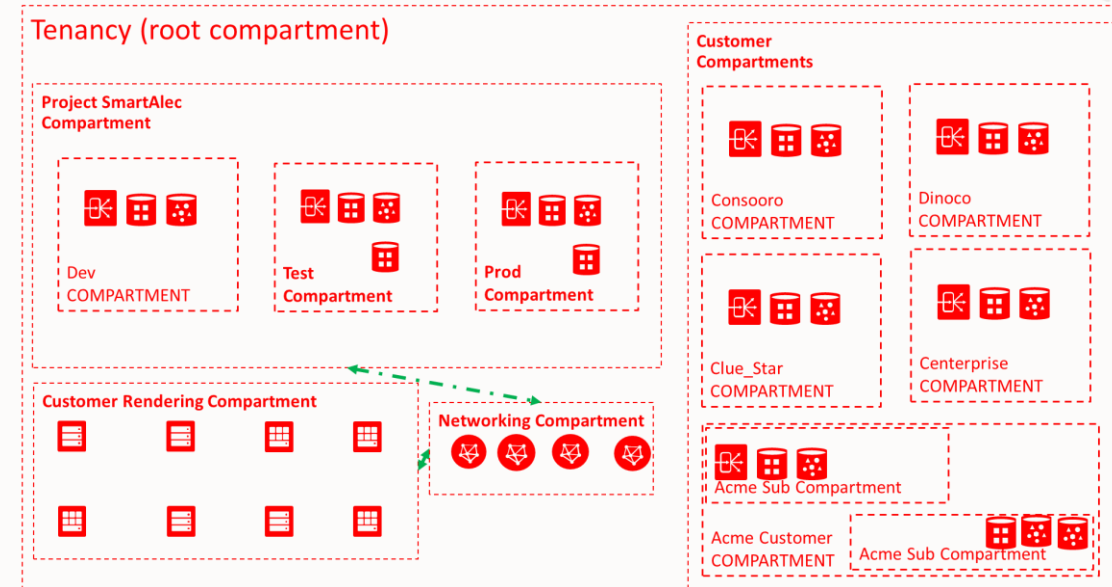


Compartments

Governance and Administration >> Identity >> Compartments

Governance and Administration >> Governance >> Tenancy Explorer

- ❑ A compartment is a collection of related resources (VCN, instances,...) that can be accessed only by groups that have been given permission (by an administrator in your organization)
- ❑ Compartments help you organize and control access to your resources
- ❑ Design considerations:
 - ✓ When creating a resource (for example, instance, block storage volume, VCN, subnet), you must decide in which compartment to put it.
 - ✓ Compartments are logical, not physical, so related resource components can be placed in different compartments.
 - ✓ You can create a hierarchy of compartments up to six compartments deep under the tenancy (root compartment).
 - ✓ When you write a policy rule to grant a group of users access to a resource, you always specify the compartment to apply the access rule to. So if you choose to distribute resources across compartments, remember that you will need to provide the appropriate permissions for each compartment for users that will need access to those resources.
 - ✓ If you want to delete a compartment, you must delete all resources in the compartment first.



- ❑ Tenancy Explorer (<https://docs.cloud.oracle.com/en-us/iaas/Content/General/Concepts/compartmentexplorer.htm>)



Tagging

Governance and Administration >> Governance >> Tag Namespaces

❑ Free-form Tags – basic implementation

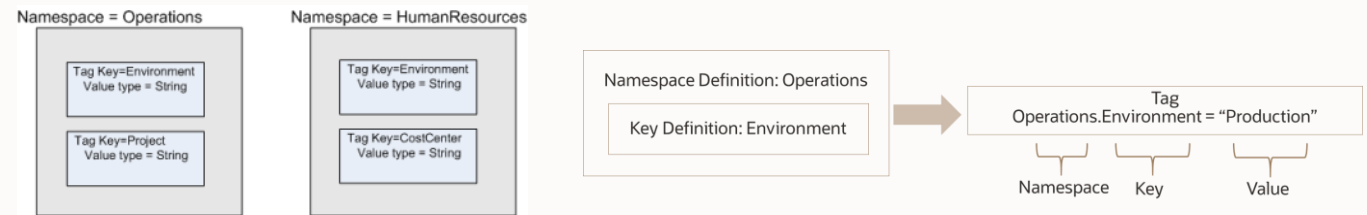
- ✓ Consist simply of a key and a value



❑ Default Tags – tag that is applied to all resources inside the compartment

❑ Defined Tags – more features and control

- ✓ Are contained in tag Namespaces
- ✓ Defined schema, secured with Policy
- ✓ Using of variables



❑ You can use a **variable to set the value of a tag**. When you add the tag to a resource, the variable resolves to the data it represent. E.g.

- ✓ **Operations.CostCenter = \${iam.principal.name} at \${oci.datetime}**
- ✓ Operations is the namespace, CostCenter is the tag key, and the tag value contains two tag variables \${iam.principal.name} and \${oci.datetime}
- ✓ When you add this tag to a resource, the variable resolves to your user name (the name of the principal that applied the tag) and a time date stamp for when you added the tag



Tagging + SDK

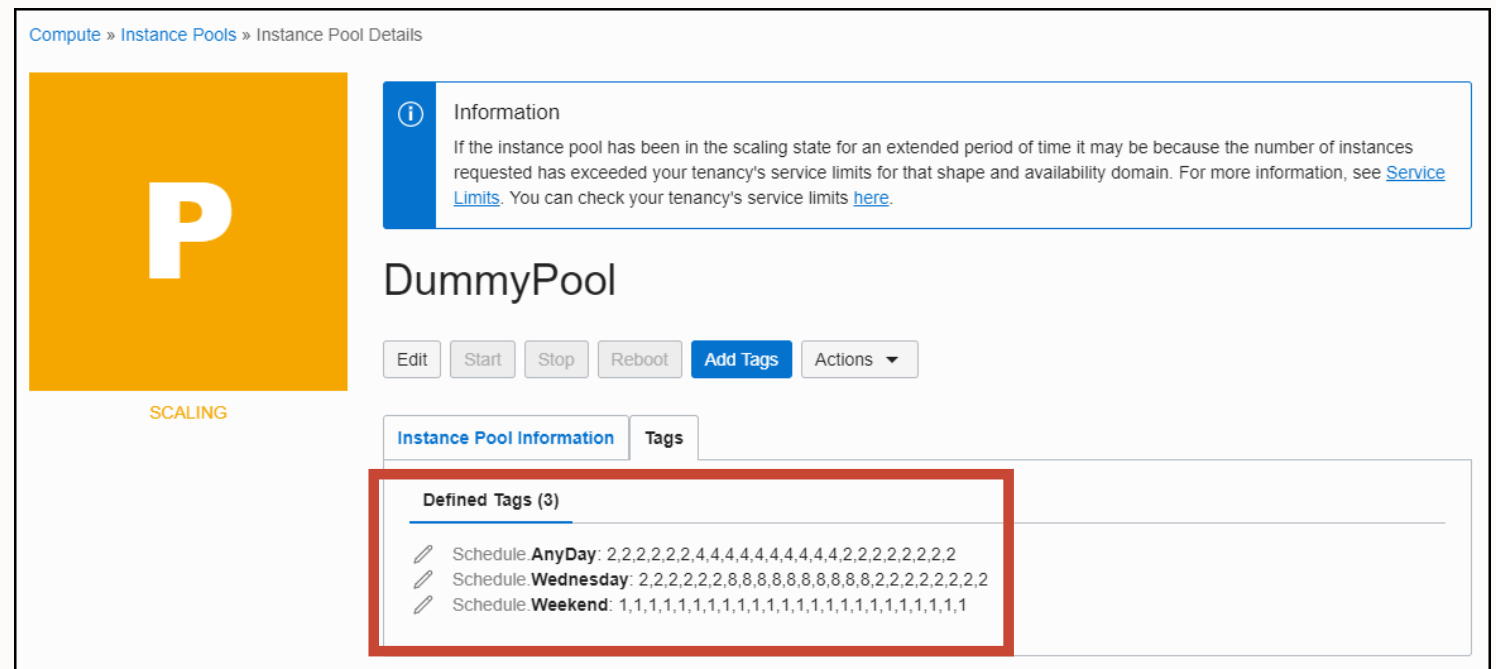
Example Use Case

<https://github.com/AnykeyNL/OCI-AutoScale>

OCI-AutoScale

Welcome to the Scheduled Auto Scaling Script for OCI (Oracle Cloud Infrastructure).

To control what to scale up/down or power on/off, you need to create a predefined tag called **Schedule**



Compute » Instance Pools » Instance Pool Details

Information

If the instance pool has been in the scaling state for an extended period of time it may be because the number of instances requested has exceeded your tenancy's service limits for that shape and availability domain. For more information, see [Service Limits](#). You can check your tenancy's service limits [here](#).

DummyPool

Edit Start Stop Reboot **Add Tags** Actions ▾

Instance Pool Information Tags

Defined Tags (3)

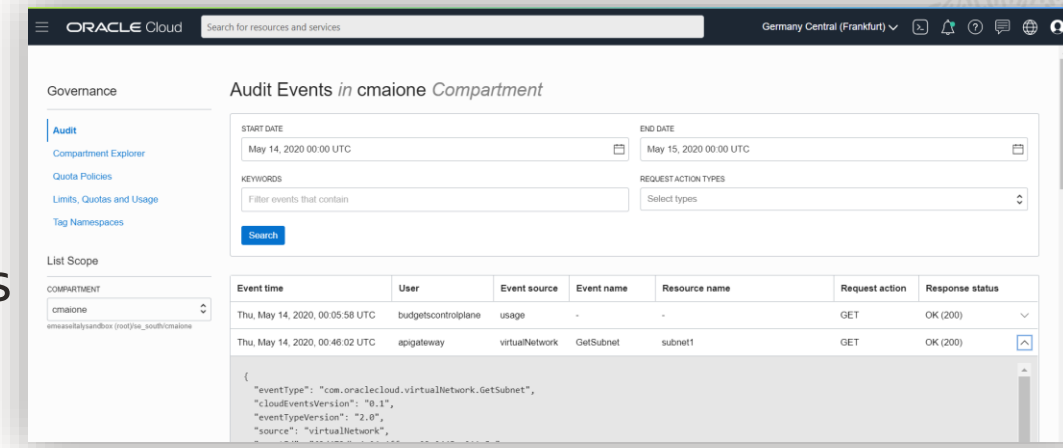
- ✎ Schedule.**AnyDay**: 2,2,2,2,2,2,4,4,4,4,4,4,4,4,2,2,2,2,2,2,2
- ✎ Schedule.**Wednesday**: 2,2,2,2,2,2,8,8,8,8,8,8,8,8,2,2,2,2,2,2,2
- ✎ Schedule.**Weekend**: 1,1



Audit

Governance and Administration >> Governance >> Audit

- ❑ API calls are logged and made available to customers
 - ✓ Includes calls made via the Console, CLI, and SDKs
- ❑ API for listing audit events
 - ✓ New events available within 15 minutes. 90 days of history by default
 - ✓ Configurable up to 365 days (affects all regions and compartments)
- ❑ Searchable via the Console or other tool like Oracle Management Cloud



Data Integrity Checks

Internal integrity checks ensure event data is read-only and any tampering can be detected for your compliance and security needs.



Maintain Traceability

Automatically record API calls made from the console or SDK. Each event can be used to identify the action, actor, target, and outcome.

