



ORACLE

Cloud shared security responsibility

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Safe Harbor

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Protecting our Business-Critical Assets

Organizations must be right
100% of the time

An attacker only has to be
right once...

32%

of breaches resulted in a
CEO/President/C-level
executive losing their job

[Oracle.com/CTR](https://www.oracle.com/CTR)



ORACLE AND KPMG CLOUD THREAT REPORT

2019

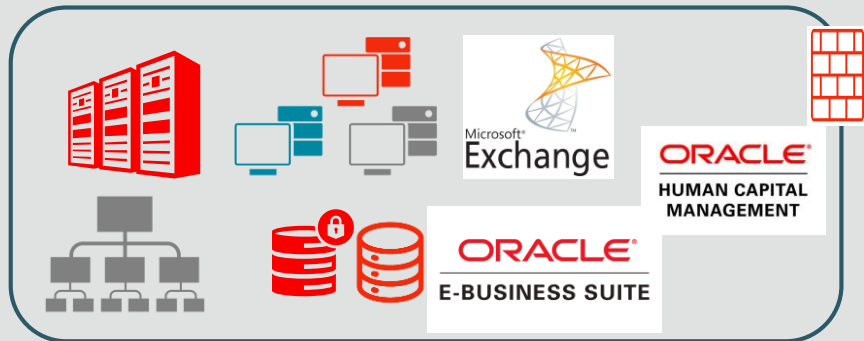
Defining Edge Intelligence: Closing Visibility
Gaps with a Layered Defense Strategy

[Oracle.com/CTR](https://www.oracle.com/CTR)



Making a Secure Transition to the Cloud

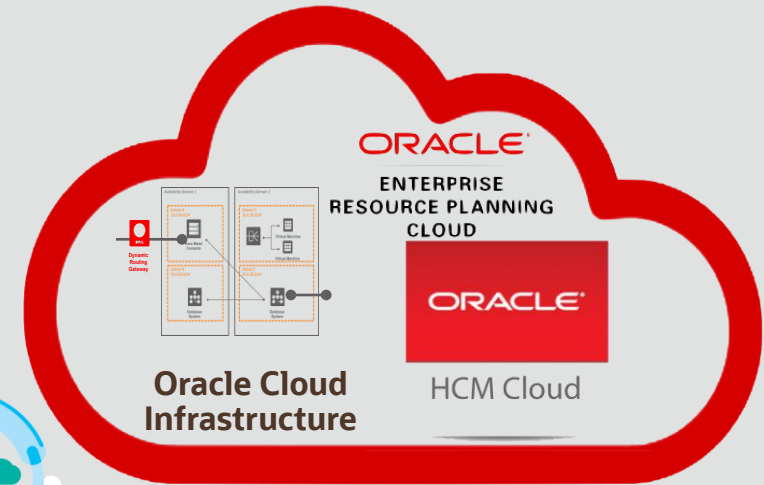
Key Challenges



On Premises

**Own
Responsibility**

- Data Security
- Threat Protection
- Visibility
- Compliance



Multi-Cloud (IaaS, PaaS and SaaS)

Shared Responsibility



**Lack of
Visibility**



**Poor
Compliance**



**Inconsistent
Policies**



**Wide Threat
Surface**

Key Operational Challenges

Security Is Driving Cloud Adoption

Source:

[SECURITY IN THE AGE OF AI Report](https://www.oracle.com/a/ocom/docs/data-security-report.pdf)
<https://www.oracle.com/a/ocom/docs/data-security-report.pdf>

C-Suite executives and policy makers also cite security as the top benefit of cloud technology.



What are the biggest benefits of cloud computing for your organization today?



Security



Cost Reduction



Scalability



Ease of use



Speed

CxO Total (n341) Gov (n110)

Is Cloud Considered Secure Enough?

66% of respondents:
“Security is one of the top benefit of cloud technology ”

Source: Security in the Age of AI, 2019 - www.oracle.com/a/ocom/docs/data-security-report.pdf

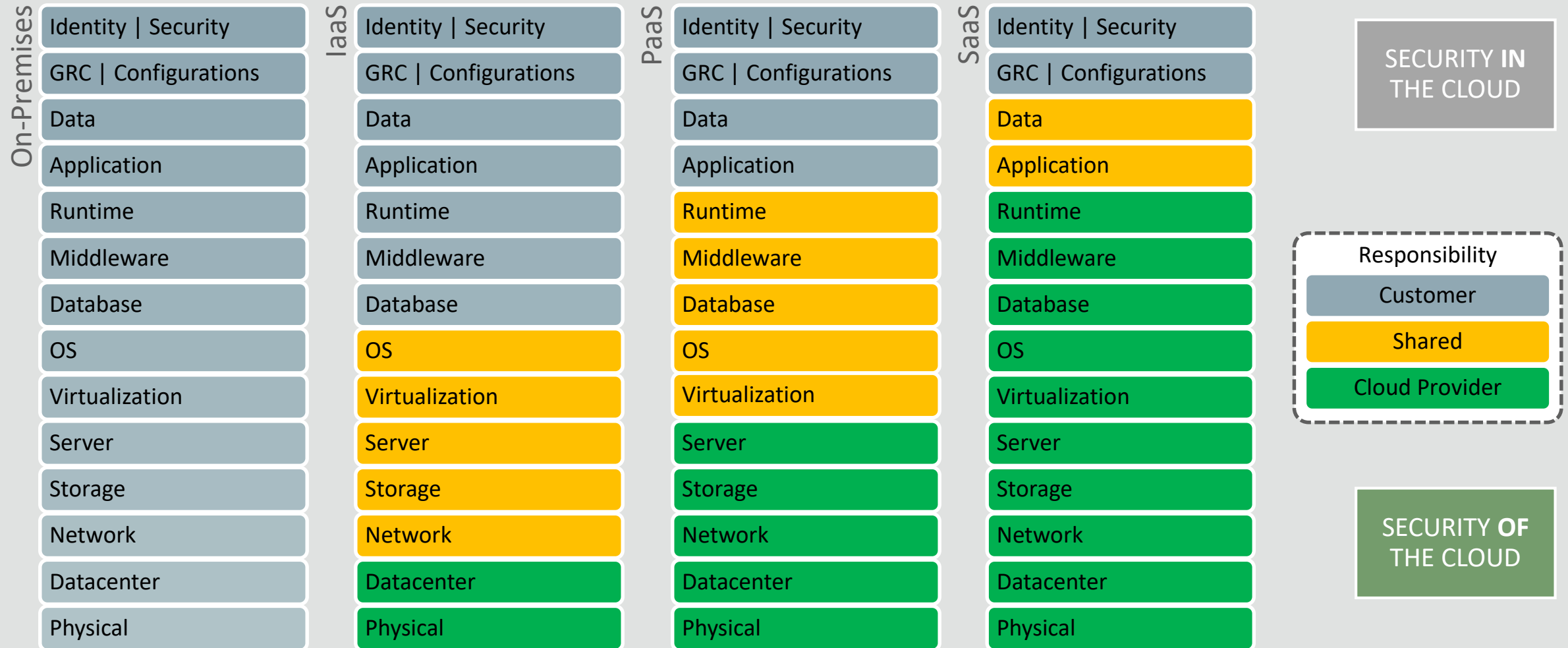
73% of respondents:
“Cloud is More Secure Than on-Premises”

