

Cloud Security: Preparing for The New Normal



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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.

Enterprise Security Today



Humans are
part of the
problem



33%

Of organizations worldwide
have experienced a
ransomware attack or breach

4M

Global positions that cannot be
filled due to the cybersecurity
talent shortage

82%

Of data breaches involved the
“human element”



Top Enterprise Security Concerns



Ransomware



Human Error



Cybersecurity Talent Shortage



Geopolitical Risks



Dispersed SaaS Services



Security Complexity



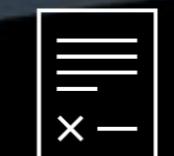
Supply Chain Vulnerabilities



Hybrid Work Environment



Fraud



Compliance Requirements



What if we....

Made security
prescriptive + integrated
into the platform

Offer best of breed
security + choice by
bringing partner
ecosystem together

Convert security to trust,
and make it a business
driver

Simplify your ability to
assure with easy to use
auditing & reporting



Oracle's approach to security and privacy on the cloud



Simple & Effortless

Oracle offers simple & prescriptive services



Deeply Integrated

Oracle provides an integrated experience across IaaS, SaaS, and multiple clouds



Complete Control

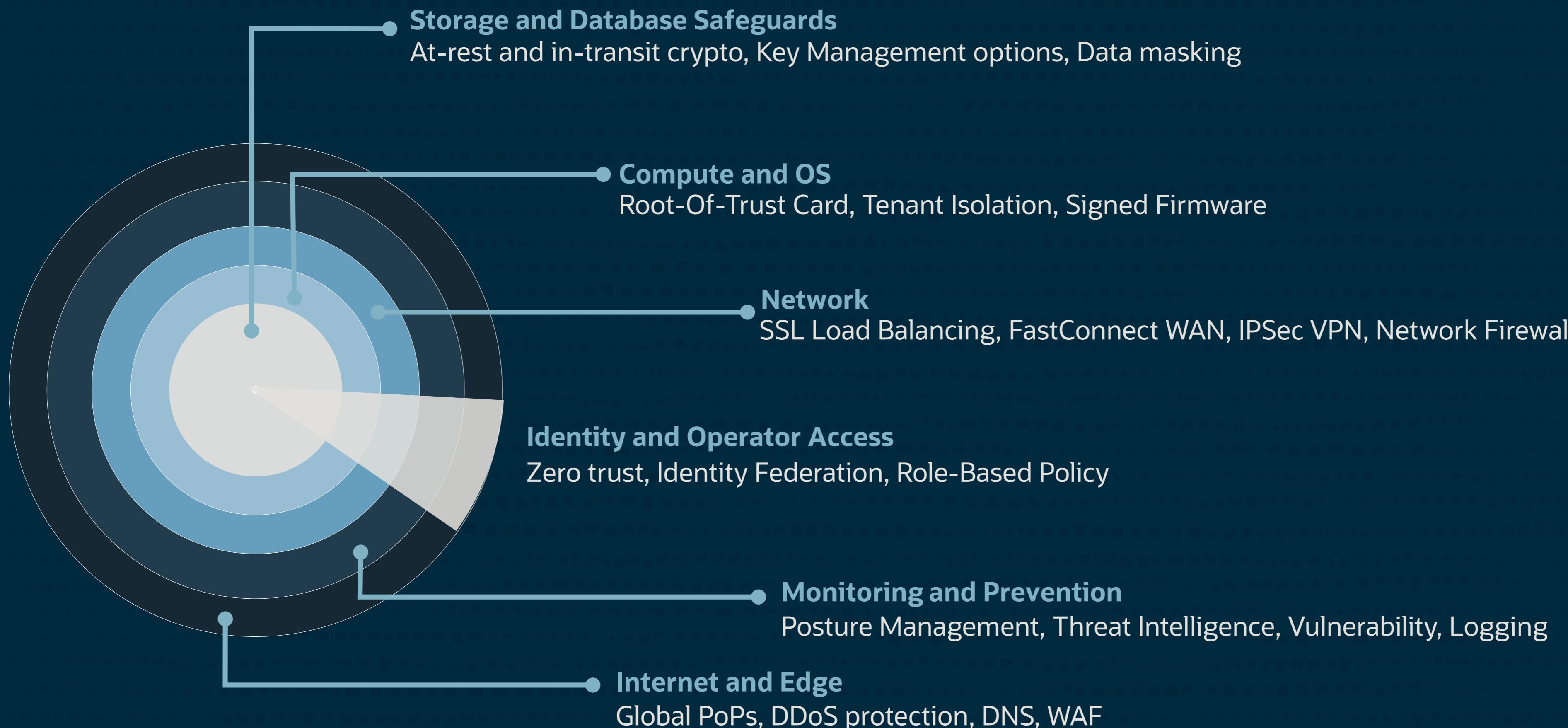
Oracle offers security controls regardless of where your applications and data reside

