



Club Utilisateurs  
de solutions **Oracle**

# COMMUNAUTÉ OCI

WEBINAR MIGRATION VERS OCI MARKETPLACE ET MISE EN PLACE DE  
« DISASTER RECOVERY » SUR OCI

*Mardi 25 juin 2024*

**ORACLE**

# Agenda

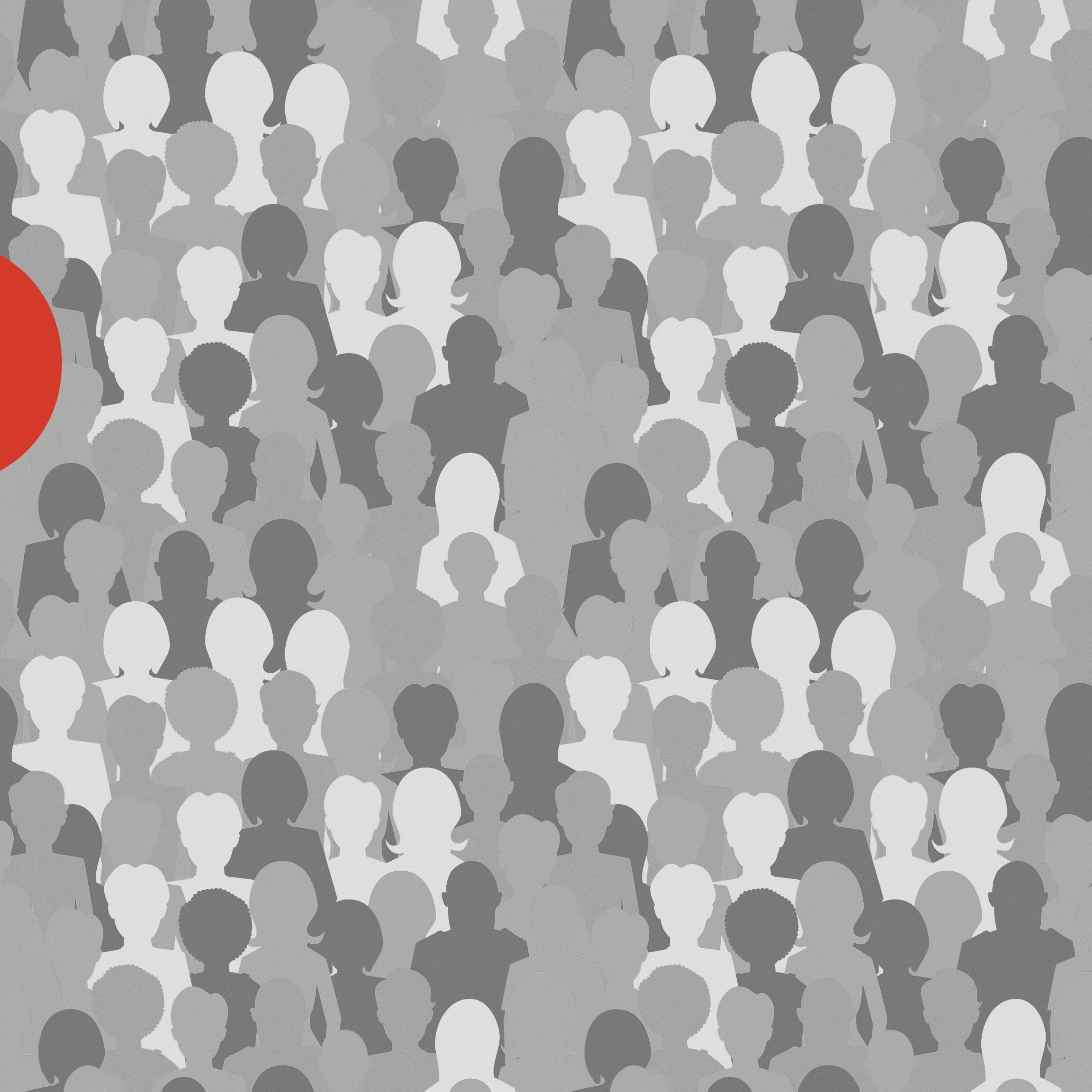
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- 1 **Introduction Club**
- 2 **Présentation SQORUS**
- 3 **Présentation AXA**
- 4 **Marketplace OCI**
- 5 **Disaster Recovery sur OCI**
- 6 **REX AXA**