82% of Cloud Users:
“Experienced security events due to confusion over the
shared responsibility model”

Source: Oracle and KPMG Cloud Threat Report 2019 - www.oracle.com/cloud/cloud-threat-report/

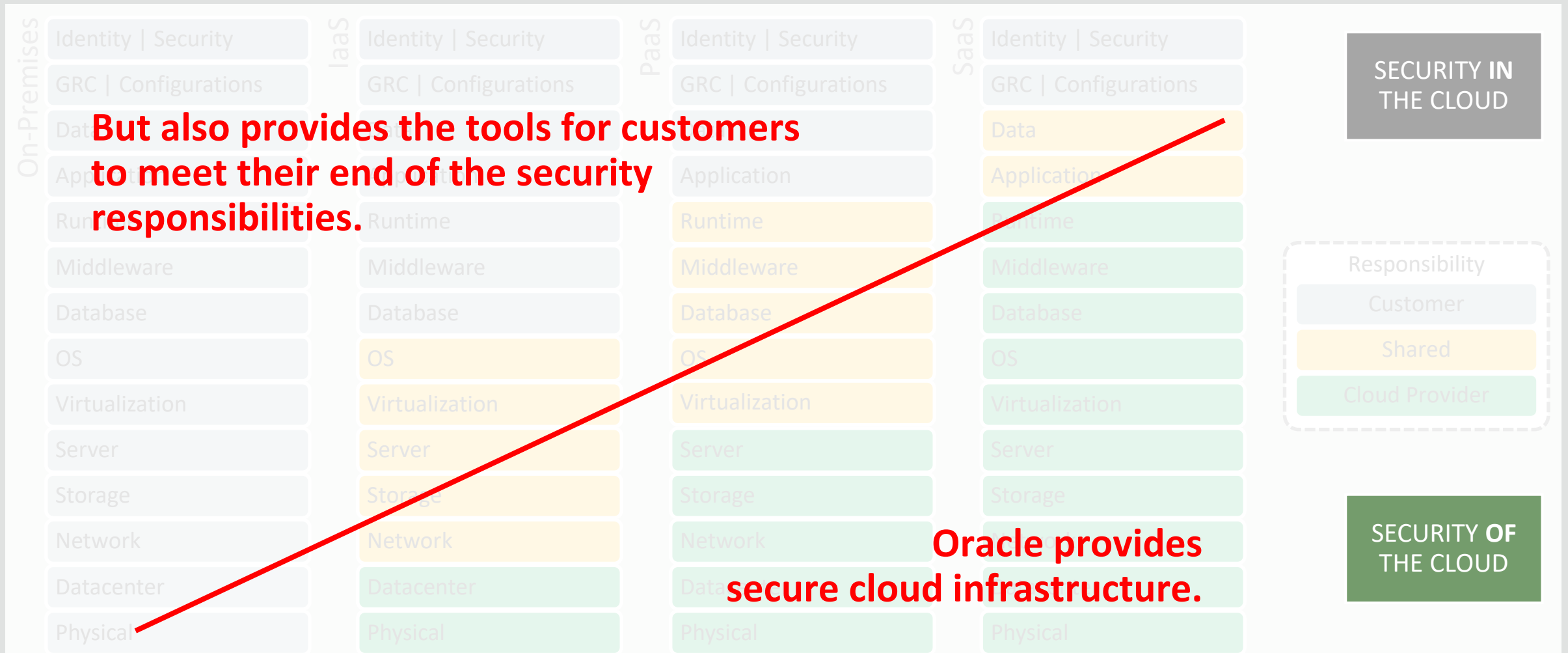
Cloud Platform Security: Shared Responsibilities

“Through 2024, 99% of cloud security failures will be the customer’s fault.” - Gartner



Cloud Platform Security: Shared Responsibilities

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“43% of organizations are not aware of IaaS responsibilities”

Oracle KPMG Cloud Thread Report 2019



72%

Public cloud is more secure
than their own data center

[Oracle.com/CTR](https://www.oracle.com/CTR)