Simple and Effortless

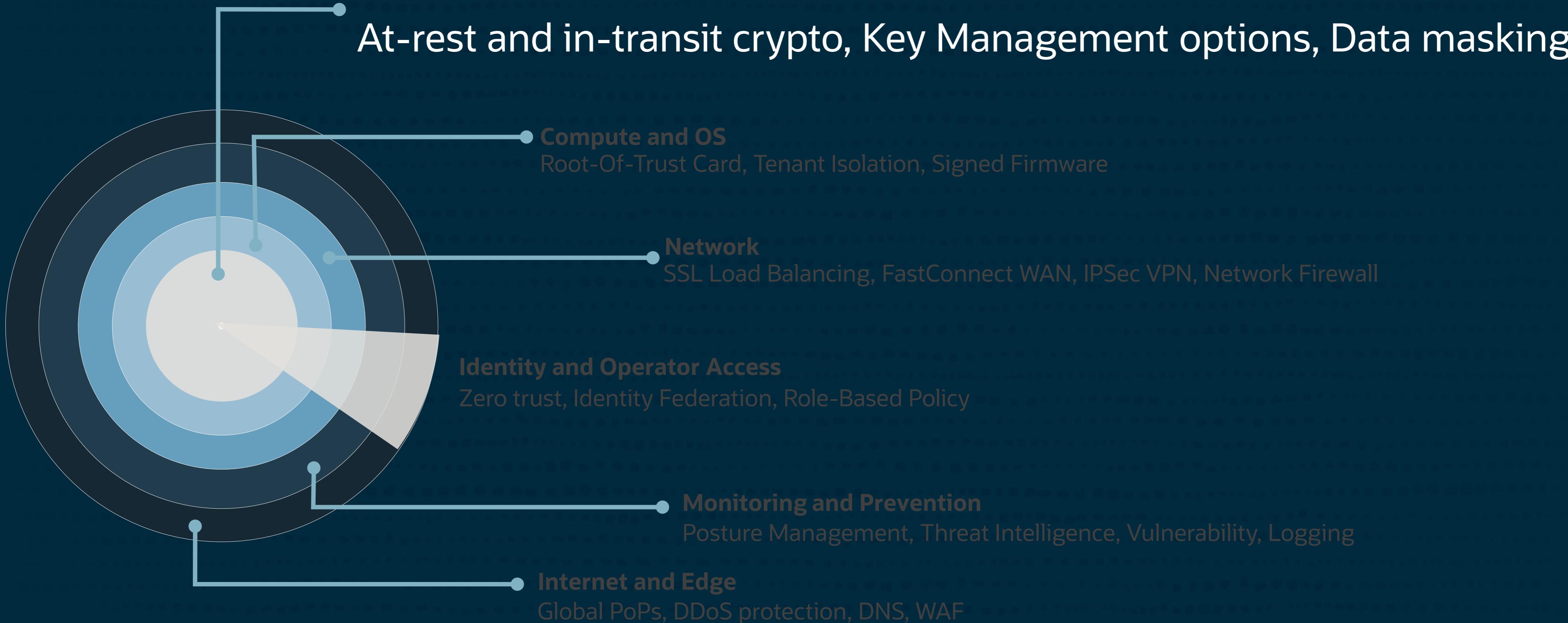


Oracle Security defense in depth

A complete solution with security built-in at every layer



Storage and Database Safeguards



GENERAL AVAILABILITY

Oracle Data Safe

Unified oracle database security control center

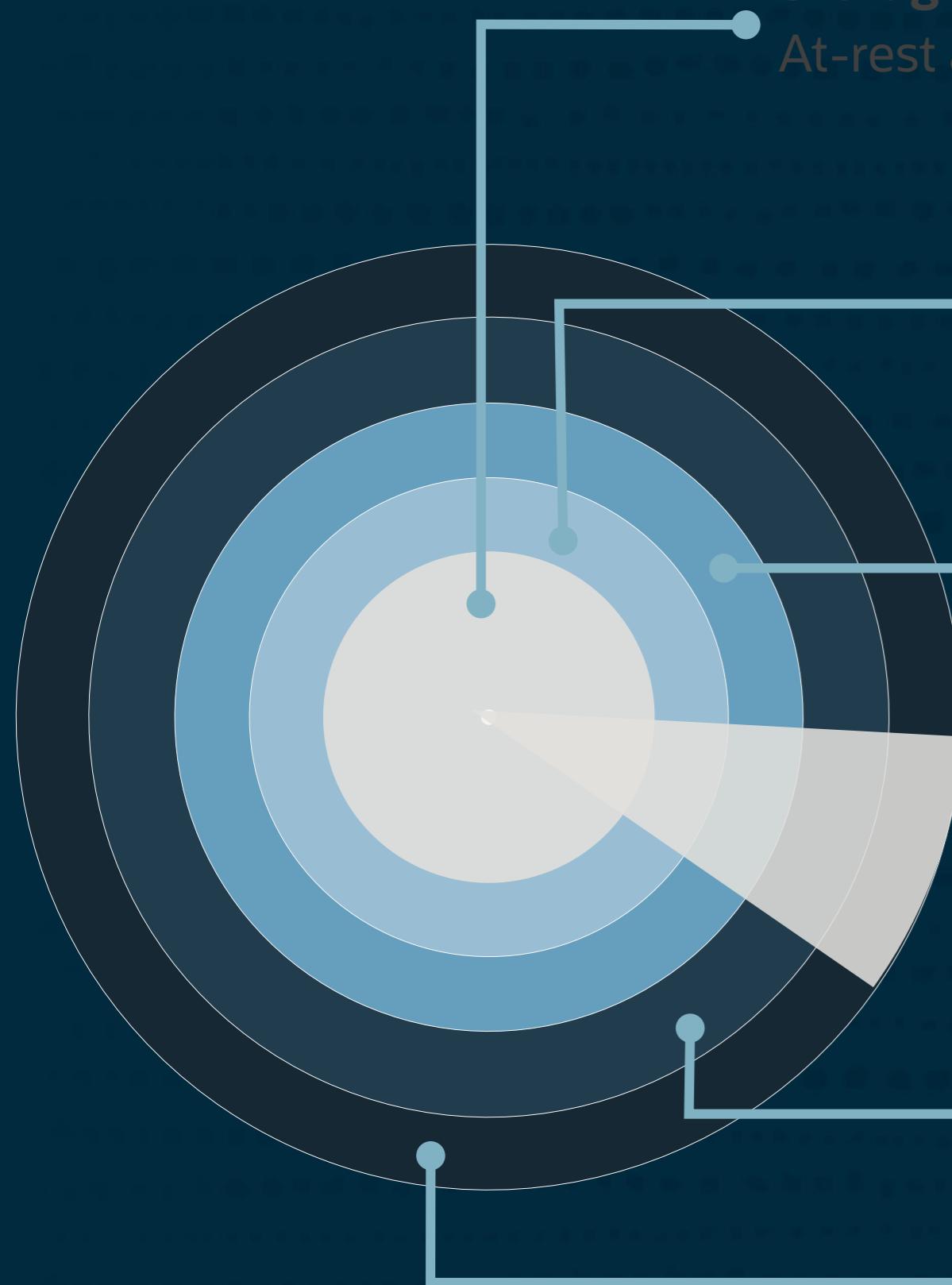
- Discover sensitive data and mask
- Prevent Unauthorized access to data
- Monitors for threats based user activity
- Risk dashboard: configuration, data, users

Benefits

- No special expertise needed: click-and-secure
- Saves time and mitigates security risks
- Defense-in-depth security for all customers



Oracle Databases



Compute and OS

Root-Of-Trust Card, Tenant Isolation, Signed Firmware

GENERAL AVAILABILITY

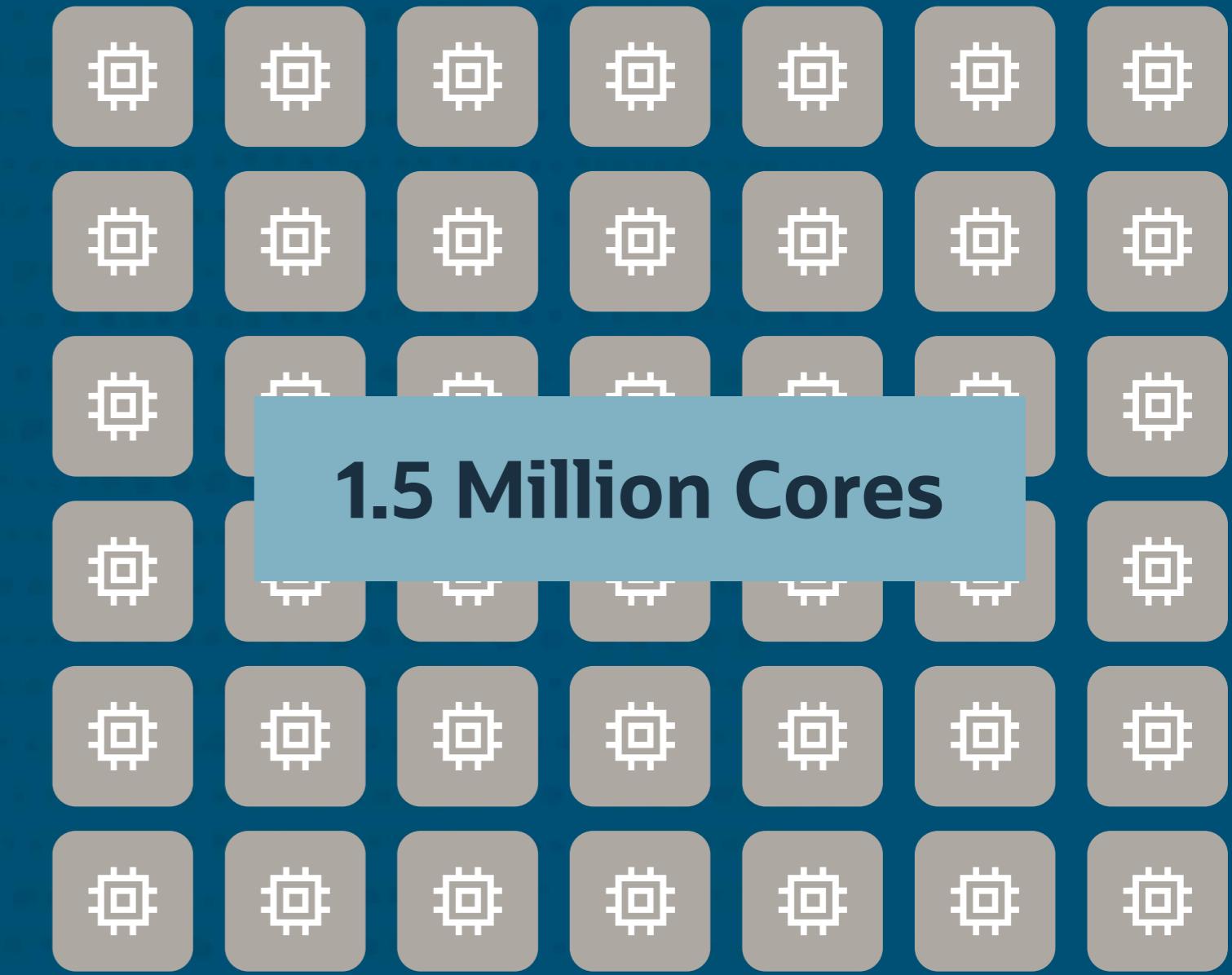
Oracle Autonomous Linux protects Oracle Cloud