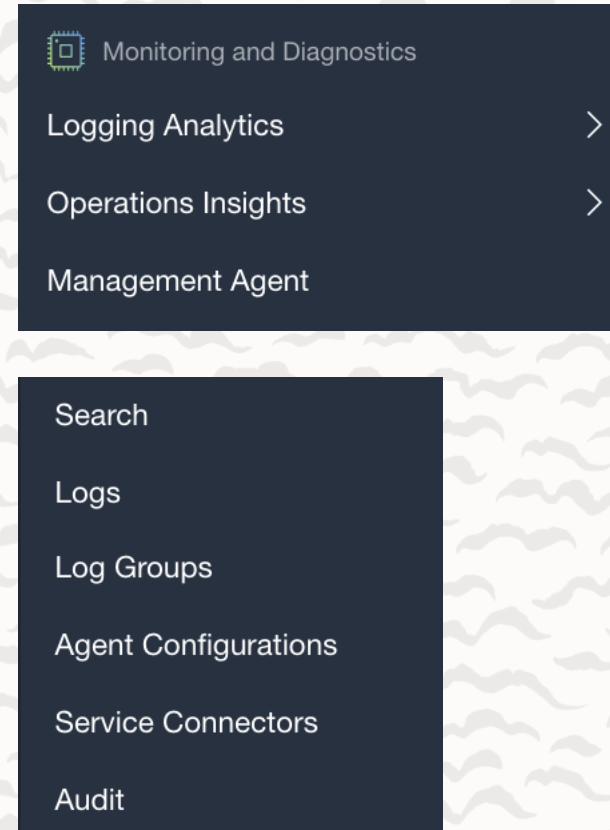


Visibility into Infrastructure

Support for all Oracle Cloud Infrastructure services including Compute, Networking, Block Volumes, and Load Balancing.

Logging, Monitoring & Diagnostics

- OCI Logging
- Logging Analytics
- Database Management (Performance Hub)
- Service Connector Hub
- OCI mobile App



Oracle Cloud Observability and Management Platform

Cross-stack visibility and rapid performance insights for any technology, deployed anywhere

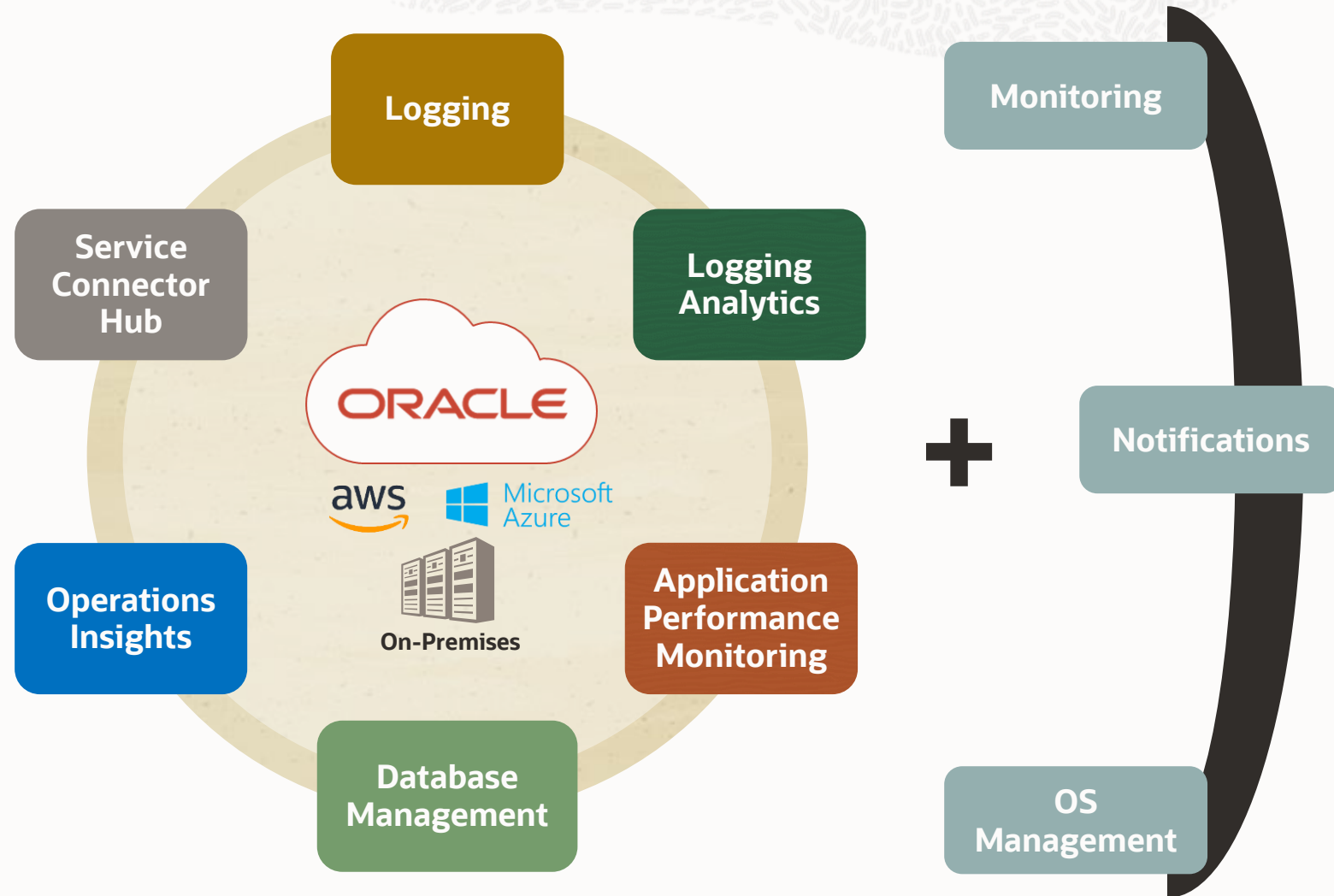
Integrated platform enables seamless analysis across all software components and types of telemetry

Cross-tier view of application, database and infrastructure performance

Cloud-native and traditional technology stack support

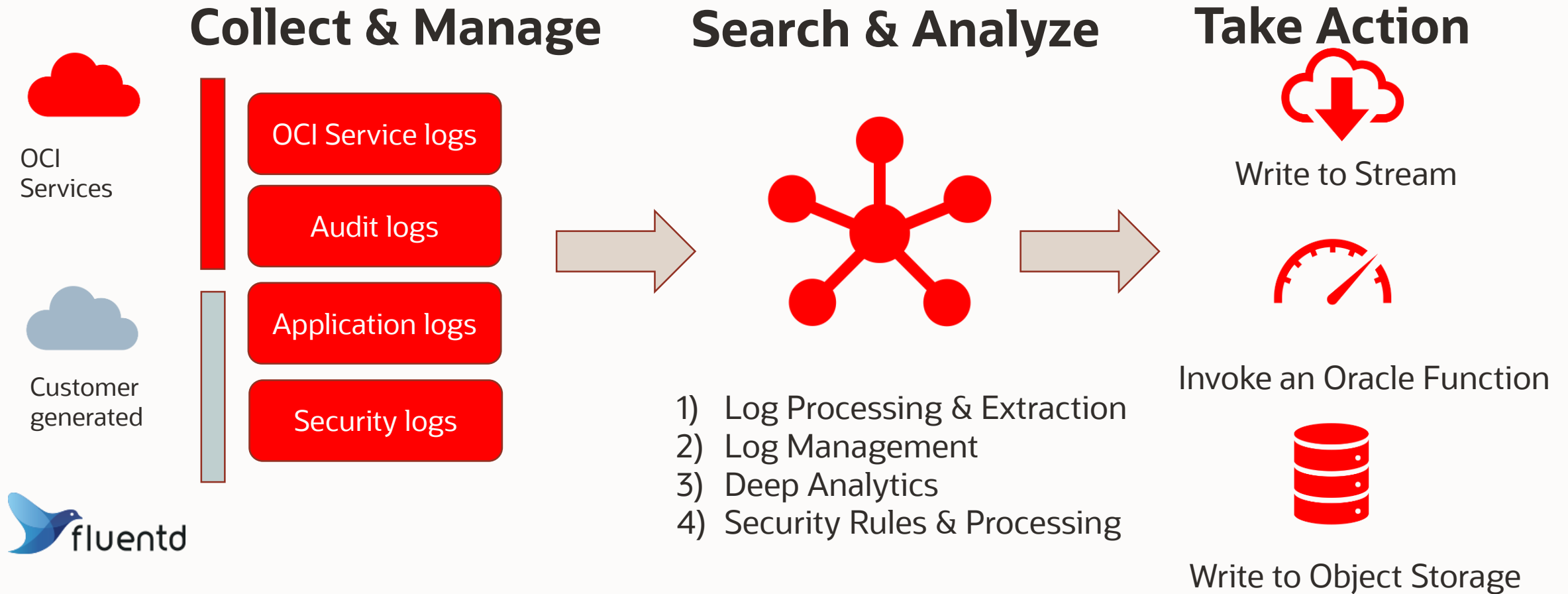
Enterprise-wide visibility across Oracle Cloud, third-party clouds and on-premises

Ecosystem interoperability through standards-based data exchange and collection



OCI Logging

Cloud Native, High Throughput, Standards Based



OCI Logging

Cloud Native Logging Service

- ❑ Enable logs on your OCI resources, and ingest application logs from any host any environment using fluentd, an open source data collector
 - ✓ Native service logs available directly
 - ✓ Ready-to-go when using cloud native developments
 - ✓ Uploads logs from any source (cloud or on-premises)
- ❑ Search, filter and analyze logs for troubleshooting and pattern detection
 - ✓ Includes calls made via the Console, CLI, and SDKs
- ❑ Make every log line actionable with an intuitive rules engine
 - ✓ Store, invoke functions or send notifications
- ❑ Publish logs to other applications through OCI Streaming, or archive to Object Storage
 - ✓ Also available using Service Connect Hub

The top screenshot shows the Oracle Cloud Logging console for the 'vcn-network-core' compartment. It features a sidebar with navigation links (Search, Saved Searches, Logs, Log Groups, Agent Configurations, Service Connectors, Audit) and a main area with two cards: 'Create custom log' and 'Enable service log'. Below these is a table of logs with columns: Log name, Log type, Status, Details, and Created. A single log entry is shown for 'vcn-hub-logs'.

The bottom screenshot shows the 'Search' page. It includes a search bar, filters, and a 'Filter by time' dropdown set to 'Past 5 minutes'. A bar chart titled 'Number of Log Events Per Minute' displays log event counts over time. Below the chart is a table of log data.

Log name	Log type	Status	Details	Created
vcn-hub-logs	Service	Active	Service: Virtual Cloud Network (subnets); Category: Flow Logs (All records)	Fri, Nov 13, 2020, 11:53:44 UTC

Log Data
Thu, Jan 21, 2021, 11:23:12 UTC vcn.flowLogs.DataEvent ACCEPT TCP .198 Port 443 .2 Port 46624 Bytes 6319 Packets ...
Thu, Jan 21, 2021, 11:23:12 UTC vcn.flowLogs.DataEvent ACCEPT TCP .2 Port 46624 .198 Port 443 Bytes 42160 Packets...
Thu, Jan 21, 2021, 11:22:12 UTC vcn.flowLogs.DataEvent ACCEPT TCP .180 Port 443 .2 Port 45648 Bytes 7151 Packets ...