# MUF

Club Utilisateurs  
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# COMMUNAUTÉ OCI WEBINAR MIGRATION OCI & RETOUR D'EXPÉRIENCE

*Mardi 25 juin  
11h00-12h00  
En distanciel*



**CLUB UTILISATEURS  
DE SOLUTIONS ORACLE**

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# ÉVÈNEMENTS À VENIR

- ✓ **ATELIER | HR Hub**  
Mardi 2 juillet 2024
- ✓ **WEBINAR | ERP Cloud – présentation de la nouvelle release**  
Jeudi 11 juillet 2024
- ✓ **JOURNEE UTILISATEURS 2024 (dont un atelier OCI - REX Migration Ouisof)**  
Mardi 1<sup>er</sup> octobre 2024
- ✓ **WEBINAR | JDE – testing et expériences utilisateurs**  
Mardi 17 septembre 2024
- ✓ **WEBINAR | JDE – développement avec JDE**  
Jeudi 14 novembre 2024



- 1. Migration et utilisation des services Cloud vers Marketplace**
- 2. Mise en place d'un Disaster Recovery**



**Alban GEBHARD**

Infrastructure and release manager  
AXA GROUP



**Sid Ali BALDJI**

Directeur d'activité Plateformes Cloud & DevOps  
SQORUS





SQORUS

People And Solutions That Matter

**Présentation  
SQORUS**



# Le Cabinet Conseil SQORUS

Accélérer la transformation de vos fonctions RH – Finance - IT



**300+**  
Collaborateurs



**65%**  
De projets au forfait



**43M€**  
en 2023



**75%**  
de projets  
internationaux



**30+ ans**  
d'innovation



Conseil  
en stratégie



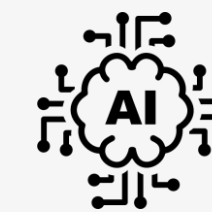
Implémentation



Data  
management



Data  
Intelligence



Artificial  
Intelligence



Amélioration  
continue



Change  
management





# Présentation AXA



# Our playground makes the challenge

Considering our diversity...

...How to secure efficiency and compliance of our Corporate activities...

... while raising the bar of our HR practices everywhere?

**61 countries**



**Country based insurance companies**



...