***Does this mean that
all clouds are equal
on security?***



OCI Worldwide Regions & Points of Presence

Protecting Enterprises for More than 40 Years

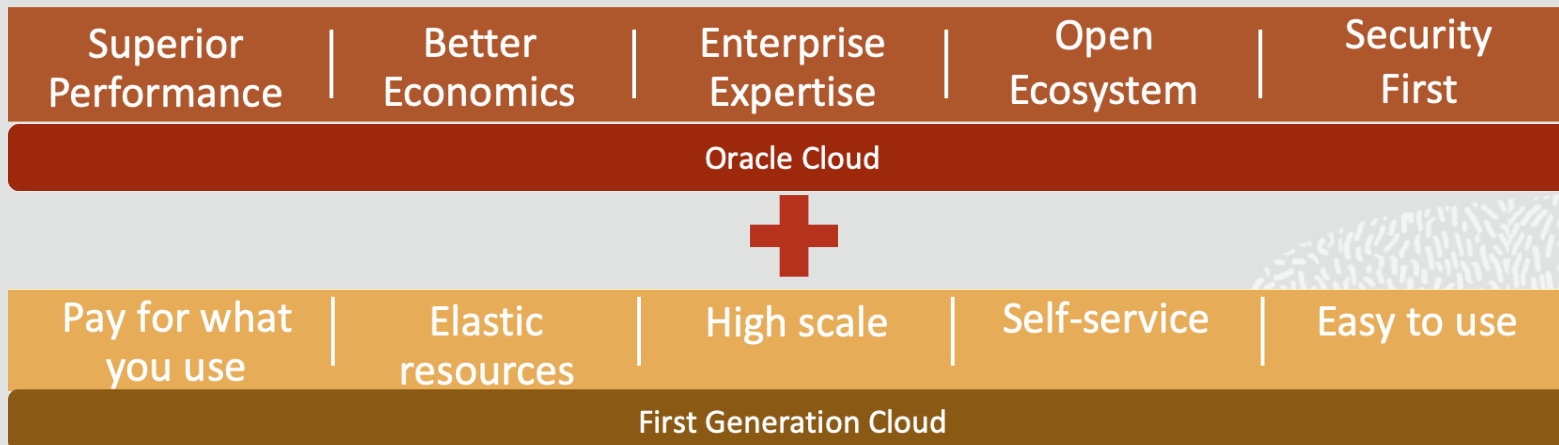
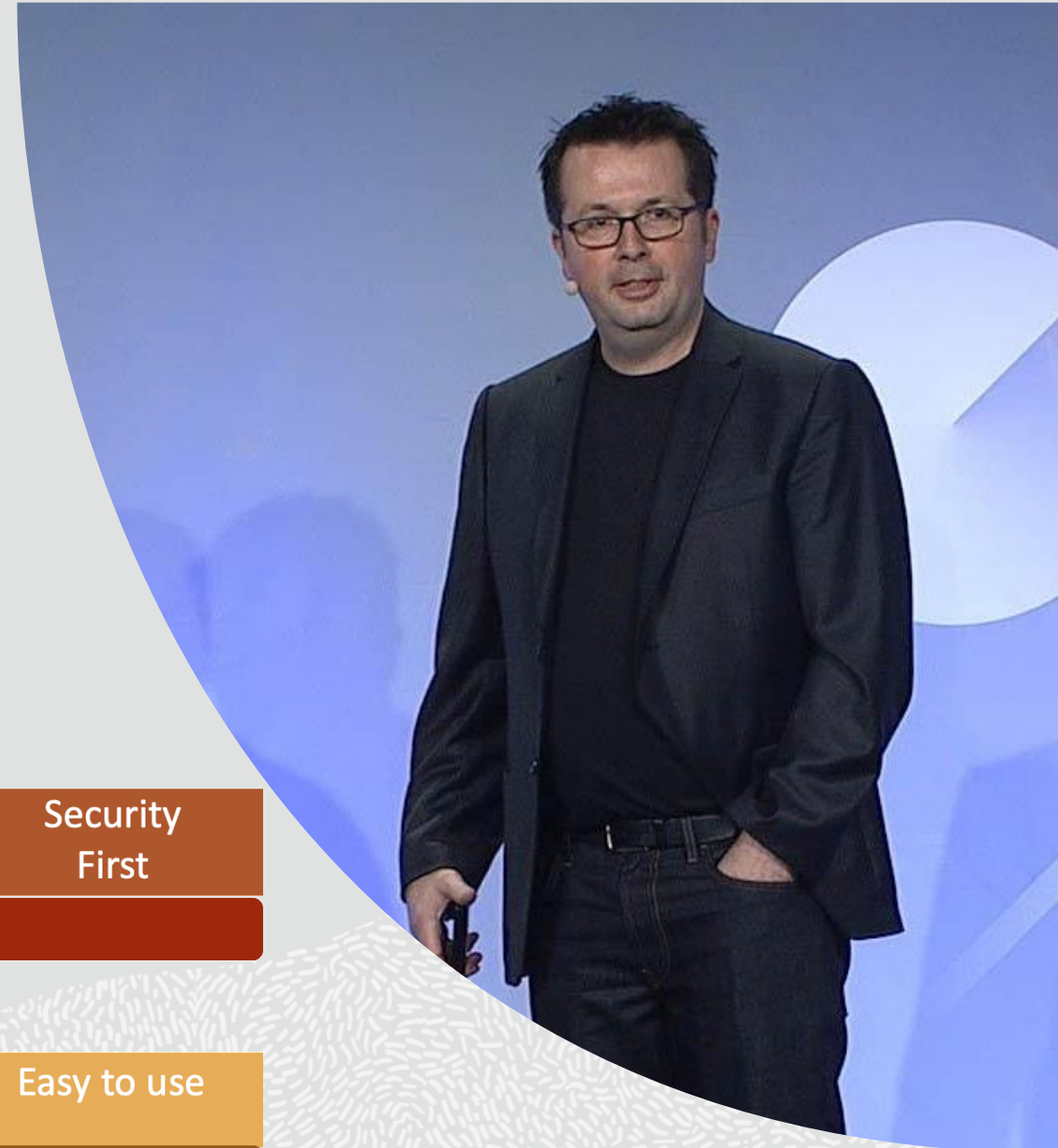


- 8 Commercial Regions, 5 New
- 2 Government Regions, 5 New
- 18 Edge POPs for application security, 5 New POPs
- Distinct geo security profiles
- Automated global edge protection
- 2000+ cloud security personnel
- 24/7 monitoring
- Trillions of signals collected daily
- Internet and Cloud Intelligence

The Advantage of Newest to Market

“We took a different technical approach to design a platform for enterprises with the highest data security concerns.”