Logging Analytics

Data analytics and exploration

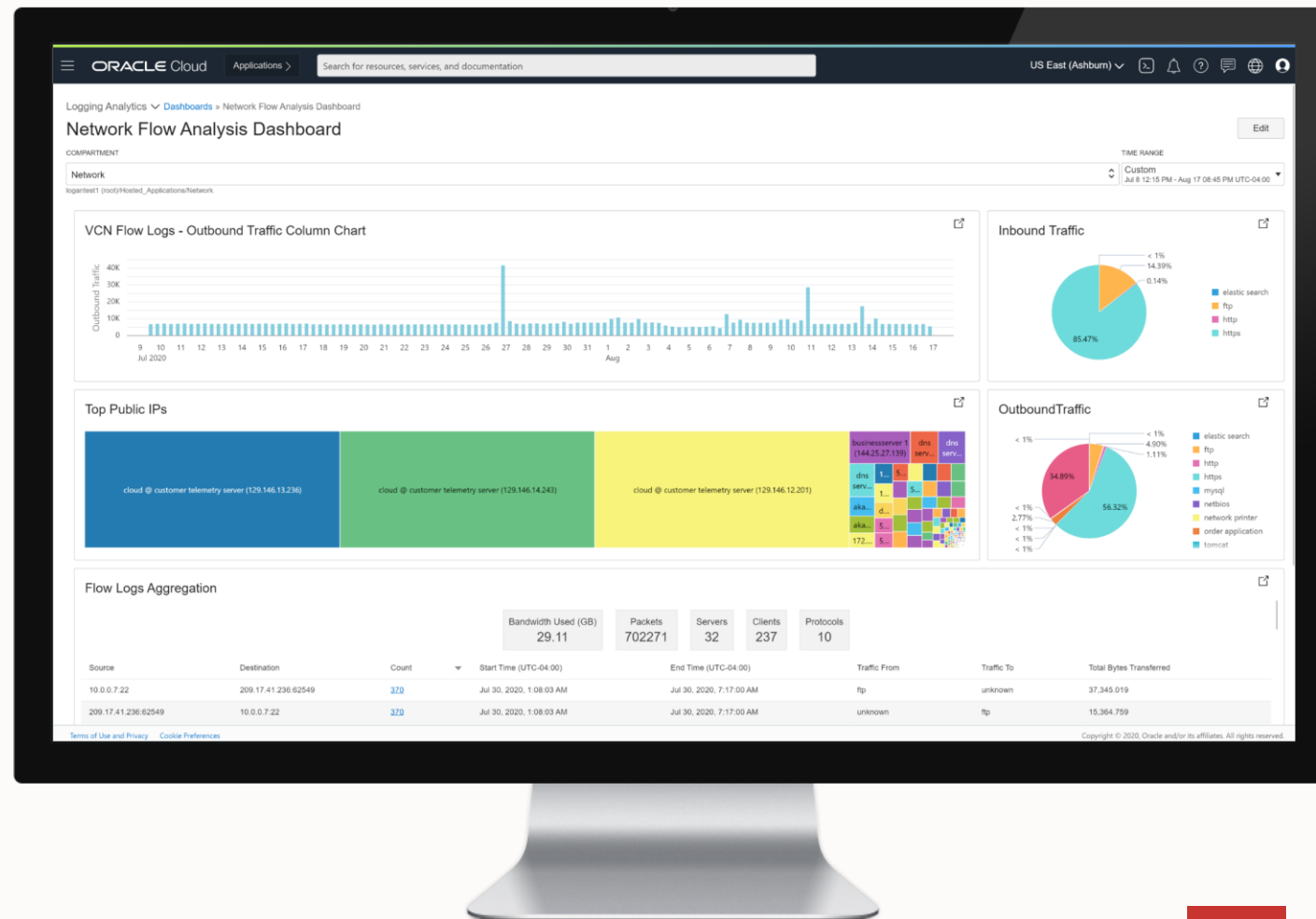
- Easily visualize and analyze log patterns and outliers
- Topology-aware exploration & drill-downs
- Curated ML algorithms find anomalies in real-time: Cluster, Link, Classify, etc.
- Rich query language with 70+ primitives

Data archival and recall

- Archive and recall logs based on user-defined policies
- Enables long-term retention at low-cost

Parsers for heterogeneous technologies

- Rich collection (250+) of out-of-box parsers for Oracle and non-Oracle stacks



Database Management

Fleet monitoring and management

- Unified view for monitoring and managing Oracle DB fleet across on-premises and cloud

Performance Hub

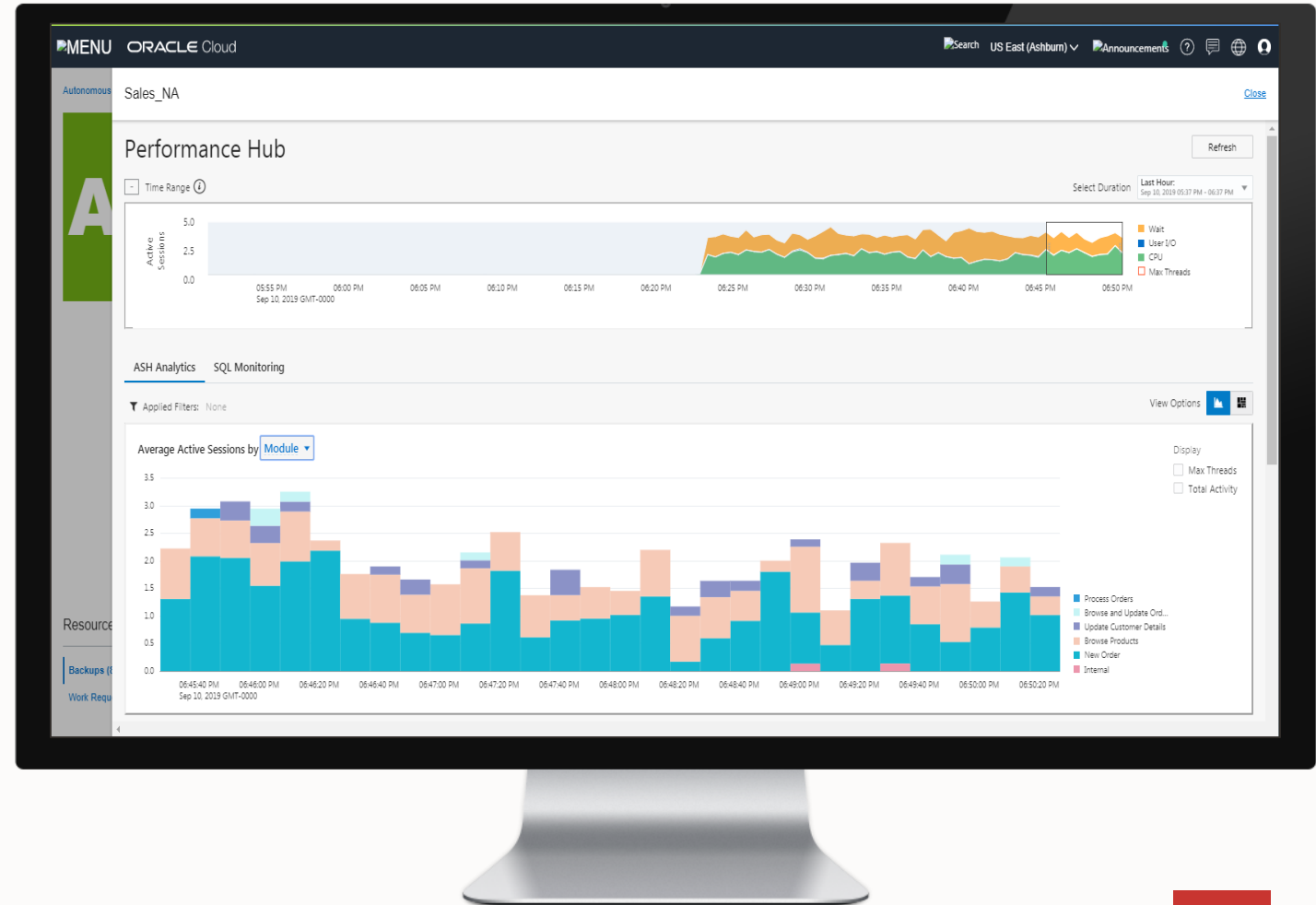
- Integrated view of DB activity for easy performance diagnostics
- Features include ASH Analytics, SQL/Session details, Blocking sessions

Real-time SQL monitoring

- Advanced execution plan analysis for monitoring and optimization

Database administration

- Simplified space, configuration, users and backup management



Database Management – Agents + External Databases

The image shows two screenshots of the Oracle Cloud Management console. The top screenshot displays the 'Management Agents' page, and the bottom screenshot displays the 'External Databases' page. Both pages have a dark sidebar on the left with navigation links. In the top screenshot, 'Management Agent' is highlighted in the sidebar. In the bottom screenshot, 'External Database' is highlighted. The top screenshot shows a table with one agent: 'gnsdb-agent-c1' on host 'c1. [redacted]' with 'Active' status and 'LINUX' OS. The bottom screenshot shows a table with one external pluggable database: 'gnsdpdb1-dev' with 'Available' state, unique name 'GNSDB_ams17n', and container database 'gnsdb-dev'. A 'Register External Pluggable Database' button is visible above the table in the bottom screenshot.

Management Agents

Agents

Agent	Host	Availability	Operating System
gnsdb-agent-c1	c1. [redacted]	● Active	LINUX

Scope

COMPARTMENT

[redacted]

External Databases

Overview » External Databases » Pluggable Databases

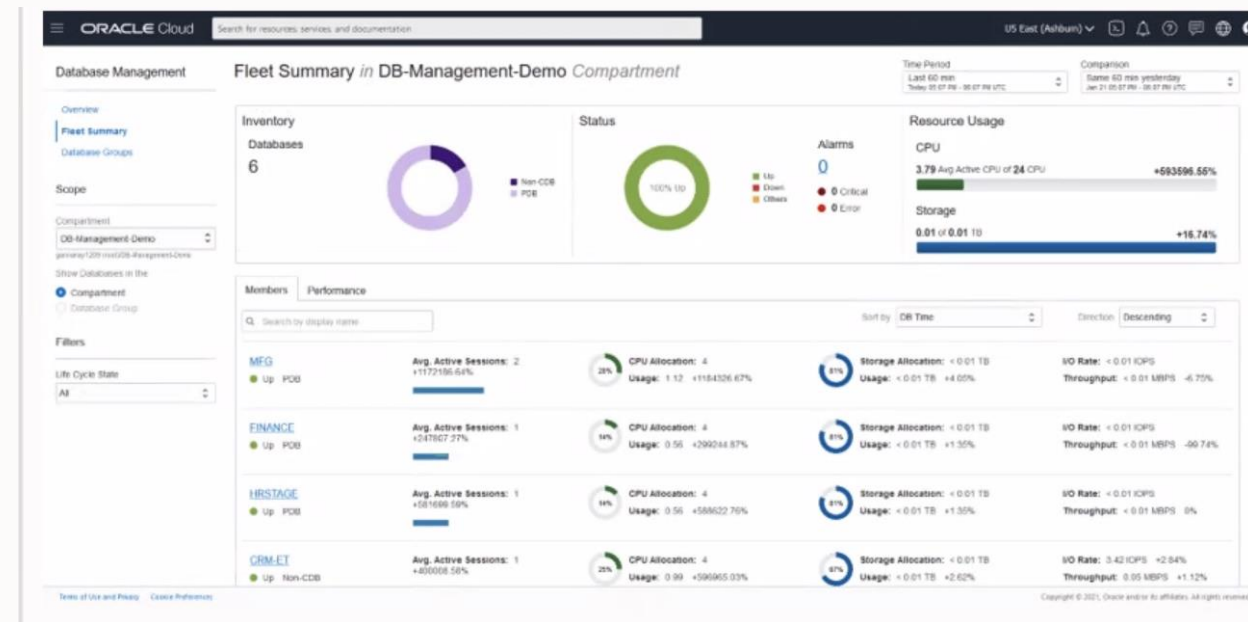
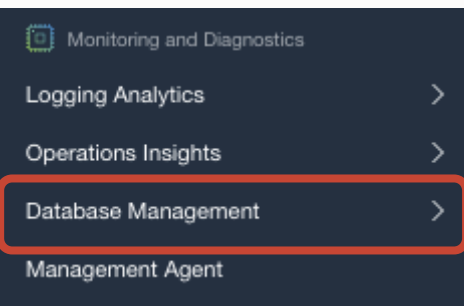
External pluggable databases in [redacted] Compartment