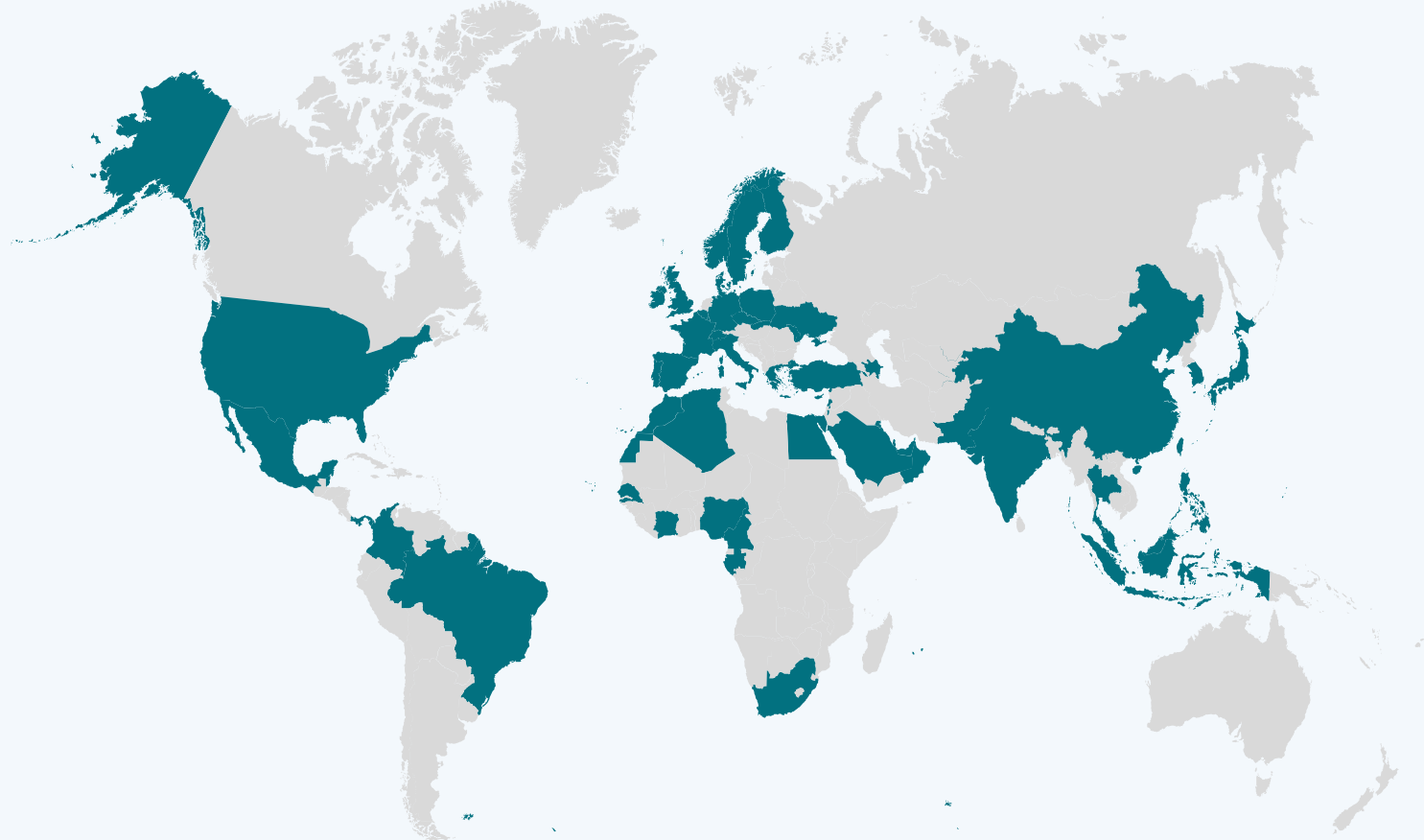
**Transversal companies**



**126 K**  
**Employees**  
(165 K incl. distributors)

**107 M**  
**Customers**

**No.1**  
**Best Insurance Global Brand**  
for the 9th consecutive year  
(Interbrand)



# Building a common & integrated HRIS to support our HR processes



# OCI Marketplace



## Key Features of OCI Marketplace

- Wide Range of Applications and Services
- Easy Deployment
- Integrated Billing
- Security and Compliance
- Scalable and Reliable
- Support and Documentation

## Benefits of Using OCI Marketplace

- **Time-Saving:** Reduce time spent on setting up and configuring applications.
- **Reliability:** Trust that the applications are tested and optimized for OCI.
- **Flexibility:** Choose from a wide array of solutions to meet specific business needs.
- **Cost-Efficiency:** Optimize costs with various pricing models and integrated billing.

# Disaster Recovery”

Mise en place de Disaster Recovery sur OCI

## What is a Disaster Recovery ?

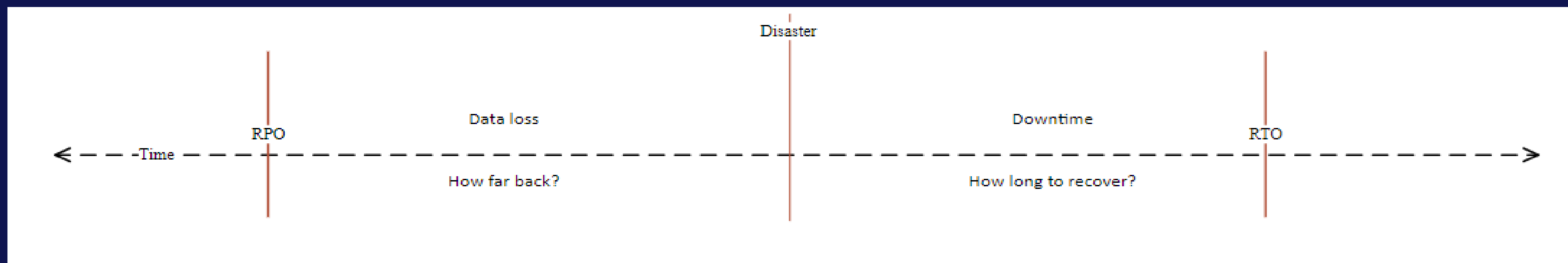
- A well-architected disaster recovery (DR) plan enables to recover quickly from disasters and continue to provide services to your users.
- DR is the process of preparing for and recovering from a disaster. A disaster can be any event that puts your applications at risk, from network outages to equipment and application failures to natural disasters.