Don Johnson
EVP Oracle Cloud Infrastructure



OCI Security Strategy

OF THE CLOUD



Security by Design

ON THE CLOUD



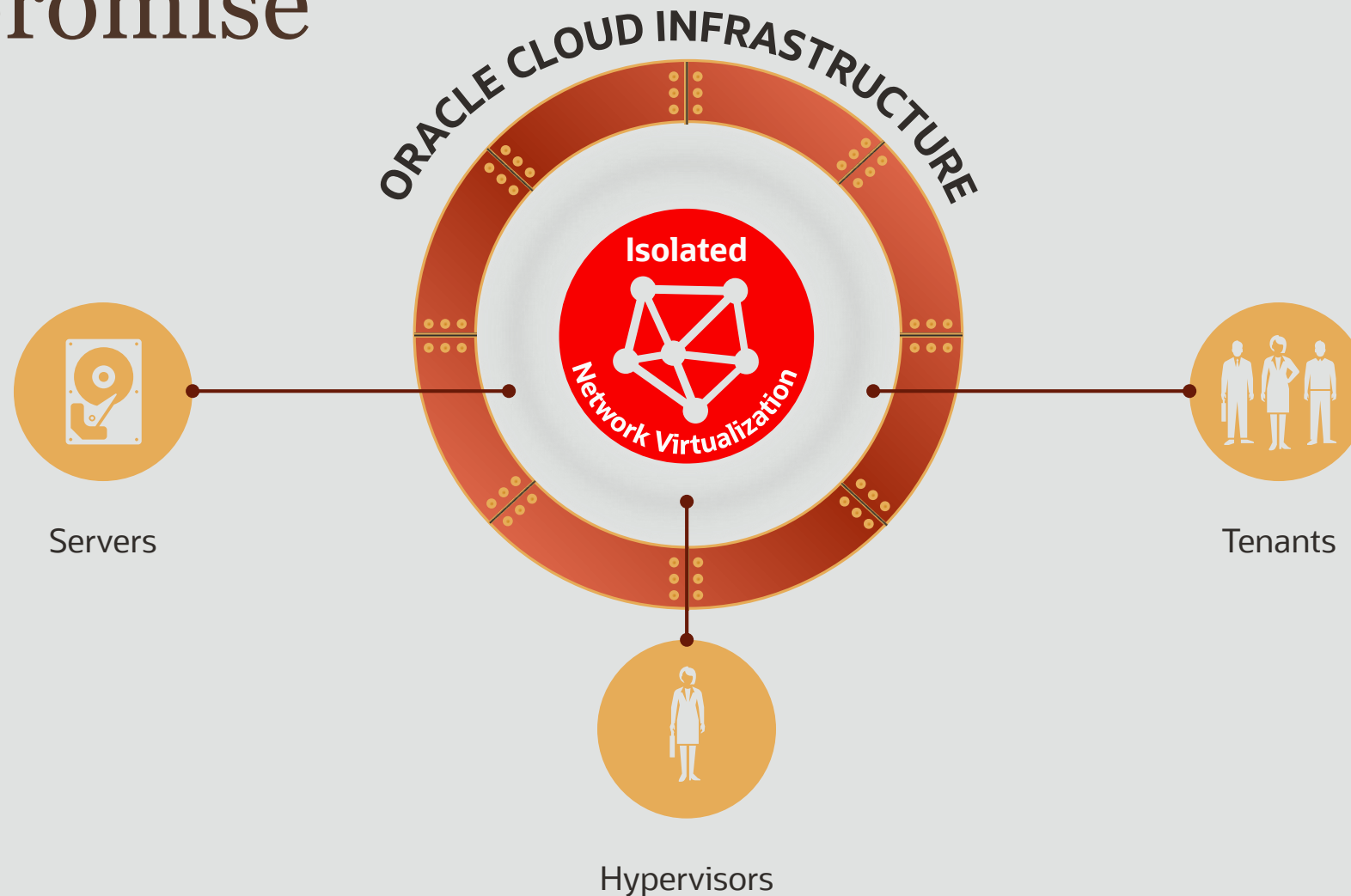
Advanced Control

CROSS CLOUD



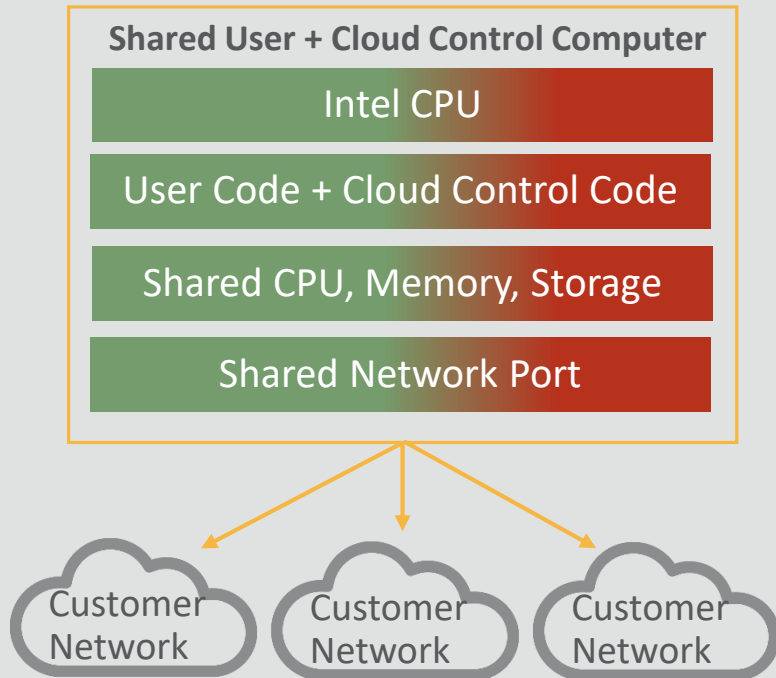
Trusted Approach

Least Trust Design – Assumption of Compromise



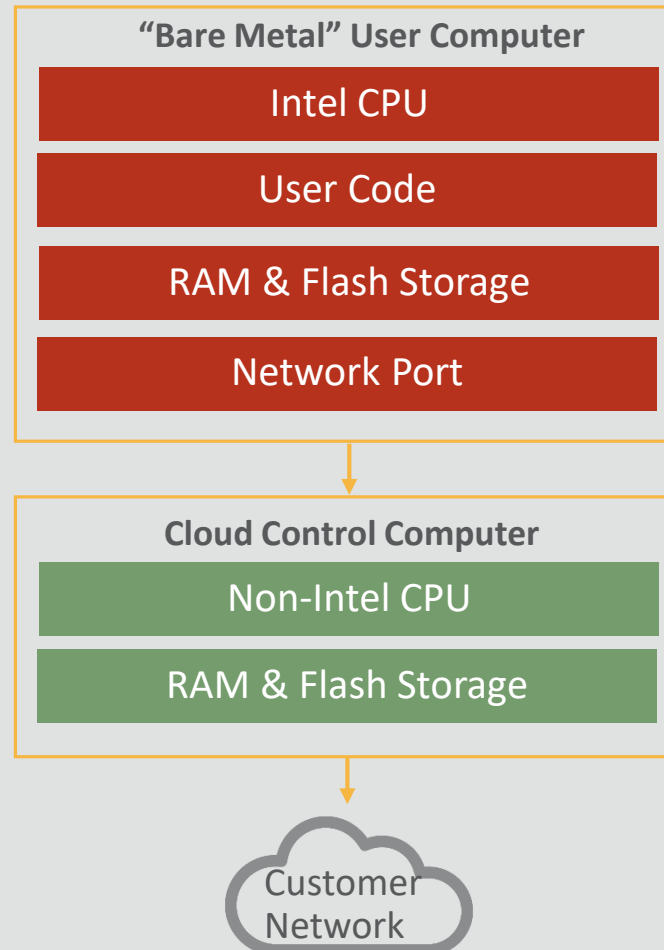
All Gen 1 Clouds Shared Computers