[Register External Pluggable Database](#)

Display name	State	Database Unique Name	Container database
gnsdpdb1-dev	● Available	GNSDB_ams17n	gnsdb-dev

Database Management – Fleet Management

- Unified NOC-Style view of the entire DB Fleet
- Native OCI telemetry for DevOps events and monitoring
- Database Groups enable cross-compartment fleets
- Fleet-level management
 - SQL execution jobs



Service Connector Hub

Seamless integration with industry tools

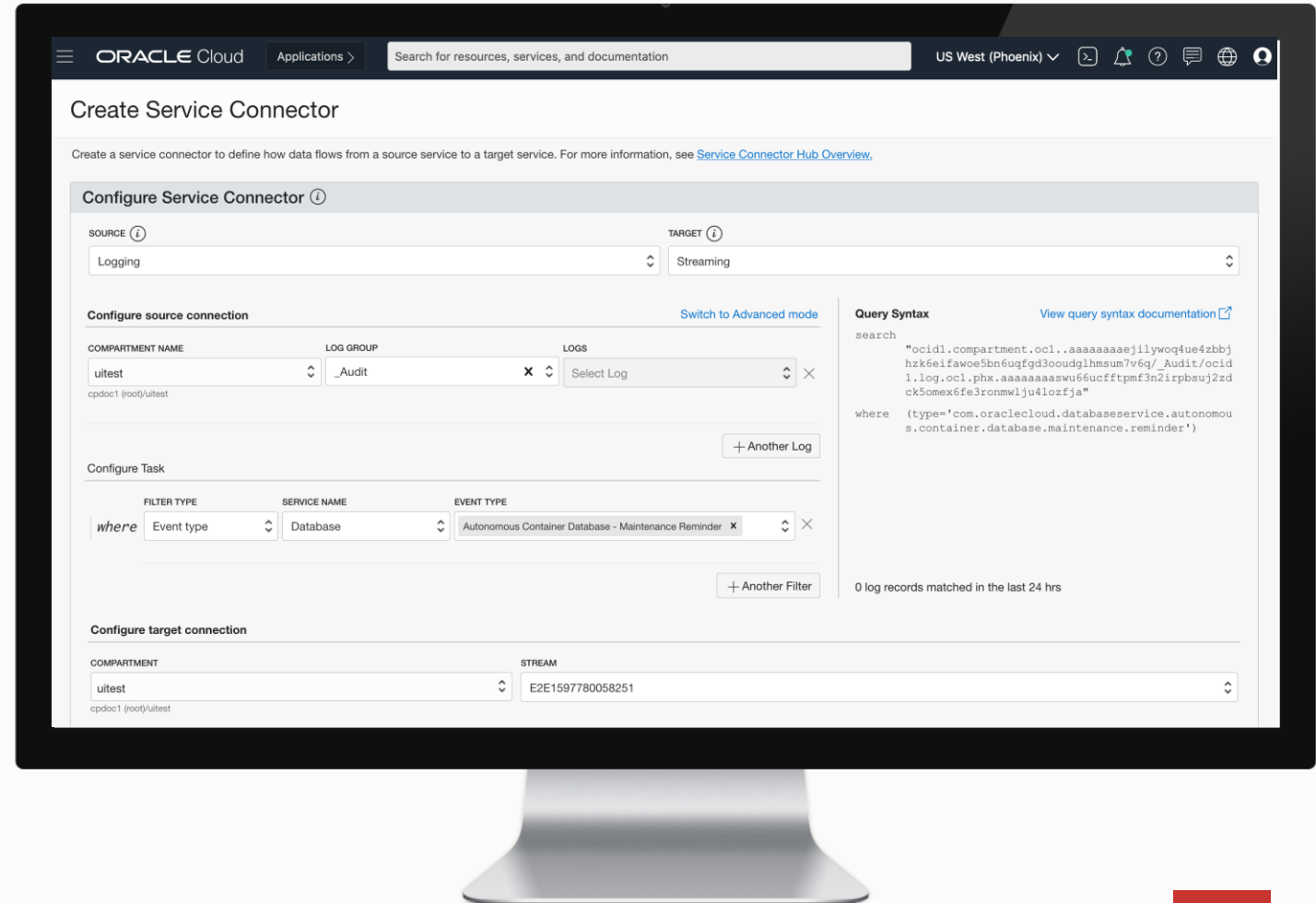
- Move data easily to any 3rd party observability tool using OCI Kafka compatible Streaming service

Complete visibility on data movement

- Centralized experience to view, secure and manage all data movement between Oracle services and 3rd party tools

Take near real-time actions

- Easily emit log metrics to OCI monitoring
- One click log archival to Object Storage
- Automated remediation and alerting for log events using functions & notifications



Oracle Cloud Infrastructure **mobile app** anytime, anywhere

OCI mobile app for **Apple iOS** and **Android**.

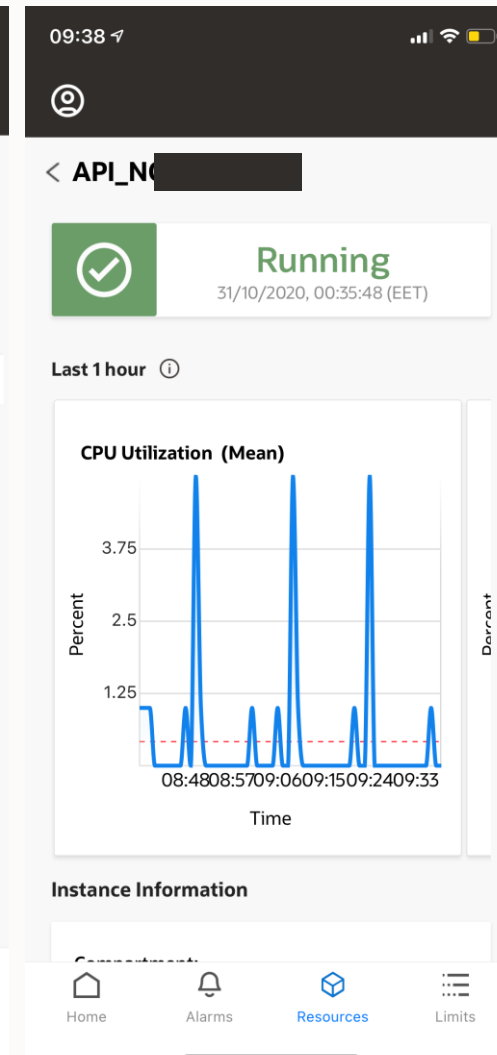
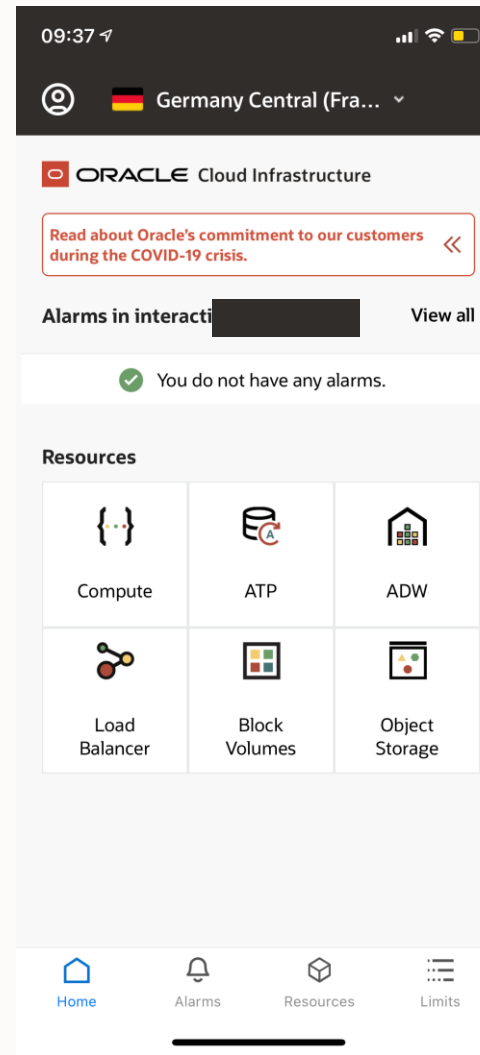
Explore resources and view monitoring information, billing, and limits information for your resources.

The home screen offers the following capabilities:

- View alarms triggered in the past 24 hours.
- Check billing information.
- Inspect resources and view more details to triage issues.

Use Resource explorer to:

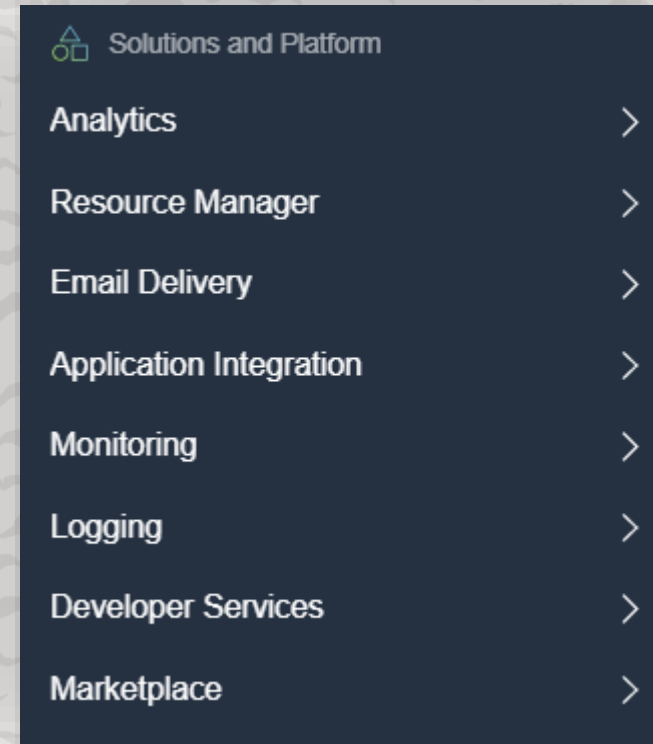
- Explore resources by compartment.
- Search for a particular resource.
- Check health of the resources.
- View all resource properties.
- Deep dive into metrics such as CPU usage, Memory, and Disk I/O.