## DR Concepts

- The **RTO** is the target time within which a given application must be restored after a disaster occurs. Typically, the more critical the application, the lower the RTO.
- The **RPO** is the period after a disaster occurs for which an application can tolerate lost data before the disaster begins to affect the business.

## DR Approaches

DR Method	RPO	RTO	Cost
Backup & Restore	Hours	Hours	\$
Warm Standby	Seconds	Minutes	\$\$
Active/Active	Near zero	Potential zero	\$\$\$



- **OCI Backup and Recovery:**

- OCI Object Storage: Used for storing backups of databases, applications, and other critical data. It supports versioning and cross-region replication.
- OCI File Storage Service: Provides persistent and shared storage for use by compute instances, supporting snapshot and cross-region replication capabilities.
- OCI Block Volumes: Supports volume backup and cross-region replication, ensuring that data stored in block volumes can be quickly recovered in case of an outage.
- OCI Database Backup Service: Automates the backup and recovery of Oracle databases. Supports both on-demand and scheduled backups.
- OCI Data Guard: A high availability, disaster recovery, and data protection solution for Oracle Databases. It maintains standby databases as copies of the production database, which can be used for failover in case of primary database failure.

- **OCI Resource Manager: An infrastructure as code (IaC) service that automates the provisioning and management of OCI resources, supporting quick re-establishment of infrastructure in a disaster recovery scenario.**

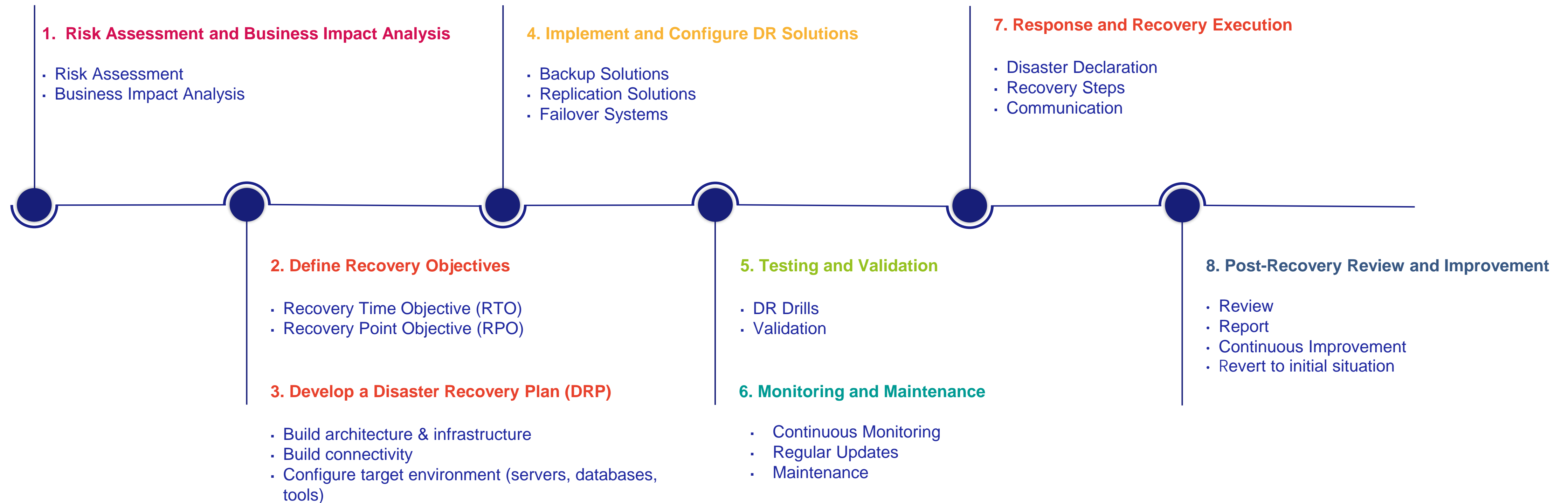
- **(OCI) SDK: Plays a crucial role in disaster recovery (DR) by providing tools and capabilities to automate, manage, and streamline DR processes.**