- Cloud provider can see customer data
- User code can access cloud control code



Oracle Cloud Infrastructure Separate Cloud Control Computers

- ✓ Oracle cannot see customer data
- ✓ No user access to cloud control computer

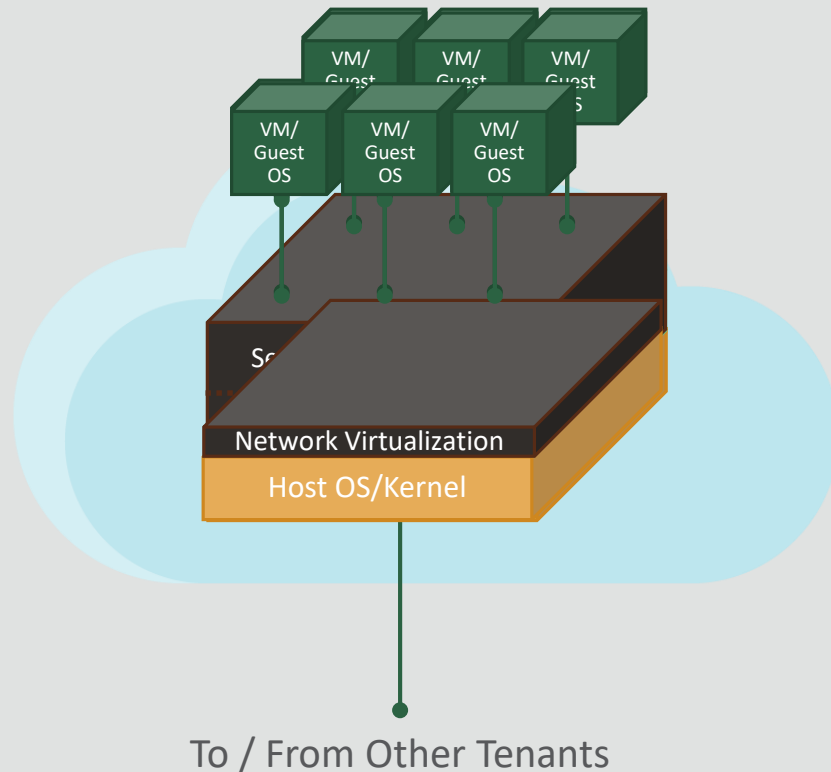


Security by Design

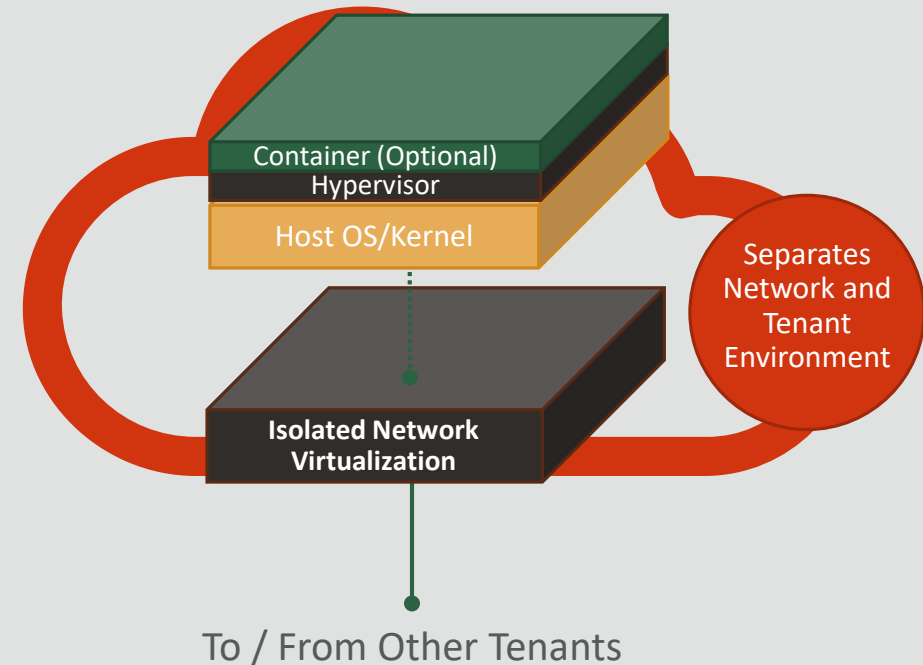
Architected from
the ground up
for maximum
isolation and
protection