This screenshot shows the "Limits" section of the Oracle Cloud Infrastructure mobile app. It displays a table of limits for various resources. The table has columns for "Compartment", "Resource", and "Limits". The "Limits" column shows the current usage and the available limit. The table is filtered by "Compartment: interactivet..." and "Resource: Analytics".

Compartment	Resource	Limits
interactivet...	Enterprise Edition OCPUs	Available: -10 of 12
interactivet...	Enterprise Edition Total Users	Available: 200 of 200
interactivet...	Professional Edition OCPUs	Available: 0 of 4
interactivet...	Professional Edition Total Users	Available: 200 of 200

Automatic Control of your Infrastructure and Applications

- OCI Monitoring
- OCI Alarms
- OCI Events
- OCI Notifications
- OCI Health Checks



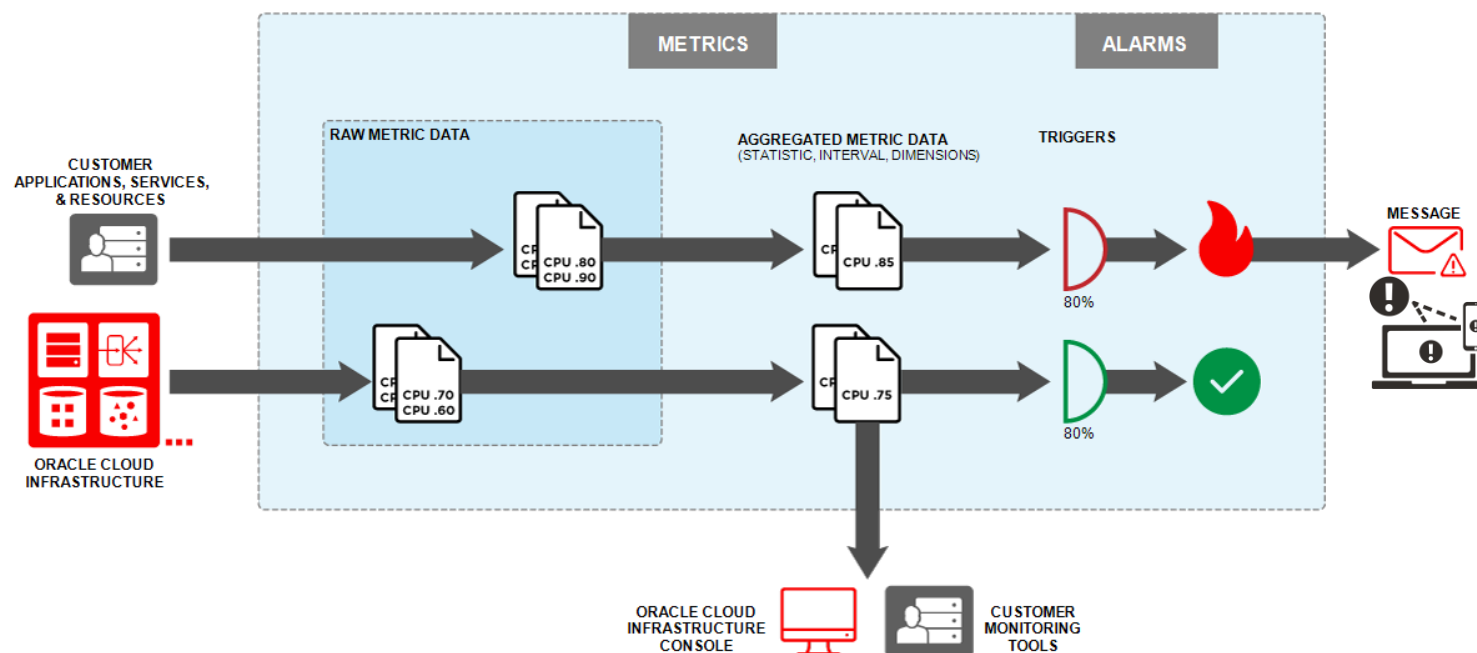


OCI Monitoring

Solutions and Platform >> Monitoring



Oracle Cloud Infrastructure Monitoring



- Enables you to actively and passively monitor your cloud resources using the Metrics and Alarms features

- Supported services:
 - Compute
 - Block Storage
 - Load Balancing
 - Networking
 - Object Storage
 - ...and others...

<https://docs.cloud.oracle.com/en-us/iaas/Content/Monitoring/Concepts/monitoringoverview.htm>

<https://docs.cloud.oracle.com/en-us/iaas/Content/Monitoring/Concepts/monitoringoverview.htm#supported>



OCI Monitoring – Metrics Explorer

Solutions and Platform >> Monitoring >> Metrics Explorer

Monitoring

Service Metrics

Metrics Explorer

Alarm Status

Alarm Definitions

Metrics Explorer

Write and edit queries in Monitoring Query Language (MQL), using metrics from either your application or an Oracle Cloud Infrastructure service.

START TIME

2019-01-30 23:35

END TIME

2019-01-31 23:35

Y-AXIS LABEL

Custom y-axis label

Y-AXIS MIN VALUE

Custom minimum value

Y-AXIS MAX VALUE

5

percent

Time (GMT)

Adjust x-axis (window of data display)

Close Query Editor

Query 1

CpuUtilization[1m].mean()

Add Query

Query 1

COMPARTMENT

dizzyhorse1 (root)

METRIC NAMESPACE ⓘ

oci_computeagent ⓘ

ADVANCED MODE

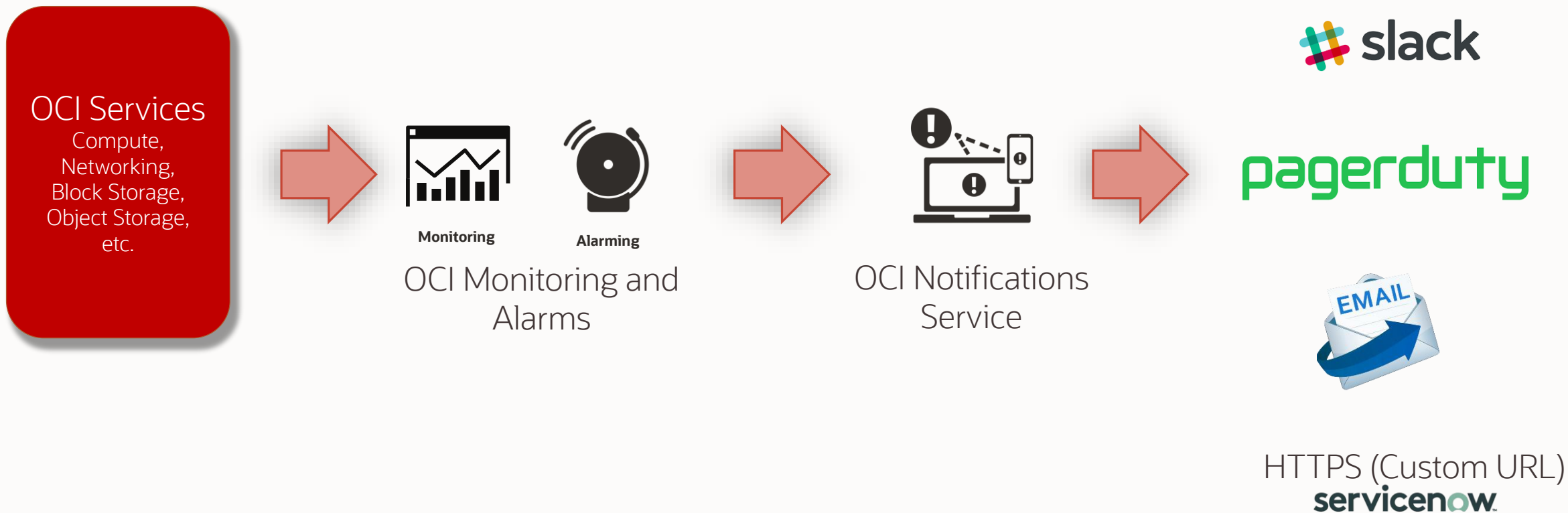
Metrics Query
Language
(MQL)

31 Copyright © 2021, Oracle and/or its affiliates



OCI Monitoring and OCI Notifications

Solutions and Platform >> Application Integration >> Notifications



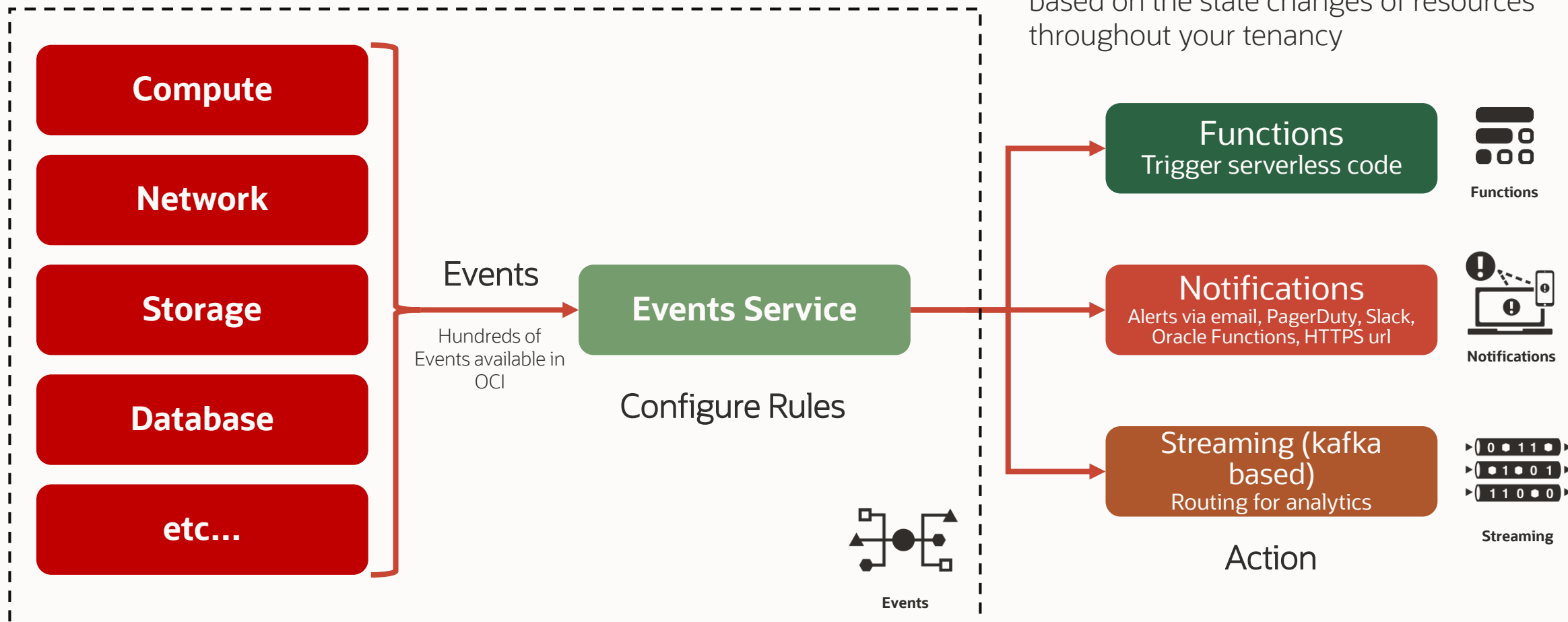


OCI Events

Solutions and Platform >> Application Integration >> Events Service



Oracle Cloud Infrastructure Events enables you to create automation based on the state changes of resources throughout your tenancy