- **OCI Events and Notifications: Can be configured to monitor infrastructure and alert administrators in case of issues that might lead to a disaster scenario.**



# DR The SQORUS Way

SQORUS methodology to design and build a DR strategy



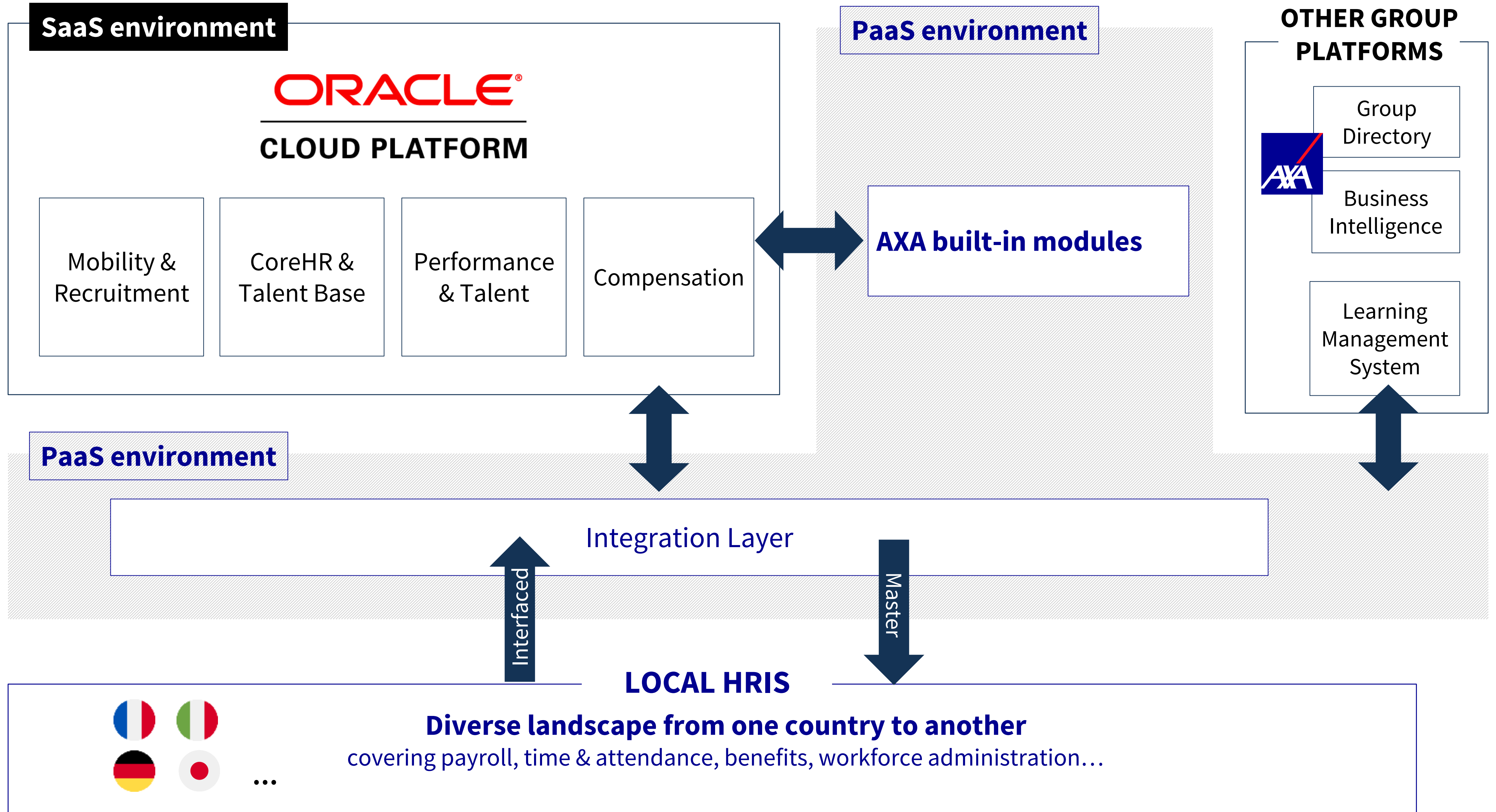


# REX AXA

Marketplace & DR



# Snapshot 1: our architecture at a glance



# Scope of DR Project in Oracle Marketplace

- The project scope is to implement a Disaster Recovery site for PAAS Application