Secure Design: Stronger Tenant Isolation

1st Generation Clouds:
Most Prevalent Today

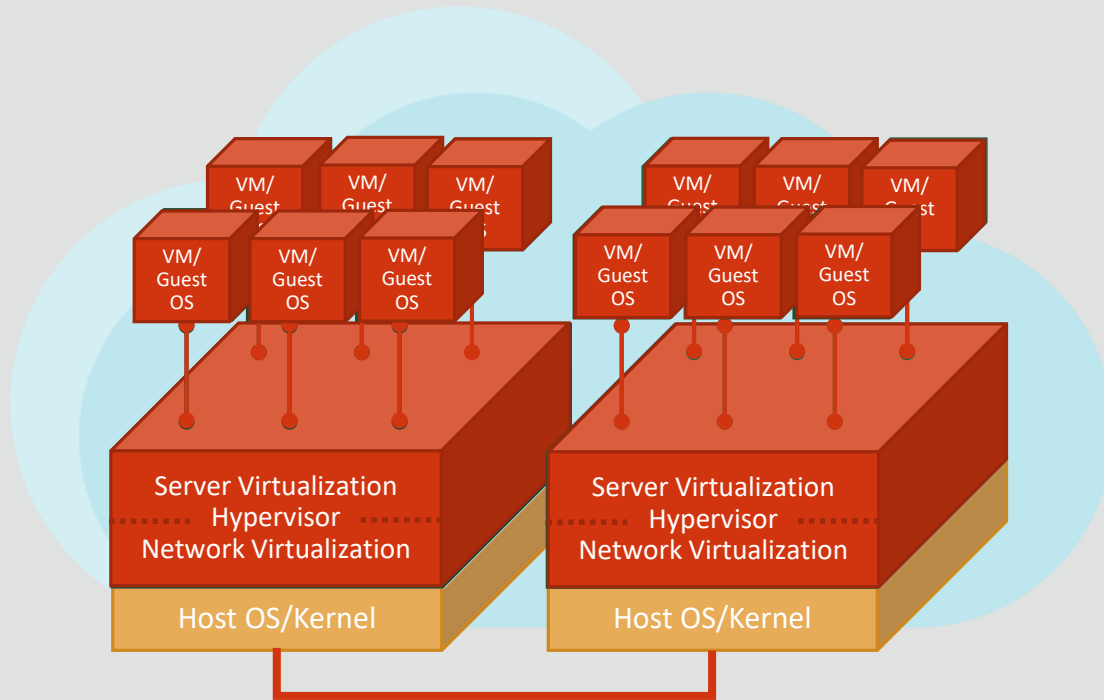


2nd Generation Cloud:
Oracle Cloud Infrastructure-Wide

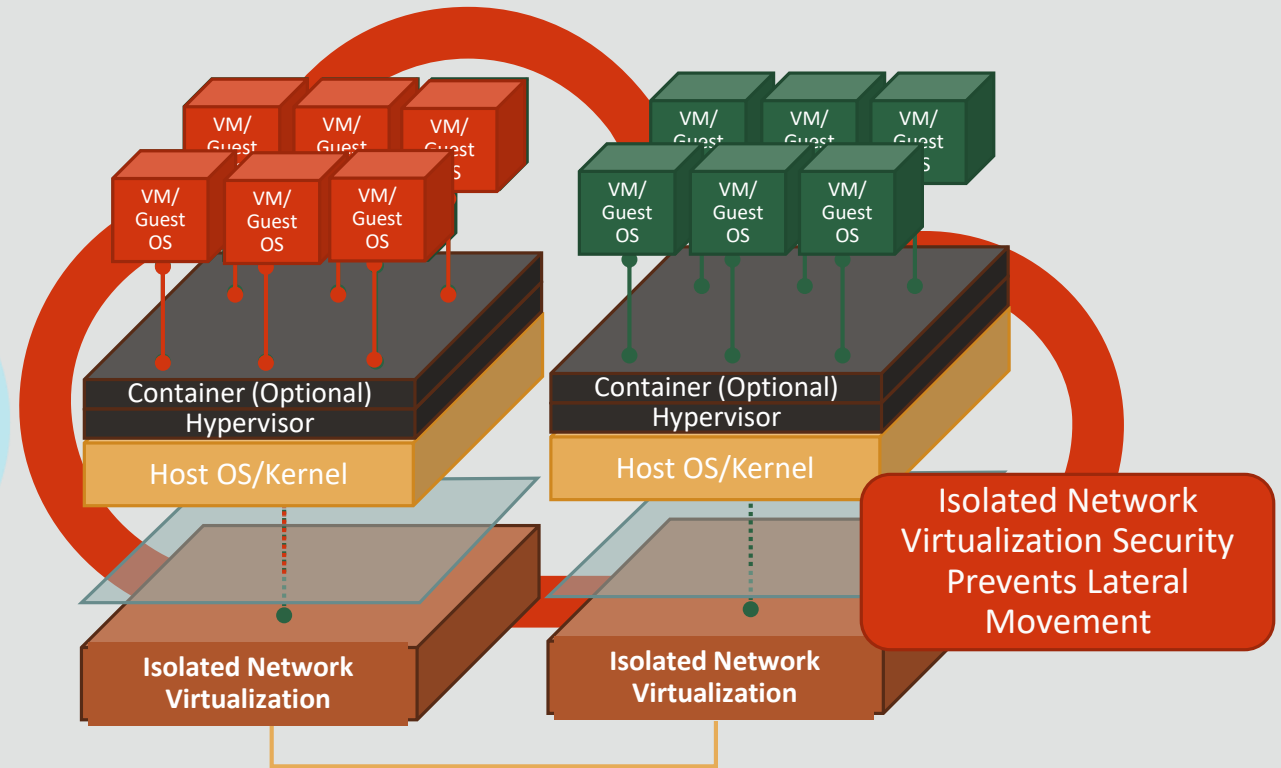


Threat Containment & Reduced Risk

1st Generation Cloud



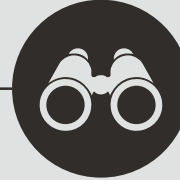
Oracle 2nd Generation Cloud



Secure Design: Bootstrap Trust To Immutable Component



Offensive Security



Hardware Hacking



Penetration Testing

Security Research



Red Teaming



Deep Security Experts

Hackers | Security Researchers | Others
Identify Security vulnerabilities

Defensive Security



Collect
Security Infrastructure



Remediate
Vulnerability
Management

Detect
Security Analytics



Respond
Incident Response



OCI Compliance: Current Audit Programs

Global	 SOC 1 : SOC 2 : SOC 3	 27001 : 27017 : 27018	 Self-Assessment	 US Privacy Shield			
Government	 DoD DISA SRG IL2	 Moderate – Agency ATO	 VPAT – Section 508	 G-Cloud 11 - UK	 Model Clauses - EU		
Industry	 HIPAA	 PCI DSS	 FISC - Japan	 IG Toolkit - UK			
Regional	 GDPR - EU	 BSI C5 - Germany	 TISAX - Germany	 PIPEDA - Canada	 Cyber Essentials Plus - UK	 My Number - Japan	 Cloud Security Principles - UK

Stronger Isolation and Advanced Controls from Core to Edge

OF THE CLOUD



Security by Design

ON THE CLOUD

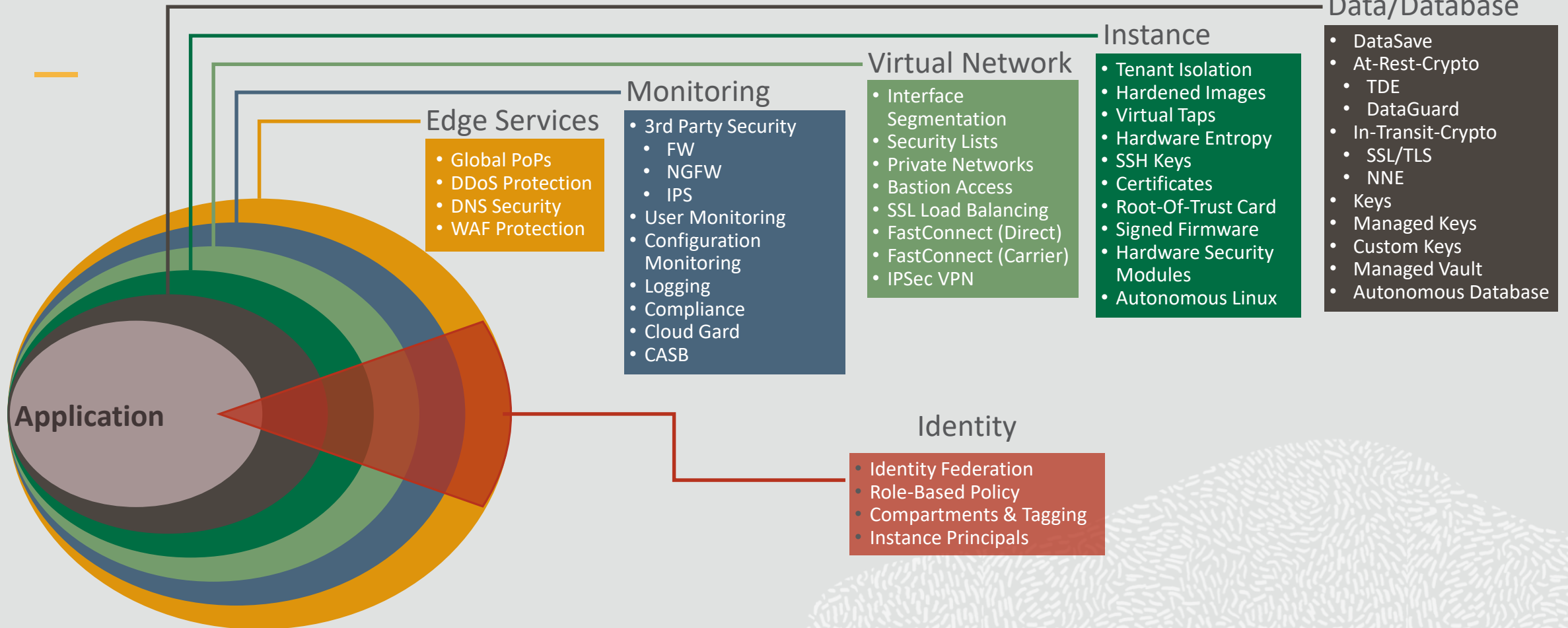


Advanced Control

CROSS CLOUD



Trusted Approach





Security by Design



Advanced Control



Trusted Approach

Automates Security for Critical Workloads

Announced at OOW19



Data Safe



Database Security and Compliance Assessment



User Risk Assessment



User Activity Auditing and Reporting



Sensitive Data Discovery



Data Masking



Cloud Guard (CASB for Oracle)



OCI Unified Security



Collect Security Data



Detect Threats



Identify Misconfigurations



React Automatically



Key Management



For OCI services



Dedicated HSM
(FIPS 140-2 Level 3)