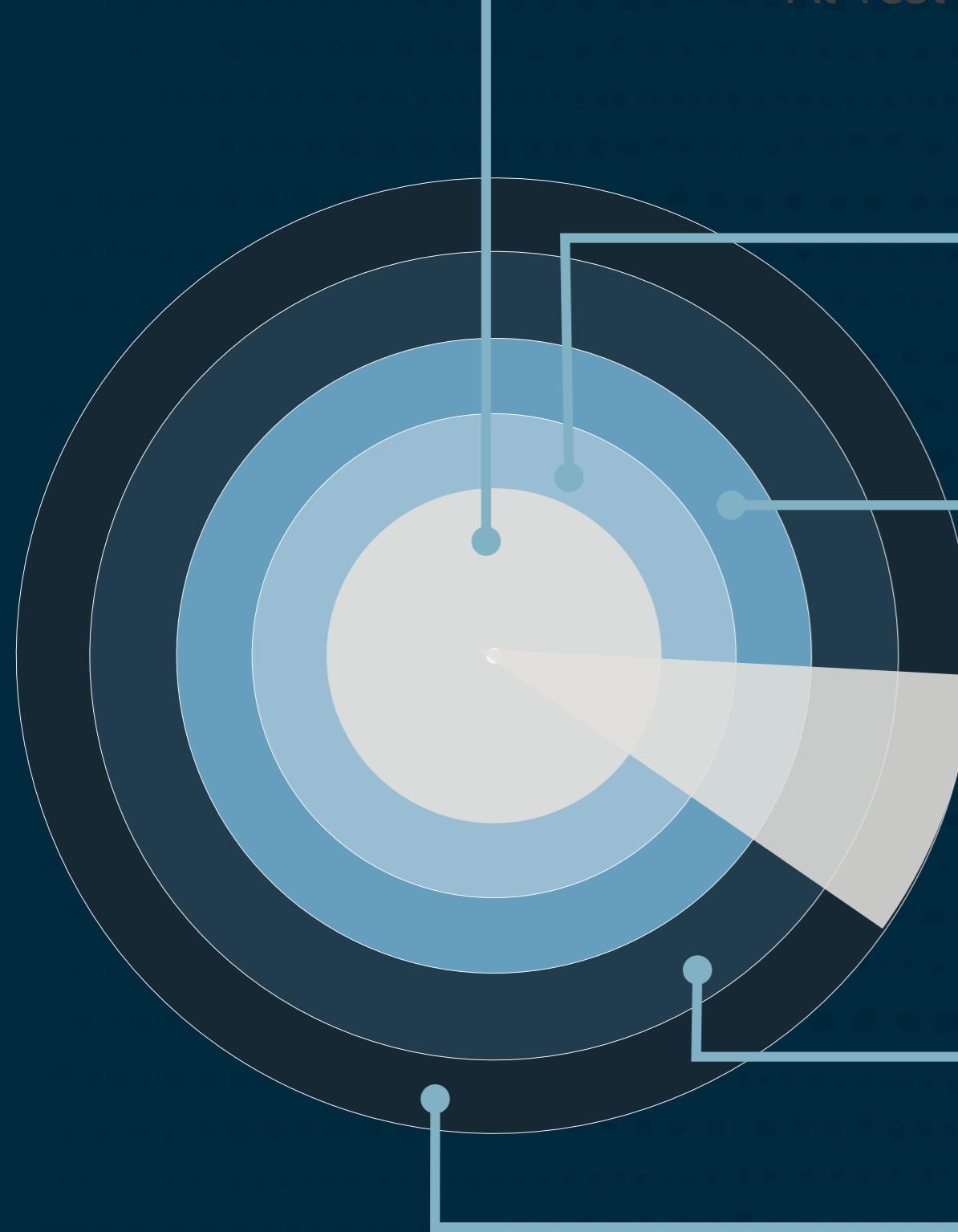
4 hours



Applied to



150M patches applied in OCI in 4 hours for Spectre/Meltdown Bugs—No Downtime



Storage and Database Safeguards

At-rest and in-transit crypto, Key Management options, Data masking

Compute and OS

Root-Of-Trust Card, Tenant Isolation, Signed Firmware

Network

SSL Load Balancing, FastConnect WAN, IPSec VPN, Network Firewall

Identity and Operator Access

Zero trust, Identity Federation, Role-Based Policy

Monitoring and Prevention

Posture Management, Threat Intelligence, Vulnerability, Logging

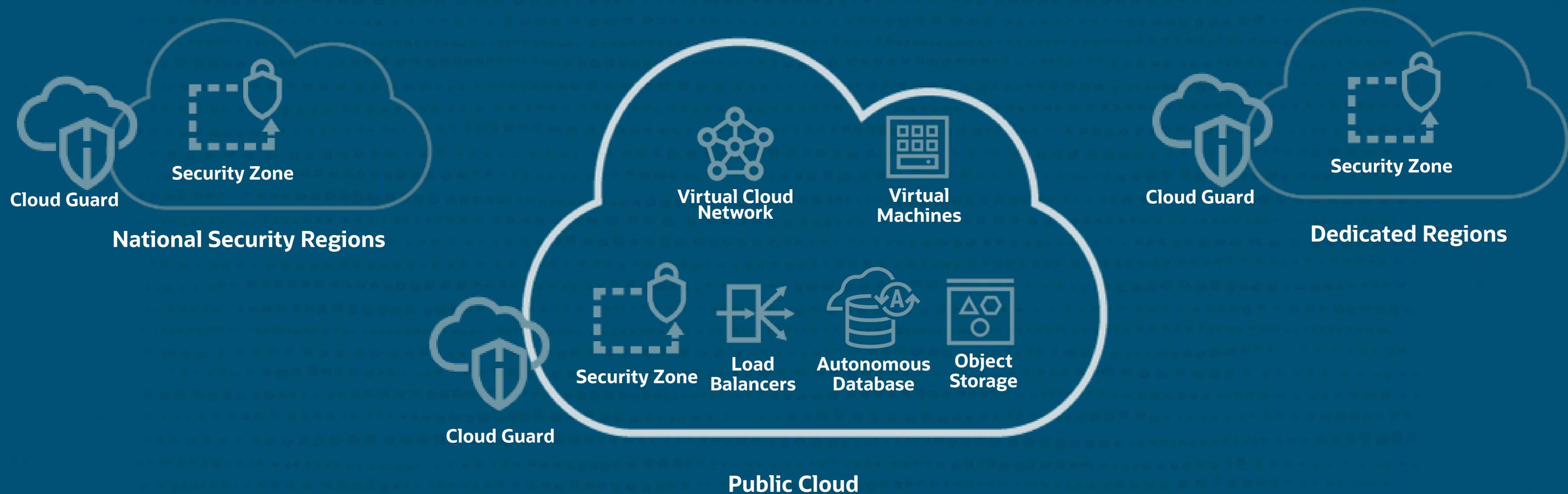
Internet and Edge

Global PoPs, DDoS protection, DNS, WAF

GENERAL AVAILABILITY

Oracle Security Zones and Oracle Cloud Guard

Simple and effortless proactive and reactive security posture management



Oracle Cloud Guard

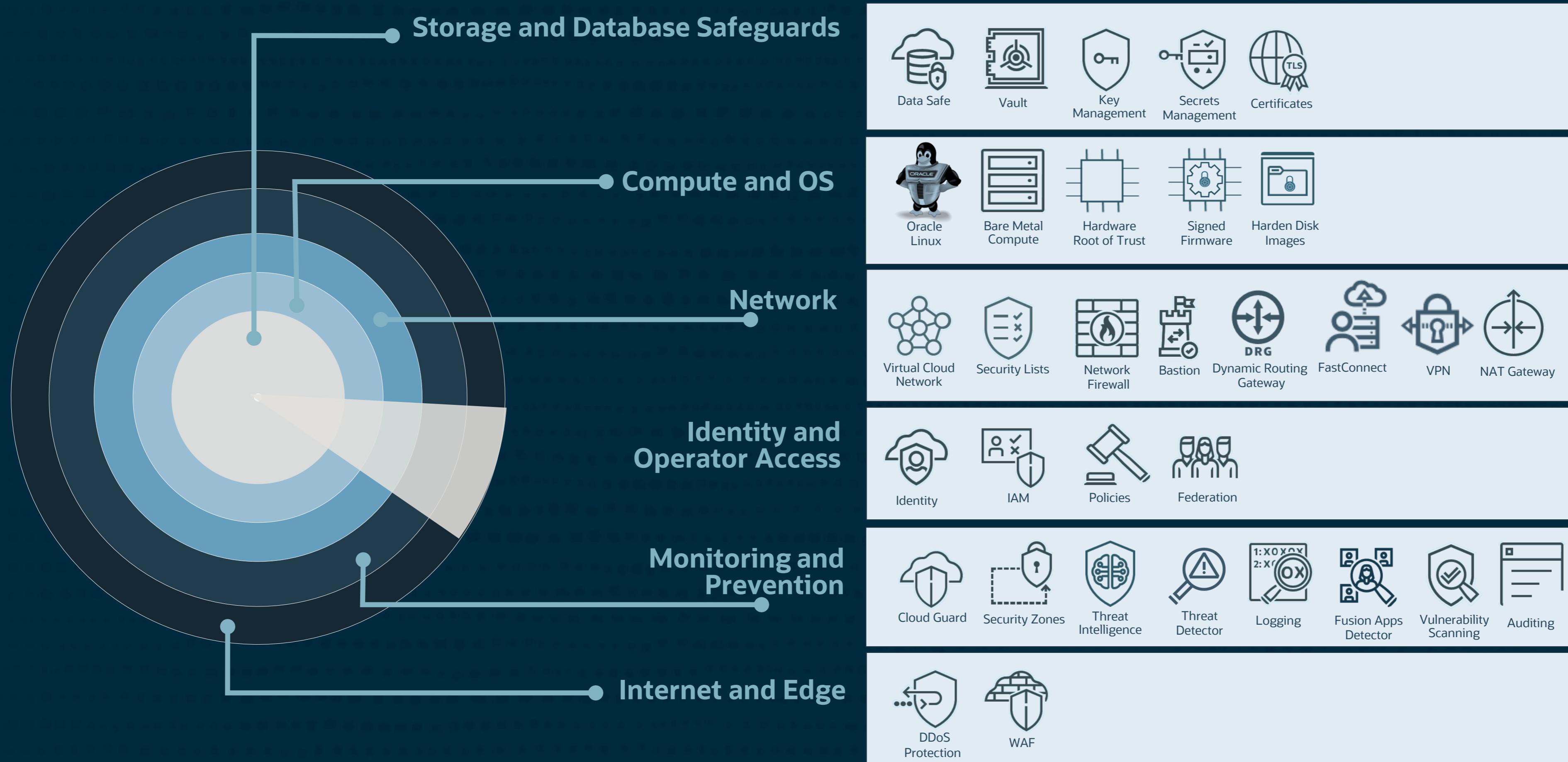
Continuously monitor your cloud environment
Automatic problem identification
Optional Automatic remediation