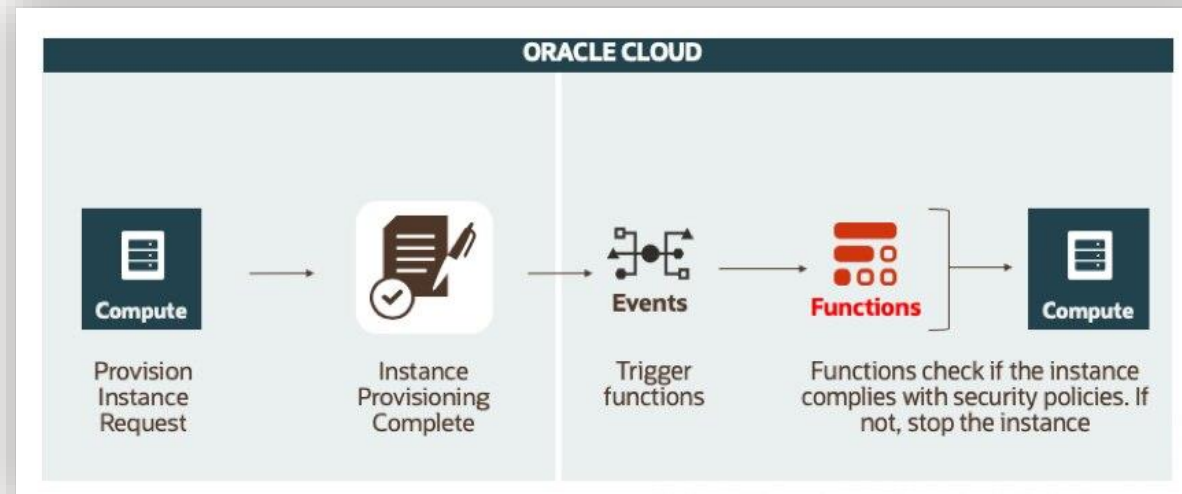


OCI Events – Use Cases

<https://blogs.oracle.com/cloud-infrastructure/automating-it-operations-with-oracle-functions>

This post walks through an example of a function that verifies whether a compute instance is tagged correctly when it's provisioned. If the instance isn't tagged properly, the function acts to stop the instance. This practice is common in infrastructure automation; it allows resources to be audited for compliance with internal governance policies as they are created, rather than after.

This function is triggered by the **Instance - Launch End** event, which the Compute service generates at the completion of instance provisioning, based on whether the instance succeeds or fails.



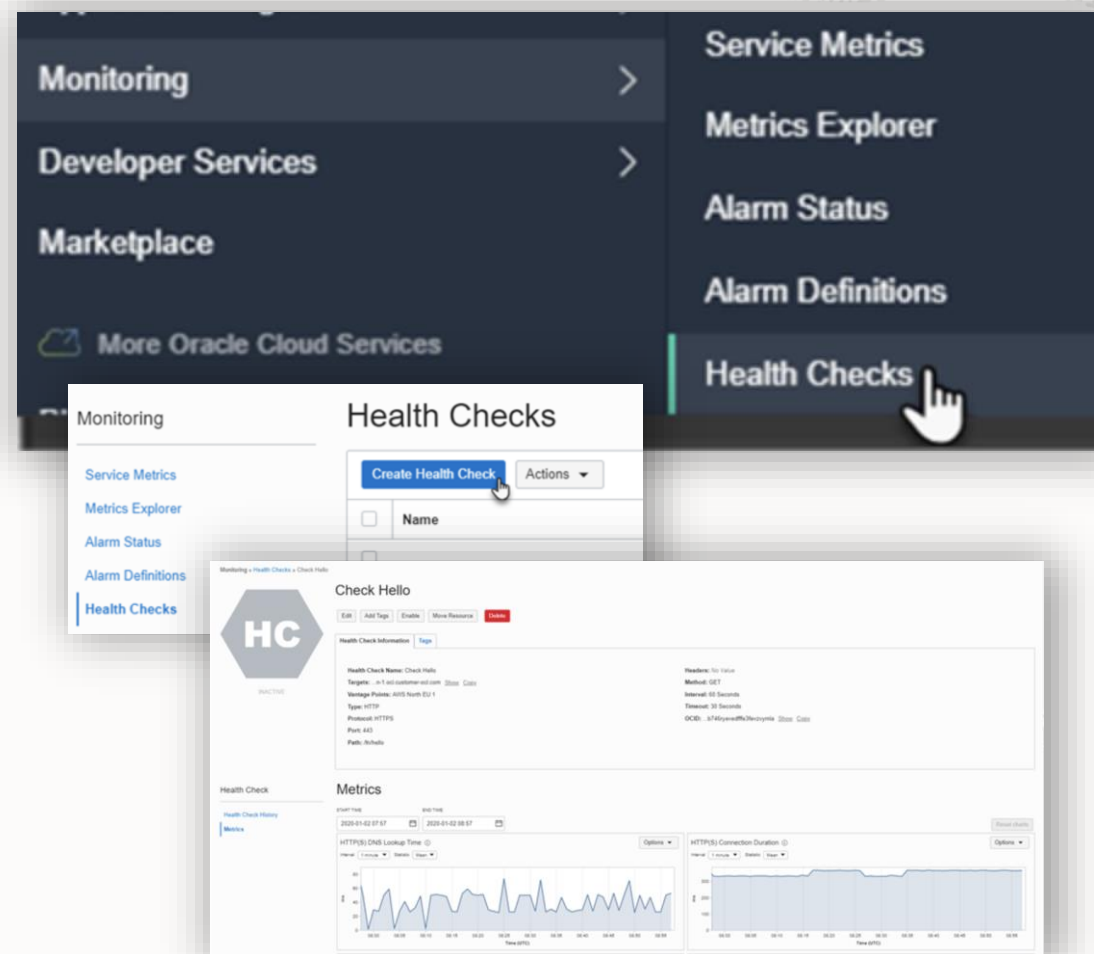


OCI Health Checks

Solutions and Platform >> Monitoring >> Health Checks

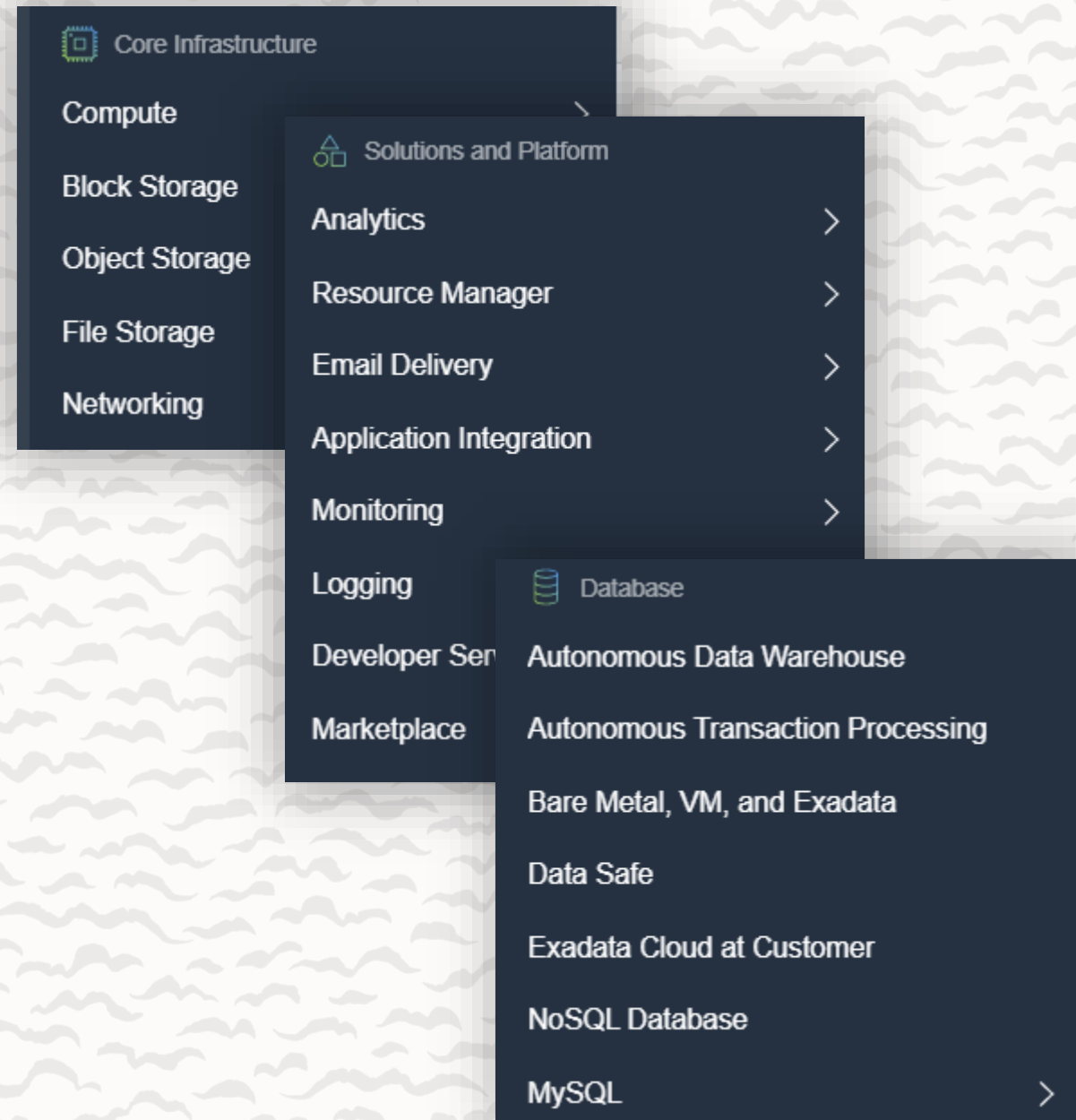


- ❑ **Availability & Performance Monitoring:** Monitor the availability and performance of any public-facing IP address or fully qualified domain name (FQDN).
 - ✓ **Simple UI Configuration:** Easy to configure Health Checks for external monitoring from Vantage Points around the globe.
 - ✓ **Availability Monitoring:** Monitor for the availability of any publicly visible IP address or FQDN from Vantage Points located around the globe.
 - ✓ **Performance Monitoring:** Monitor for latency metrics for any publicly visible IP address or FQDN from Vantage Points located around the globe.
 - ✓ **On-Demand Testing:** Perform tests on demand to gauge performance and troubleshoot endpoints.
- ❑ **DNS Traffic Management Failover Detection:** Detect failures and use DNS Traffic Management to failover in the event of a problem.
- ❑ **Alerting and API:** Fully integrated with Oracle Cloud Infrastructure Monitoring and backed by an extensive REST API.
- ❑ **Hybrid Monitoring:** Monitor endpoints within the Oracle cloud and across your hybrid infrastructure