Virtual Vault



Bring Your Own Key



Multi-Cloud Security Solutions



IDCS



Cloud Directory



Identity Lifecycle Management



SSO



Adaptive Authentication



Multi Factor Authentication



OMC



Unified data collector platform



Application Performance Monitoring



Log Analytics



IT Analytics



Infrastructure Monitoring



WAF



Access Control



Threat Intelligence



Bot Challenges

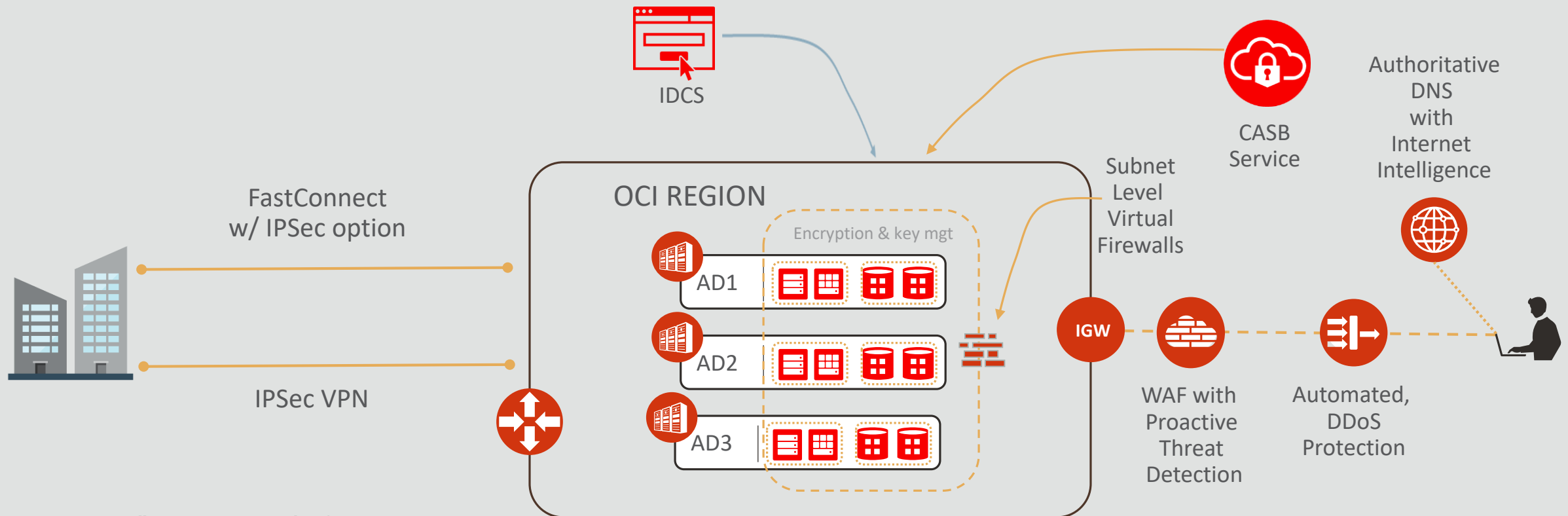


WAF OASP TOP 10 Protections



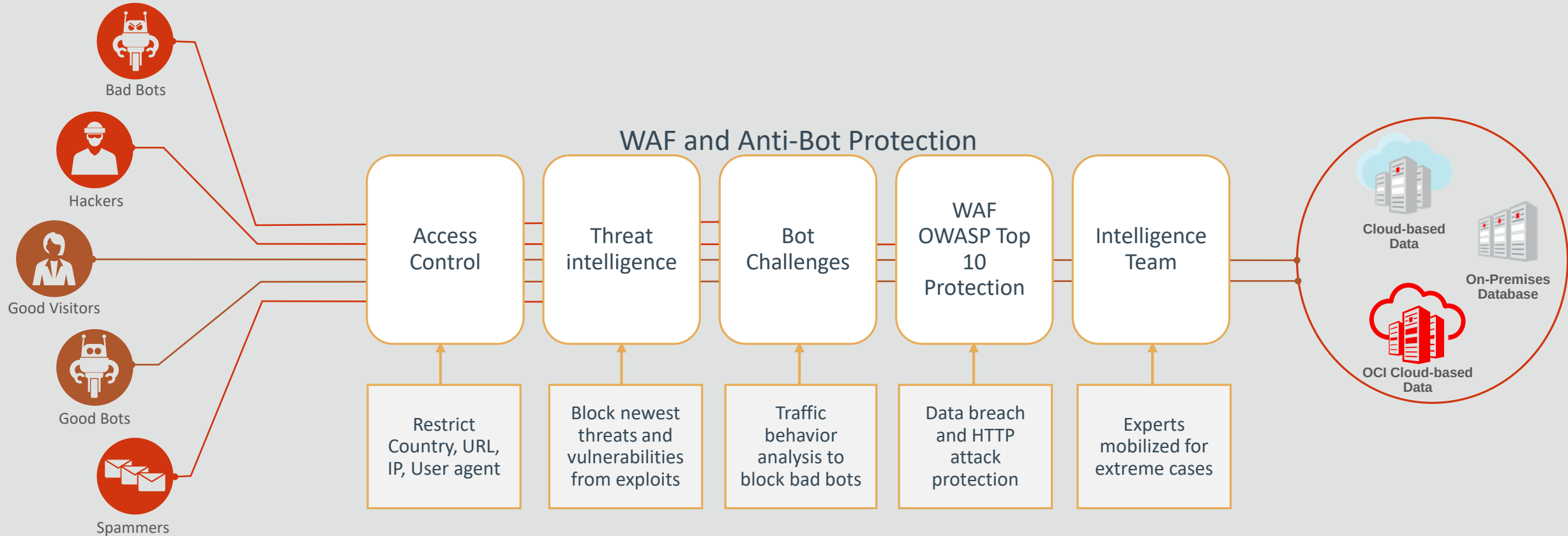
Intelligence Team

Advanced Control: Defense In-Depth & Breadth



- vFirewalls – access control in/out
- Distributed Denial of Service (DDoS) – network layer attack protection
- Web Application firewall (WAF) – application layer attack protection
- Cloud Access Security Broker (CASB) – visibility, compliance, control drift alerting
- Virtual Private Network (VPN) – protection/encryption in transit over Internet & private links
- Domain Name Service (DNS) – managed DNS from Oracle for OCI customers
- Identity & Access Management (IAM) – control who can access and manage OCI resources

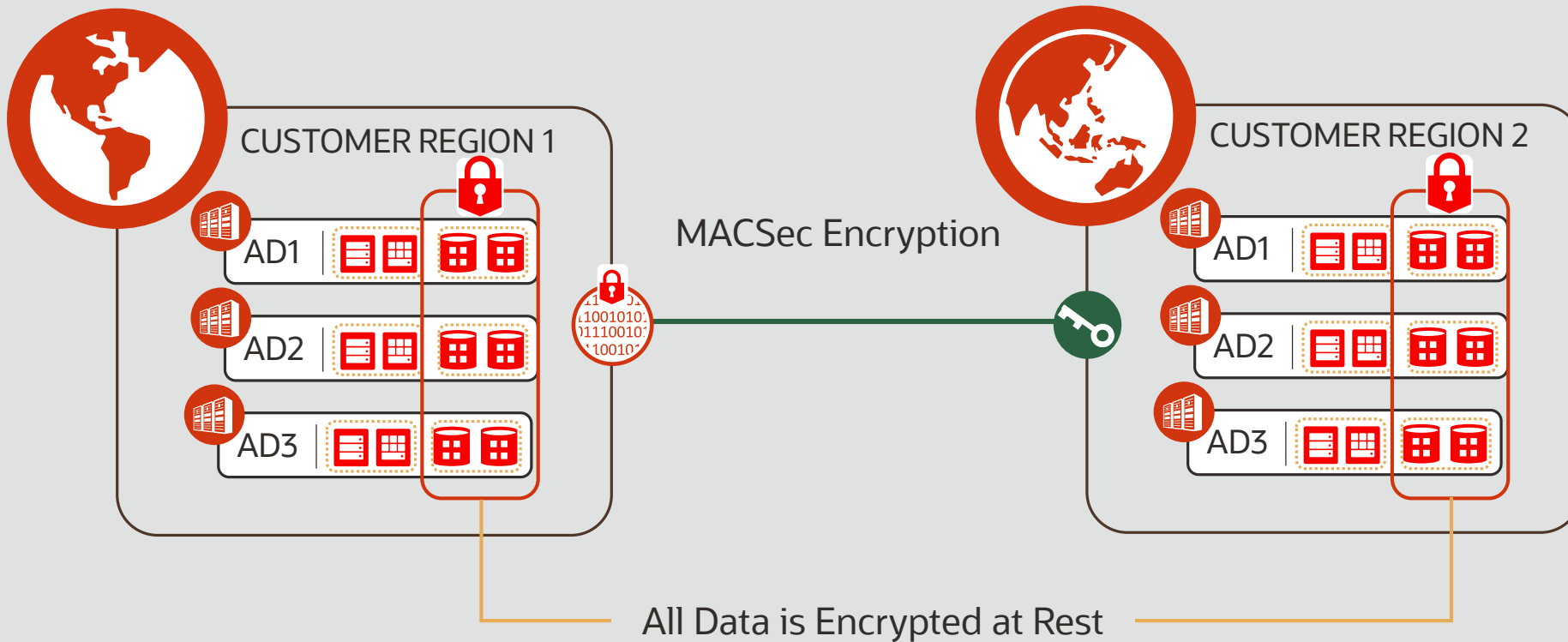
Defense in Depth: WAF, API Security, DDoS