Security Zones

Extremely secure location
Security is always enforced
Designed for highly secure workloads

Oracle Security defense in depth

A complete solution at every layer





“

Cloud Guard was the first thing we did when we got our tenancy, it is a great security monitoring tool and we also use compartments, policies, and Logging Analytics to maintain visibility and control. Together with logs from OCI IAM identity domains, we're able to access all of our logs in a single location and customize the dashboards we need for complete visibility. The fact that this detailed view is all streamlined is a big win for customers.

”

Lance Braswell, Cloud Architect, Cisco Systems, Inc.



Deeply Integrated



Oracle Cloud: Infrastructure + Applications

Oracle Identity

Oracle Applications

Industry Applications

ISV Applications



Developer Services



Containers and Functions



Application Integration



Analytics and BI



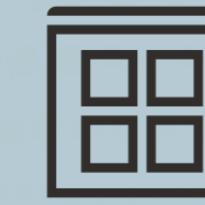
Machine Learning and AI



Data Lakehouse



Compute



Storage



Networking



Oracle Databases



Open Source Databases



Operating Systems, Native VMWare

Security | Observability and Management | Compliance | Messaging | Governance

Global Cloud Datacenter Infrastructure

Commercial and Government Public Cloud Regions | Hybrid Cloud: Cloud@Customer, Dedicated Regions, Roving Edge

A distributed cloud, available in more ways and places

Multicloud

Our products work with
your other providers

Public cloud

Access OCI cloud services
from 40+ global regions

Hybrid cloud

We bring cloud services to you

Dedicated cloud

A cloud just for you



Security for distributed cloud

Multicloud

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Security for distributed cloud

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Our products work with
your other providers