Evolution of your Infrastructure and Applications

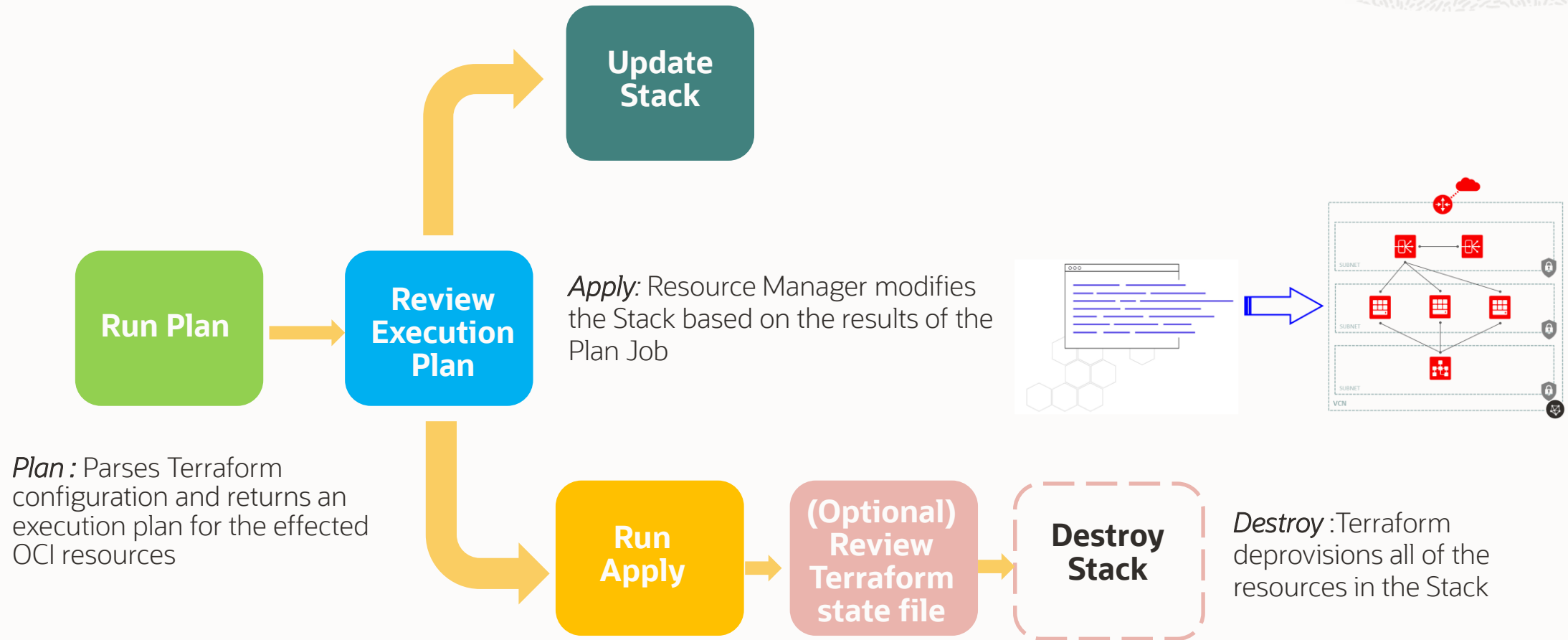
- Resource Manager (Terraform)
- OKIT - The OCI Designer Toolkit
- OS Management
- Autonomous Linux
- Cloud Shell and Cloud Developer Image





OCI Resource Manager

Solutions and Platform >> Resource Manager



<https://docs.cloud.oracle.com/en-us/iaas/Content/ResourceManager/Concepts/resourcemanager.htm>





OCI Resource Manager

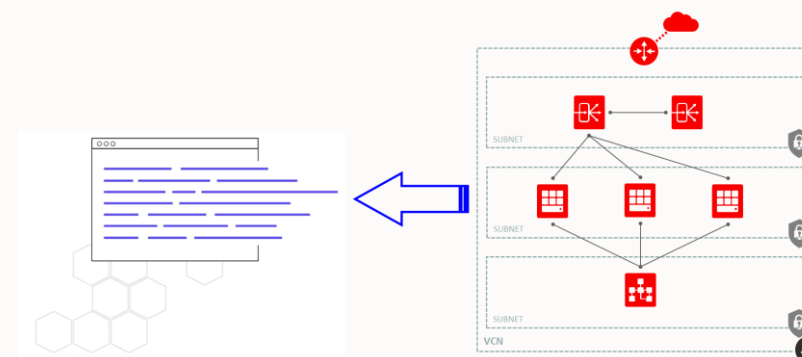
Solutions and Platform >> Resource Manager



Stack Drift Detection: drift is the difference between the actual, real-world state of your infrastructure and the stack's last executed configuration

Resource Discovery: discover deployed resources in your compartment and export them to Terraform configuration and state files using Resource Manager

Private Templates, GitLab & GitHub Integration: will allow users to create a Resource Manager stack from a source code control system or custom template.





OCI Resource Manager

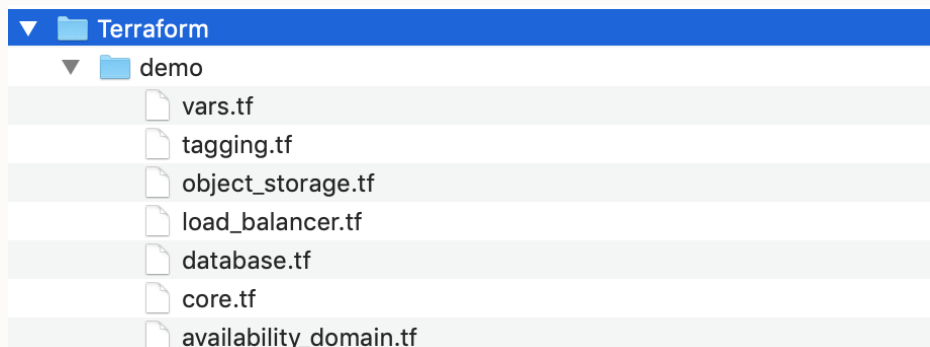
Solutions and Platform >> Resource Manager

Terraform OCI Provider:

- <https://docs.oracle.com/en-us/iaas/Content/API/SDKDocs/terraform.htm>
- <https://docs.oracle.com/en-us/iaas/Content/API/SDKDocs/terraformexamples.htm>
- <https://releases.hashicorp.com/terraform-provider-oci>

Resource Discovery output (using OCI Resource Manager or manual Terraform command):

Generates a Terraform script (.tf) for each of the different types of resources in the compartment indicated by “-compartment_name” variable and store them under directory set on “output_path” variable



Choose the origin of the Terraform configuration. The Terraform configuration outlines the cloud resources to provision for this stack. [Learn more](#)

☐ MY CONFIGURATION
Upload Terraform configuration files.

☐ TEMPLATE
Select an Oracle-provided template or private template.

☐ SOURCE CODE CONTROL SYSTEM
Select a Terraform configuration from GitHub and GitLab.

☒ EXISTING COMPARTMENT
Create a stack that captures resources from the selected compartment (resource discovery).

Stack Configuration ⓘ

COMPARTMENT FOR RESOURCE DISCOVERY

Demo

lab443939 (root)/Demo

REGION FOR RESOURCE DISCOVERY

eu-frankfurt-1

TERRAFORM PROVIDER SERVICES ⓘ

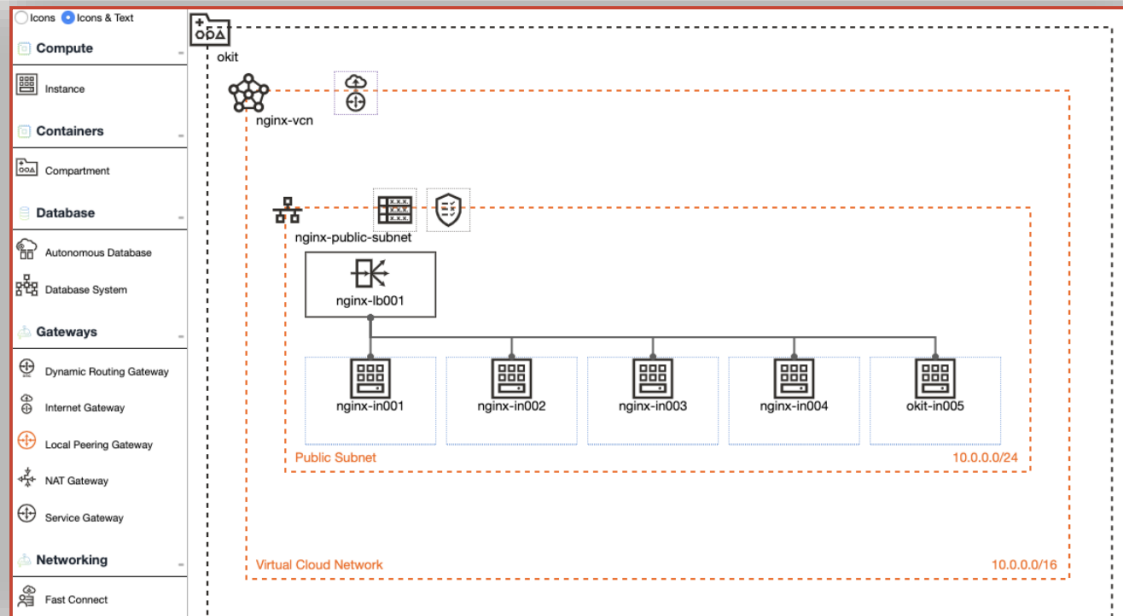
☒ ALL

☐ SELECTED

SERVICES [Select All](#) [Clear All](#)

OKIT - The OCI Designer Toolkit

The OCI Designer Toolkit (OKIT) is a, standalone / offline, OpenSource browser-based Drag-n-Drop design tool for OCI providing rapid design and prototyping of OCI based infrastructure. Once the design is complete Terraform / Ansible scripts can be generated that can then be executed to build what has been designed



Visual Representation export

- SVG
- PNG
- JPEG

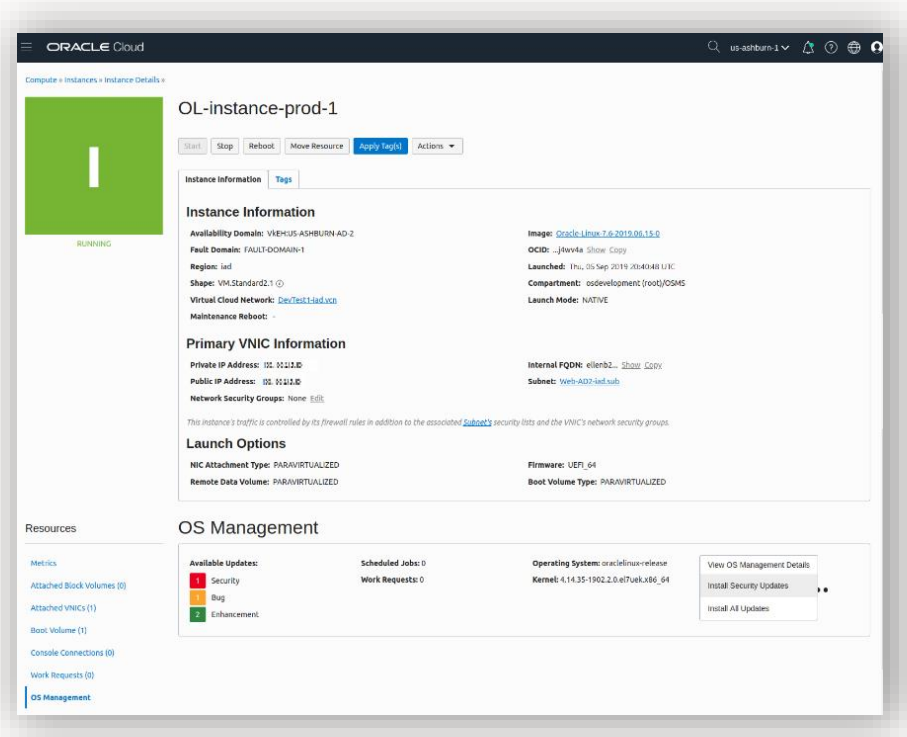
Infrastructure as Code export

- Ansible
- Terraform
- OCI Resource Manager



OS Management

Core Infrastructure >> Compute >> OS Management



- ❑ **The OS Management Service (OSMS) helps Oracle Cloud users automate the management of their Oracle Linux and Windows instances**
- ❑ **Automatic OS maintenance for Oracle Linux and Microsoft Windows**
 - Performs patching and updating while the system is running
 - Automated diagnostics gathering
- ❑ **Use OSMS to further enhance Oracle Linux and Microsoft Windows by including**
 - Package inventory and software management
 - Configuration management
 - Compliance auditing and remediation
 - Automated data collection, analytics, and audit features
- ❑ **Integrated with the Oracle Cloud console to simplify management**
- ❑ **Grouping Instances for Common Tasks**
 - Users can create logical grouping of instances tasks such as updates
 - Filter for instances by Compartment, tag and Availability Domains, then convert the results to a group
- ❑ **Scheduling**
 - Jobs can be defined as either immediate or future events
 - Immediate updates are sent automatically to the work request queue
 - Scheduled requests can be defined for a future date, time and could be recurring or one-time events
- ❑ **Global Search for CVE Data**
 - Search by CVE # and determine the packages involved and any affected instances