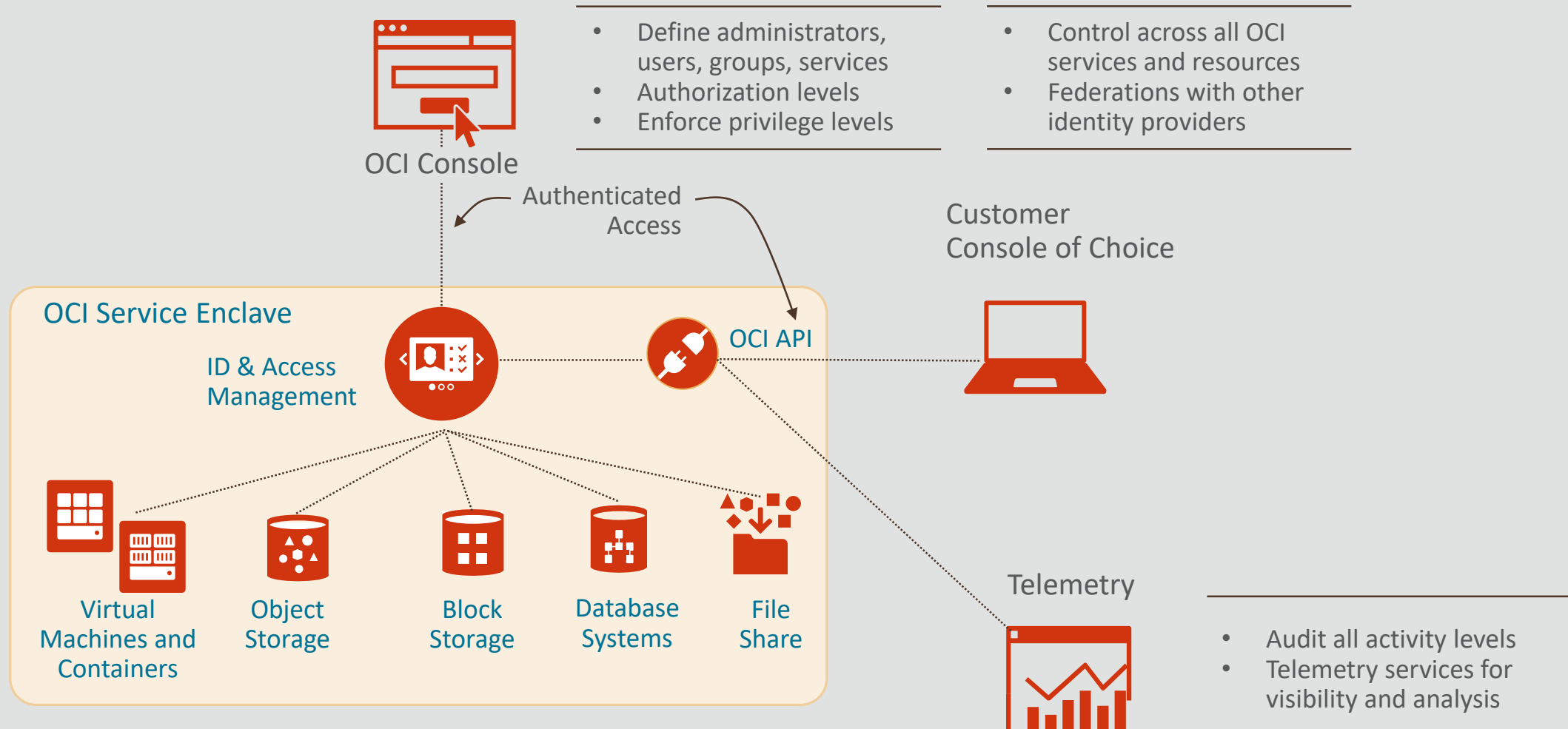
Setup and activation can be done within the minutes.
Cloud native solution, no hardware or software implementation.

Data Encryption At Rest and In Transit

- Customer managed keys (KMS)
- KMS through OCI services and in your apps directly



Identity and Access Management



Cloud Test Drive - OCI Security Day

Secure Your OCI Journey with
OCI Security native features, OCI key
management, CASB, Web Application Firewall
& Identity Cloud Service



Agenda

Welcome and registration	09:00 to 09:15
Oracle Cloud Security: Presentation of the Core to Edge security measures: • Security IN Oracle Cloud Infrastructure • Security OF Oracle Cloud Infrastructure	09:15 to 10:45
Coffee break	10:45 to 11:00
Shared Responsibility model and Closing the OCI visibility gap. CASB introduction.	11:00 to 12:00
OCI consoles presentation – check access to tenants	12:00 to 12:30
Lunch break	12:30 to 13:30
Oracle CASB hands-on Labs - HCM monitoring	13:30 to 14:30
Oracle IDCS hands-on Labs – MFA and Adaptive Sec	14:30 to 15:30
Coffee break	15:30 to 15:45
OCI KMS Show Case - Keys to the kingdom	15:45 to 16:15
Oracle WAF hands-on - Attack and protect a Web app	16:15 to 17:15
Oracle CASB lab conclusion	17:15 to 17:30
Q&A and Wrap-up	17:30 to 18:00

Duration of the course:
1 Day

Audience:
Oracle Cloud & OCI
customers

How is it delivered:
On site meeting
(Customer or Oracle
premises)
(Virtual or Physical)

Pre-Requirements

- Laptop
- Universal Credits or
Free Oracle Cloud
Trial account

What's Next: NEW: *Oracle Data Safe* Launch



[Registration Link HERE](#)

Agenda

- GDPR: what happened after almost 18 month?
- Oracle Database Security - Building your risk mitigation plan- 5 steps journey into continuous and by design Data Security
- Oracle Data Safe Cloud Service- Expand upon the self-securing capabilities in Autonomous Database
- Monitor database activity to quickly discover suspicious attempts to access data to any Oracle Database
- Strengthen your security posture

For More Information

Connect with us for more info
or demo of specific technologies like
Identity Cloud Service, CASB, OCI Security

[Cloud.oracle.com/security](https://cloud.oracle.com/security)

ORACLE
Security



[@OracleSecurity](https://twitter.com/OracleSecurity)



blogs.oracle.com/cloud

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Thank You



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