Hybrid cloud

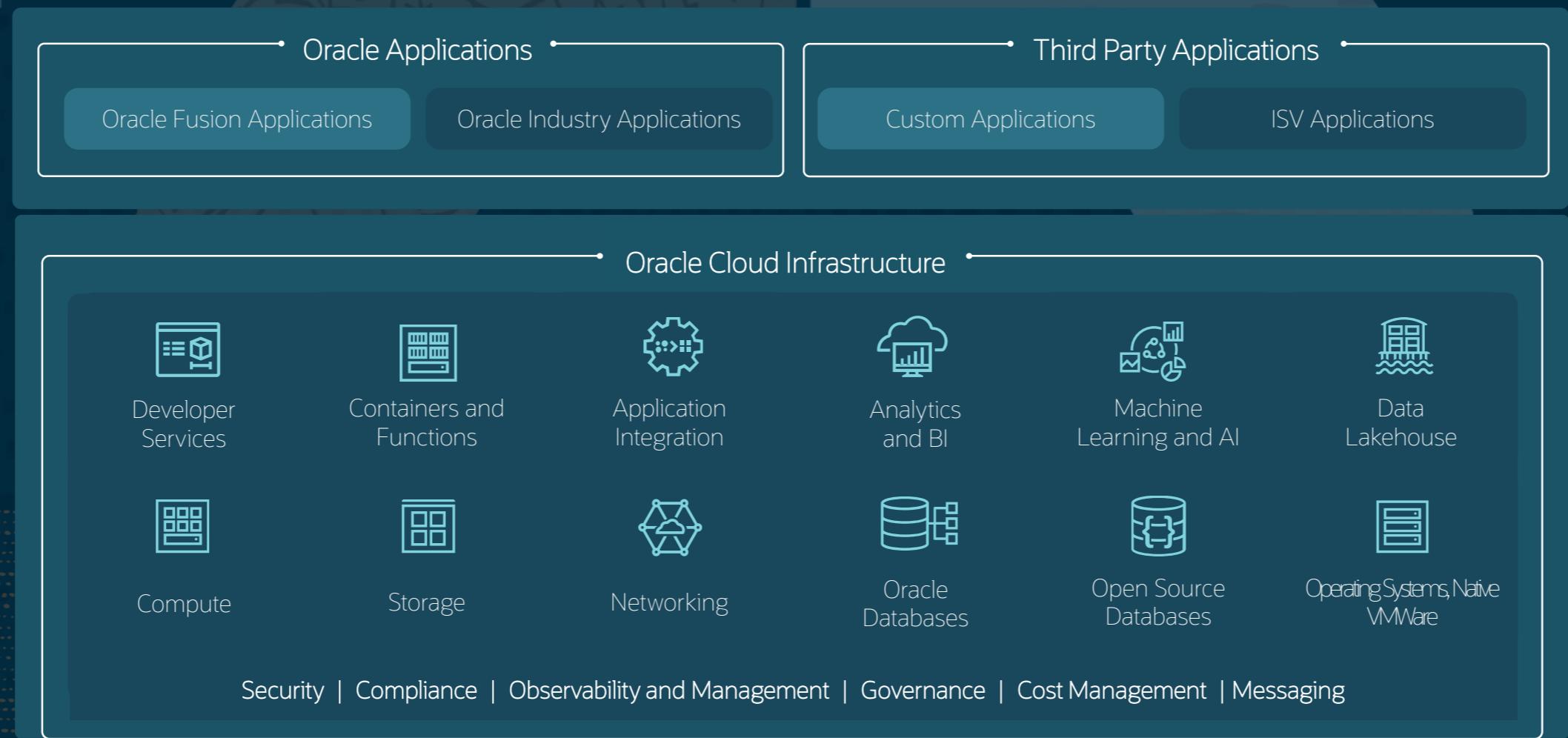
We bring cloud services to you

Public cloud

Access OCI cloud services
from 40+ global regions

Dedicated cloud

A cloud just for you

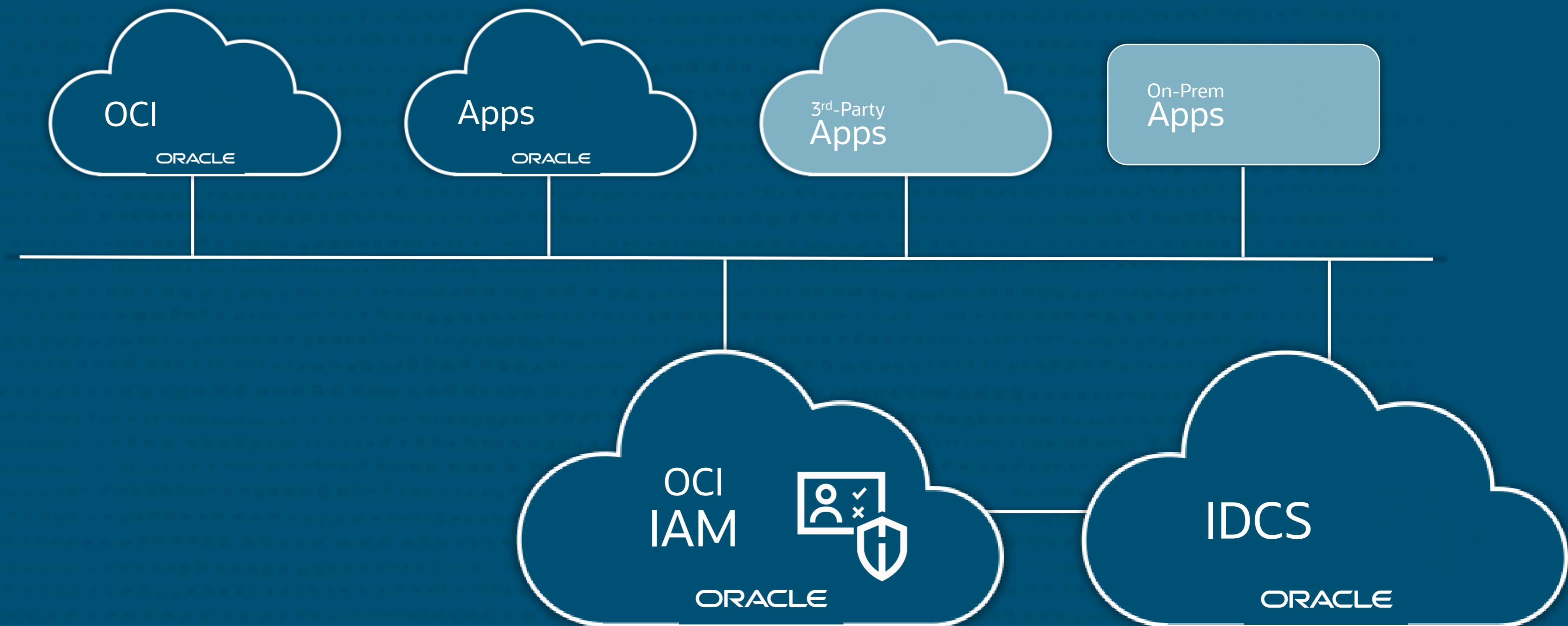


GENERAL AVAILABILITY

OCI IAM Identity Domains

Benefits of Oracle IDCS and OCI IAM services now merged together

OCI IAM will provide a single, unified IDaaS for Oracle and non-Oracle apps across hybrid cloud environments with robust MFA options, Adaptive Access, and Lifecycle Management



Security solutions enabling your Hybrid Cloud journey

Flexibility to meet you where you are today



Security for
on-premises
(e.g., IAM, database
security)



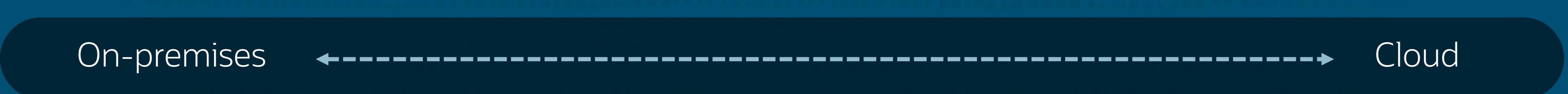
Security across cloud
and on-premises
(e.g., Data Safe, OCI
IAM, Access
Governance)



OCI security
(e.g., Cloud Guard,
Security Zones,
Network Firewall)



Multicloud
security
(e.g., OCI IAM, WAF)



New *integrated* security capabilities for SaaS

Multicloud

Our products work with
your other providers



Public cloud

Access OCI cloud services
from 40+ global regions

Hybrid cloud

We bring cloud services to you

Dedicated cloud

A cloud just for you

LIMITED AVAILABILITY - NOW

Oracle Cloud Guard Fusion Applications Detector

Security posture management for your infrastructure and Oracle HCM and Oracle ERP

- Security for critical business apps
- Detections for sensitive PII
- Pre-configured & customized recipes



Cloud Guard Fusion
Applications Detector

AUTO ENABLED FOR ALL FUSION APPLICATIONS

OCI Web Application Firewall for Fusion Applications

- Security and safeguards for Fusion Apps
- Monitor and detect malicious attacks
- 24x7, Oracle Managed end to end



**OCI WAF for Fusion
Applications**

New partner-integrated security capabilities

Multicloud

Our products work with
your other providers

Hybrid cloud

We bring cloud services to you

Public cloud

Access OCI cloud services
from 40+ global regions

Dedicated cloud

A cloud just for you



GENERAL AVAILABILITY

Partner-integrated security services

Cloud-native firewall, powered by Palo Alto Networks' next-generation firewall (NGFW)

- URL filtering, intrusion prevention, & TLS inspection
- No additional security infrastructure
- Addresses regulatory requirements



Next-generation
firewall (NGFW)

LIMITED AVAILABILITY - NOW

Qualys scanning with OCI Vulnerability Scanning

- Integrated with OCI VSS
- Quickly identify vulnerabilities from Qualys agents and address them in OCI Vulnerability Scanning
- Fully managed, eliminating the work of patching agents



Qualys®



OCI Vulnerability
Scanning Service

Requirements to support distributed clouds

- ✓ Cross-cloud authentication, authorization, and token exchanges
- ✓ Integrated logging and telemetry
- ✓ Interoperable key and secrets management systems
- ✓ Integrated security monitoring
- ✓ Cross-cloud SDK, CLI, and UI compatibility

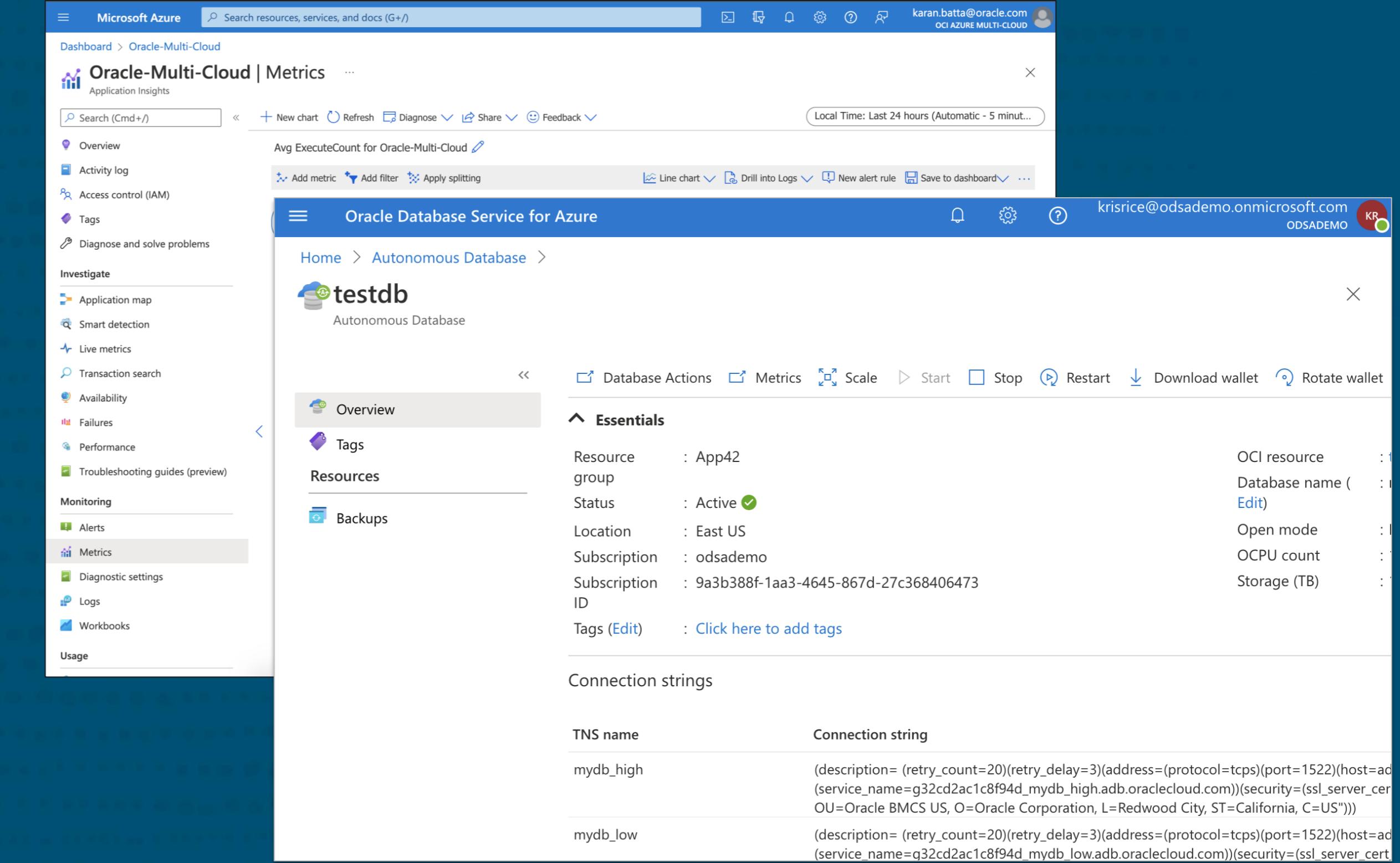
GENERAL AVAILABILITY

Oracle Database Service for Microsoft Azure

ORACLE
Cloud Infrastructure

 Microsoft Azure

Connect, provision, use your OCI database like an Azure resource



The screenshot shows two overlapping Azure application insights dashboards. The top dashboard is titled 'Oracle-Multi-Cloud | Metrics' and displays various monitoring options like 'Search (Cmd +/)', 'Overview', 'Activity log', and 'Metrics'. The bottom dashboard is titled 'Oracle Database Service for Azure' and shows details for an 'Autonomous Database' named 'testdb'. It includes sections for 'Overview', 'Tags', 'Resources', and 'Backups'. Under 'Essentials', it lists resource details such as group (App42), status (Active), location (East US), subscription (odsademo), and ID (9a3b388f-1aa3-4645-867d-27c368406473). The 'Tags' section has a link to 'Click here to add tags'. The 'Connection strings' section shows two entries: 'mydb_high' and 'mydb_low', each with its respective connection string.