Oracle Autonomous Linux

Core Infrastructure >> Compute >> Instances

❑ Oracle Autonomous Linux Image

- Fully compatible with Red Hat Enterprise Linux

❑ Automated patches and package management

- Operating system updates & Security patches
- Oracle Linux Premier Support for every instance, at no additional cost

❑ Ksplice Live Real-Time Online Patching

❑ Notifications

- Updates to the operating system
- Known exploit detection



<https://www.youtube.com/watch?v=l12dqn-4LoQ>

<https://blogs.oracle.com/cloud-infrastructure/tips-for-using-oracle-autonomous-linux-on-oracle-cloud>

<https://blogs.oracle.com/linux/reasons-for-switching-centos-to-oracle-linux>

<https://community.oracle.com/docs/DOC-1034101>



Oracle Cloud Shell

❑ Web browser-based terminal accessible from the Oracle Cloud Console

- An ephemeral machine to use as a host for a Linux shell, pre-configured with the latest version of the OCI Command Line Interface (CLI) and a number of useful tools
- 5GB of storage for your home directory
- A persistent frame of the Console which stays active as you navigate to different pages of the console

❑ What's Included With Cloud Shell

- Git
- Java
- Python (2 and 3)
- SQL Plus
- kubectl
- helm
- maven
- gradle
- terraform
- ansible
- Most OCI SDKs, including:
 - Java
 - Python
 - Go
 - TypeScript and JavaScript
 - Ruby

```
Cloud Shell

Welcome to Oracle Cloud Shell.

Your Cloud Shell machine comes with 5GB of storage for your home directory. Your Cloud Shell (machine and home directory) are located in: Germany Central (Frankfurt).
Type 'help' for more info.
david_simo@cloudshell:~ (eu-frankfurt-1)$ oci --version
2.18.0
david_simo@cloudshell:~ (eu-frankfurt-1)$ oci os ns get
{
  "data": "██████████"
}
david_simo@cloudshell:~ (eu-frankfurt-1)$
```



Oracle Cloud Developer Image for OCI

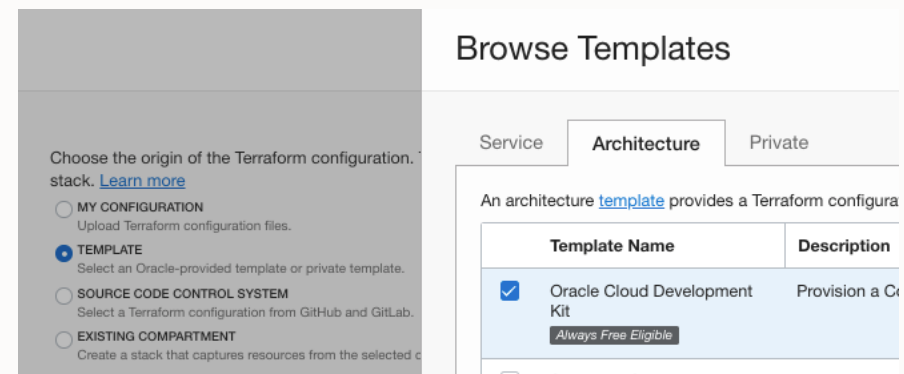
Resource Manager Template >> Oracle Cloud Development Kit

Oracle Cloud Developer Image for OCI

- Oracle Linux 7 based ready-to-run image
- Out-of-the-box development platform for OCI
- Languages and Oracle Database Connectors
 - Java SE 8, GraalVM 20, Go 1.15
 - Python 3.6, cx_Oracle 8
 - Node.js 14, node-oracledb
 - Oracle Instant Client 21, SQLcl 20.3, SQL Developer 19.4
- OCI Command Line & Tools
 - OCI CLI, Ansible and Terraform w/ OCI provider
 - Python, Java, Go and Ruby OCI SDK
- Other
 - Container Runtime for Docker, EPEL packages
 - GUI Desktop w/ access via VNC
 - Visual Studio Core, .NET Core, PowerShell Core
 - Eclipse IDE, Rclone

Oracle Cloud Development Kit

- OCI Resource Manager Architecture Template
 - *Always Free Eligible*
- Creates an complete isolated VCN
- Provision a Compute instance with Oracle Cloud developer tools installed
- Creates a Dynamic Group to identify the new instance and a related policy



<https://blogs.oracle.com/linux/announcing-the-oracle-cloud-developer-image-for-oracle-cloud-infrastructure>

Efficiency in Cloud Management

Control

- OCI Console
- API REST
- SDK
- Ansible
- Terraform
- Mobile Application
- OKIT
- Cloud Shell

Information

- Tenancy Explorer
- Tagging
- OCI Audit
- OCI Logging
- Logging Analytics
- Database Management
- Service Connector Hub
- OCI Monitoring
- Metrics Explorer
- OCI Alarms
- OCI Health Checks

Automation

- Ansible
- Terraform
- OCI Events
- OCI Notifications
- OCI Resource Manager
- OS Management
- Autonomous Services

Oracle Cloud in 8 Steps | Agenda

- 4th Feb **Immersion in the 2nd Generation Cloud**
Borja Gómez, Jesús Brasero
- 5th Feb **High-reliability architectures for mission-critical applications**
Alejandro de Fuenmayor, Raúl de Diego
- 11th Feb **Forecasting, optimization and cost management in the Cloud**
José Criado, Sergio Álvarez
- 12th Feb **Efficiency in Cloud management**
David Simón, David Mauri
- 18th Feb **How to protect critical data in the Cloud**
David Núñez, Juan Carlos Diaz
- 19th Feb **AI & Machine Learning: Migrating your data to the Cloud**
Andrés Araujo, Serena Pérez
- 24th Feb **How to migrate enterprise applications to the Cloud**
Mariano Jimenez, Guillermo Best
- 26th Feb **Cloud-Native development with Oracle Cloud**
Iván Sampedro, Victor Mendo



Scan to see all events

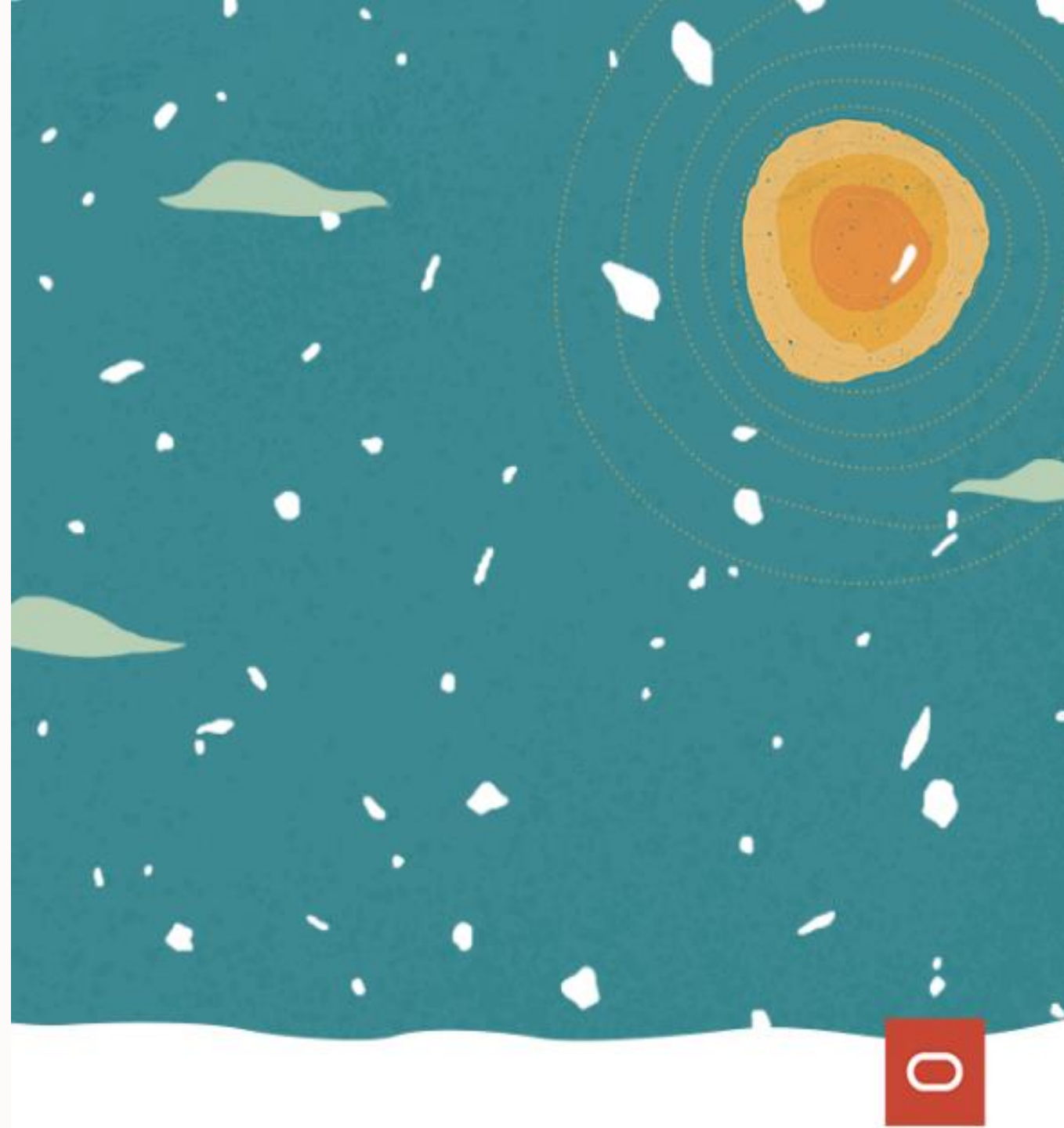


Register now for next events!

Thank you

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David Mauri | david.mauri@oracle.com





ORACLE