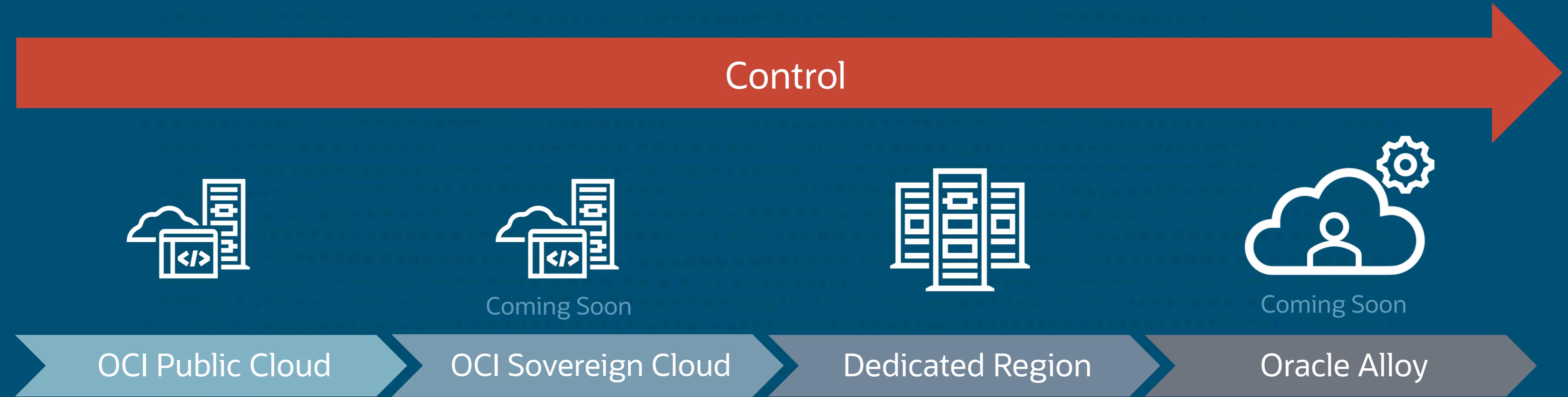
TNS name	Connection string
mydb_high	(description= (retry_count=20)(retry_delay=3)(address=(protocol=tcp)(port=1522)(host=ad... (service_name=g32cd2ac1c8f94d_mydb_high.adb.oraclecloud.com))(security=(ssl_server_cert OU=Oracle BMCS US, O=Oracle Corporation, L=Redwood City, ST=California, C=US"))))
mydb_low	(description= (retry_count=20)(retry_delay=3)(address=(protocol=tcp)(port=1522)(host=ad... (service_name=g32cd2ac1c8f94d_mydb_low.adb.oraclecloud.com))(security=(ssl server cert

- Automated identity, networking, logging, and monitoring integration
- Familiar Azure-native user experience
- < 2 ms latency private interconnection
- Access enterprise-grade Oracle database services

Complete Control



Infrastructure Options to Help navigate Data Privacy



- All OCI capabilities
- Oracle maintains the infra
- Secure data with OCI native security capabilities as well as third-party solutions

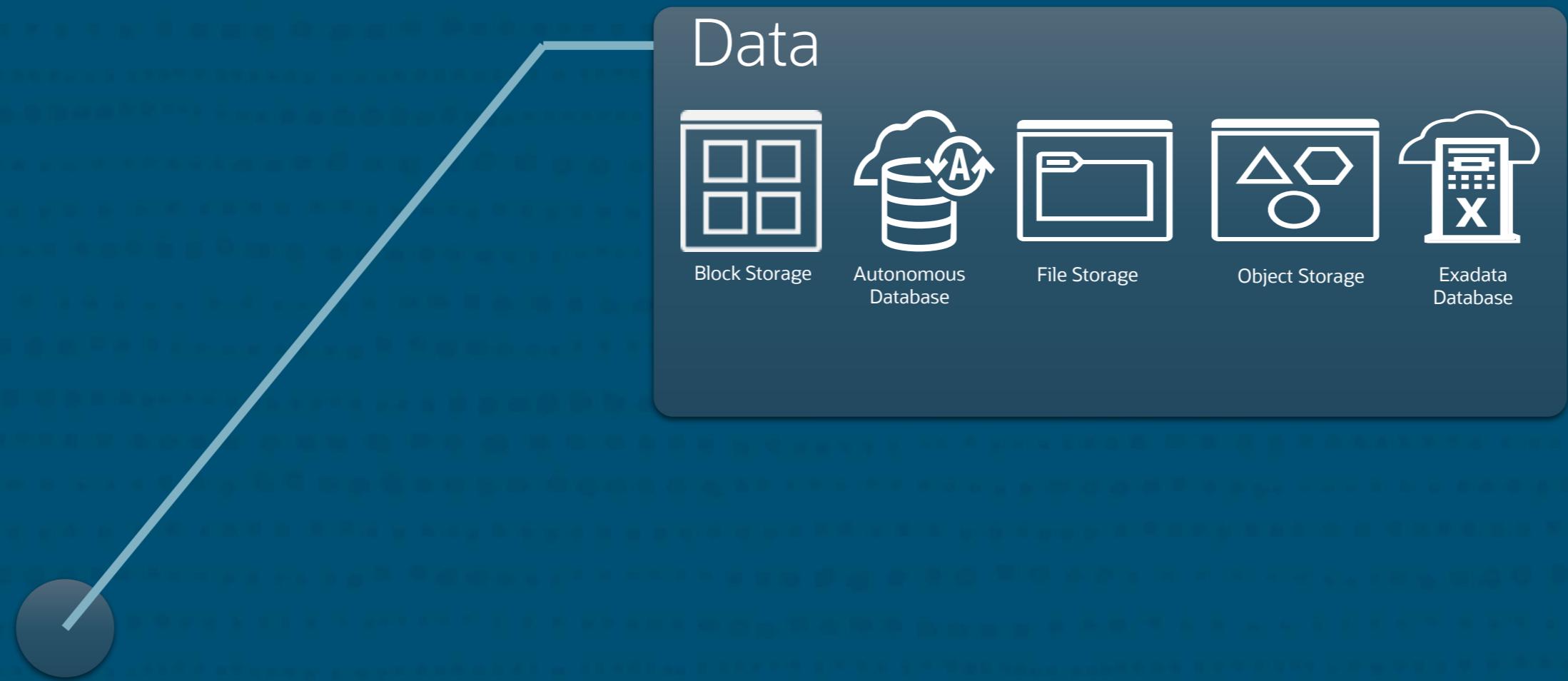
- All OCI capabilities
- Operations and support restricted to EU residents and specific EU legal entities

- All OCI capabilities
- House in your data-center
- Meet data localization and residency requirements

- All OCI Capabilities
- Designed to meet strict assurance and data sovereignty requirements

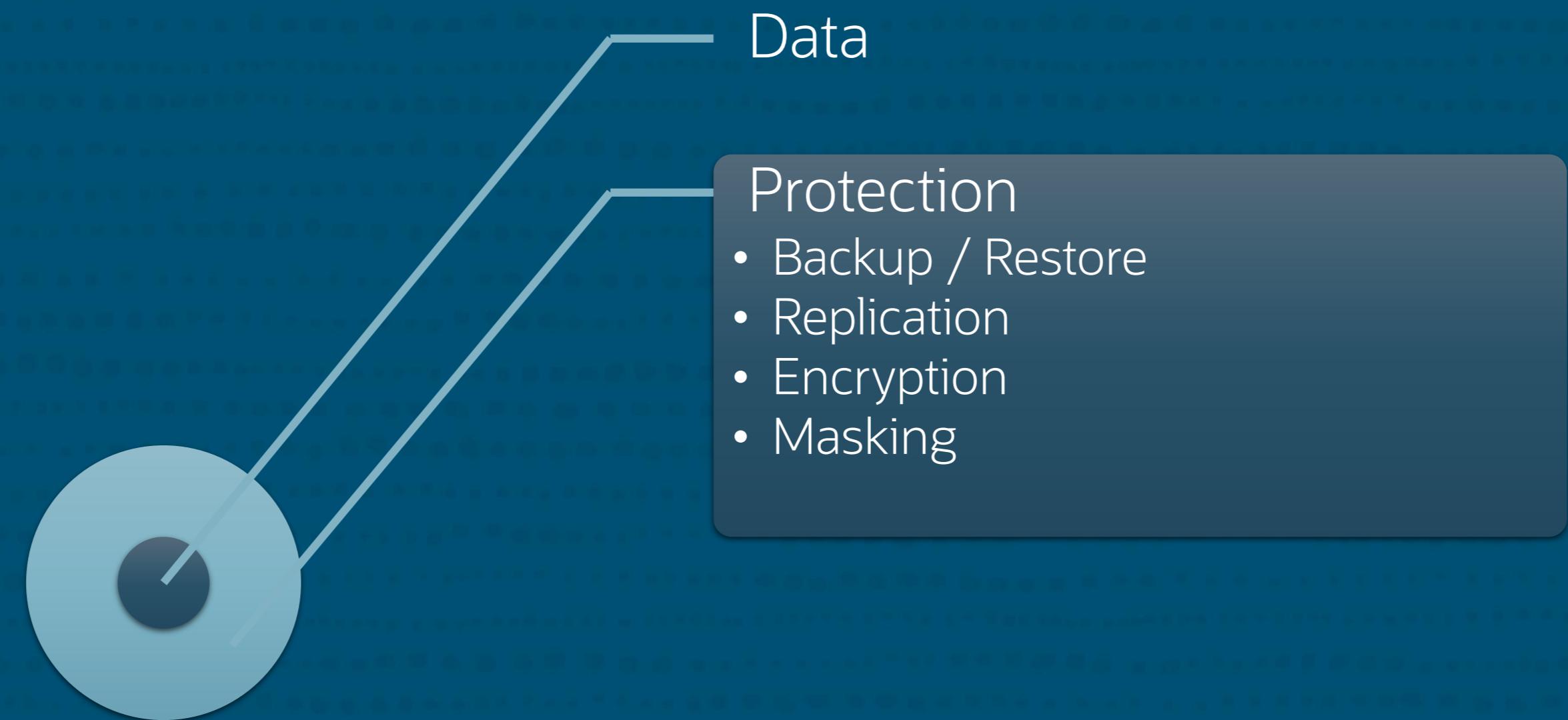
Addressing data security and privacy on the cloud

The role of software



Addressing data security and privacy on the cloud

The role of software



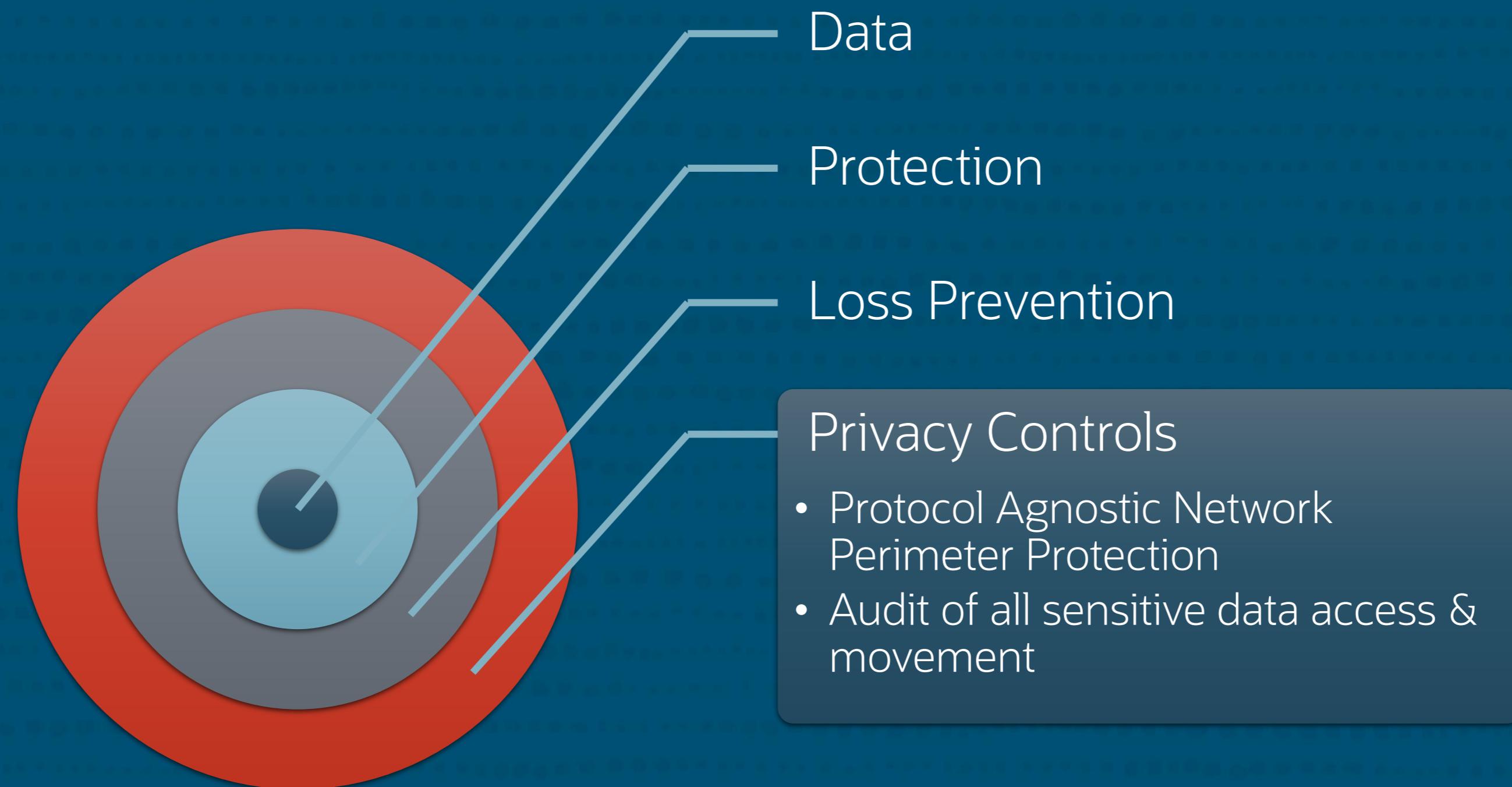
Addressing data security and privacy on the cloud

The role of software



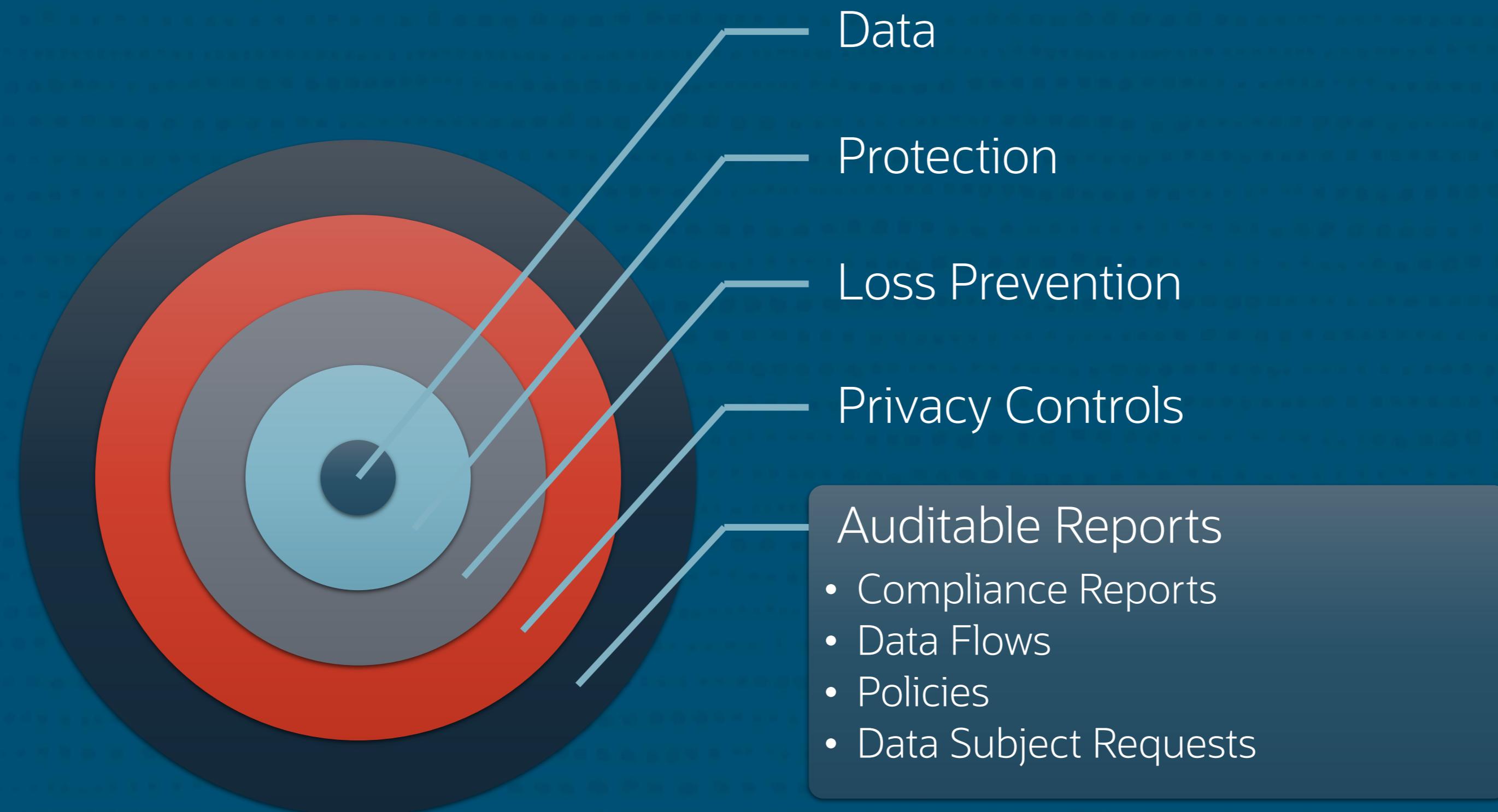
Addressing data security and privacy on the cloud

The role of software



Addressing data security and privacy on the cloud

The role of software



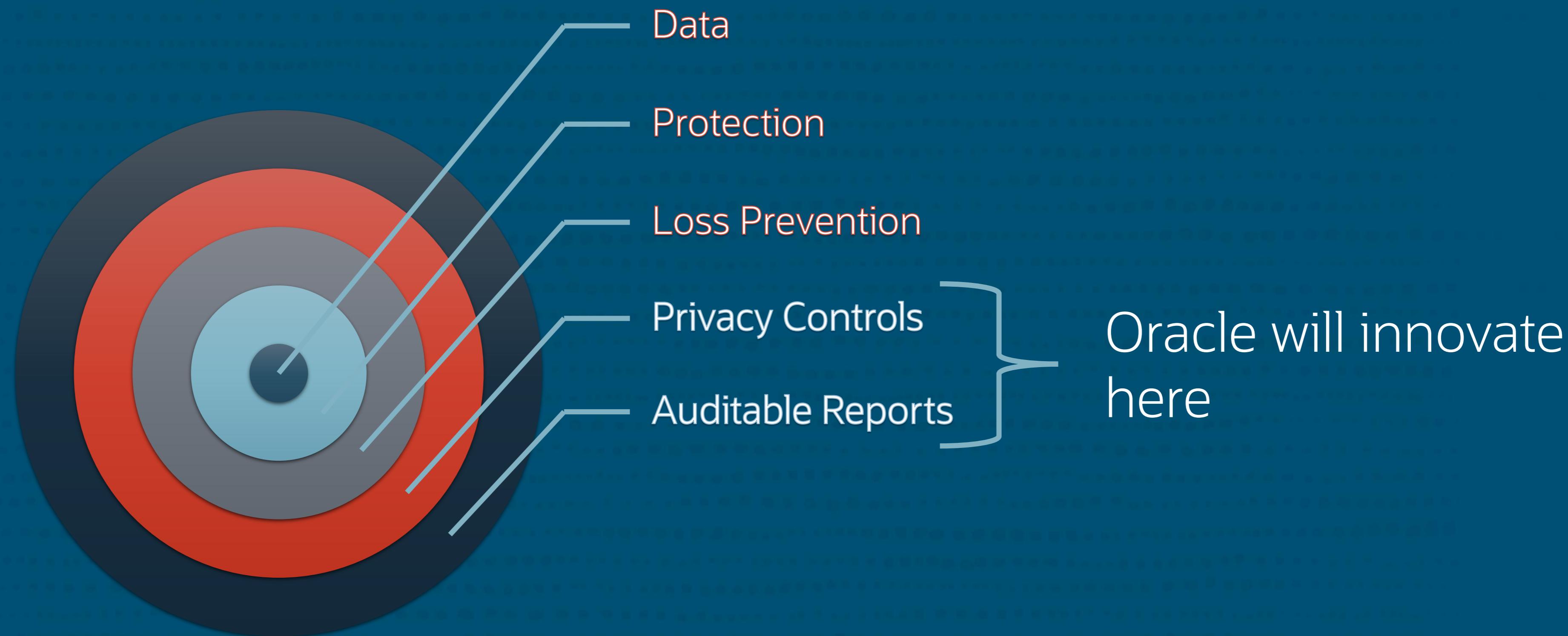
Addressing data security and privacy on the cloud

The role of software



Addressing data security and privacy on the cloud

The role of software



Options to Help you navigate Data Sovereignty Requirements

Control



OCI Public Cloud

- All OCI capabilities
- Oracle maintains the infra
- Secure data with OCI native security capabilities as well as third-party solutions



Coming Soon



OCI Sovereign Cloud

- All OCI capabilities
- Operations and support restricted to EU residents and specific EU legal entities



Dedicated Region

- All OCI capabilities
- House in your data-center
- Meet data localization and residency requirements



Coming Soon

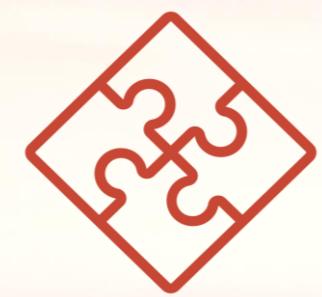


Oracle Alloy

- All OCI Capabilities
- Designed to meet strict assurance and data sovereignty requirements



Simple &
Effortless

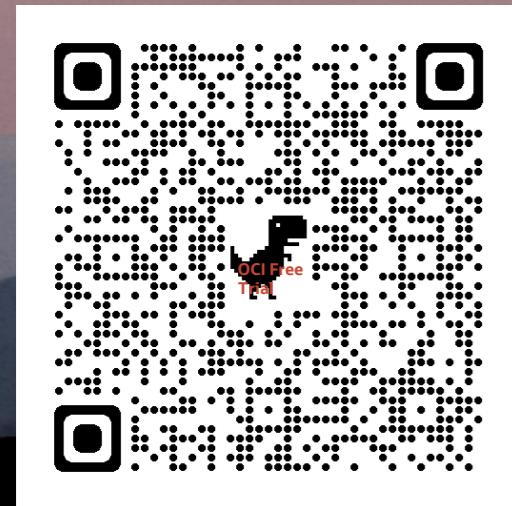


Deeply
Integrated

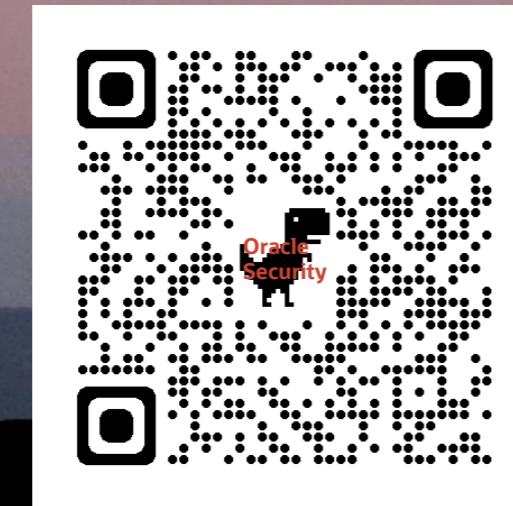


Complete
Control

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Alexandre Fagundes
Cloud Architect, Oracle Corporation