into a different Europe country. Target is to be able to continue activity when PAAS Primary site is no more available according to minimum interruption of service and minimum lost of data (RPO / RTO).
- Target is to have a DR capacity for the **production** servers only
- Keep same security level than **production**
- Expected result and document to provide:
  - Validate DR Capacity
  - Validate RPO / RTO measurement

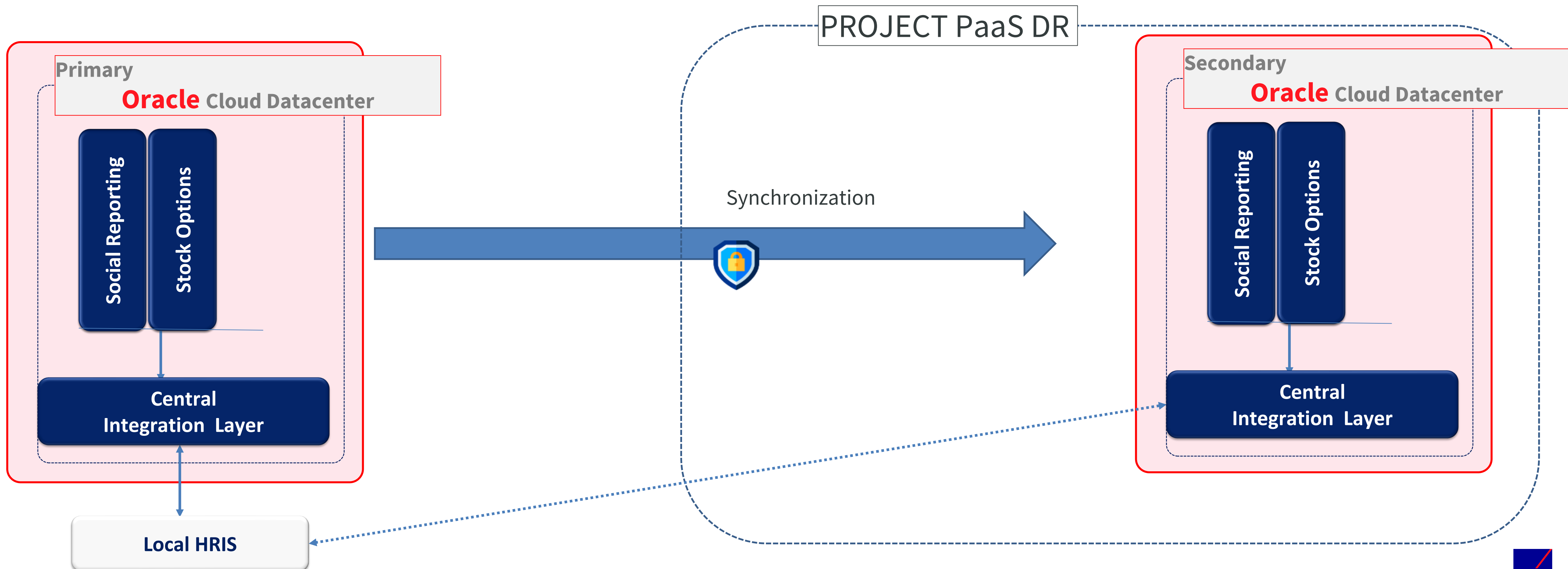


# Solution Architecture

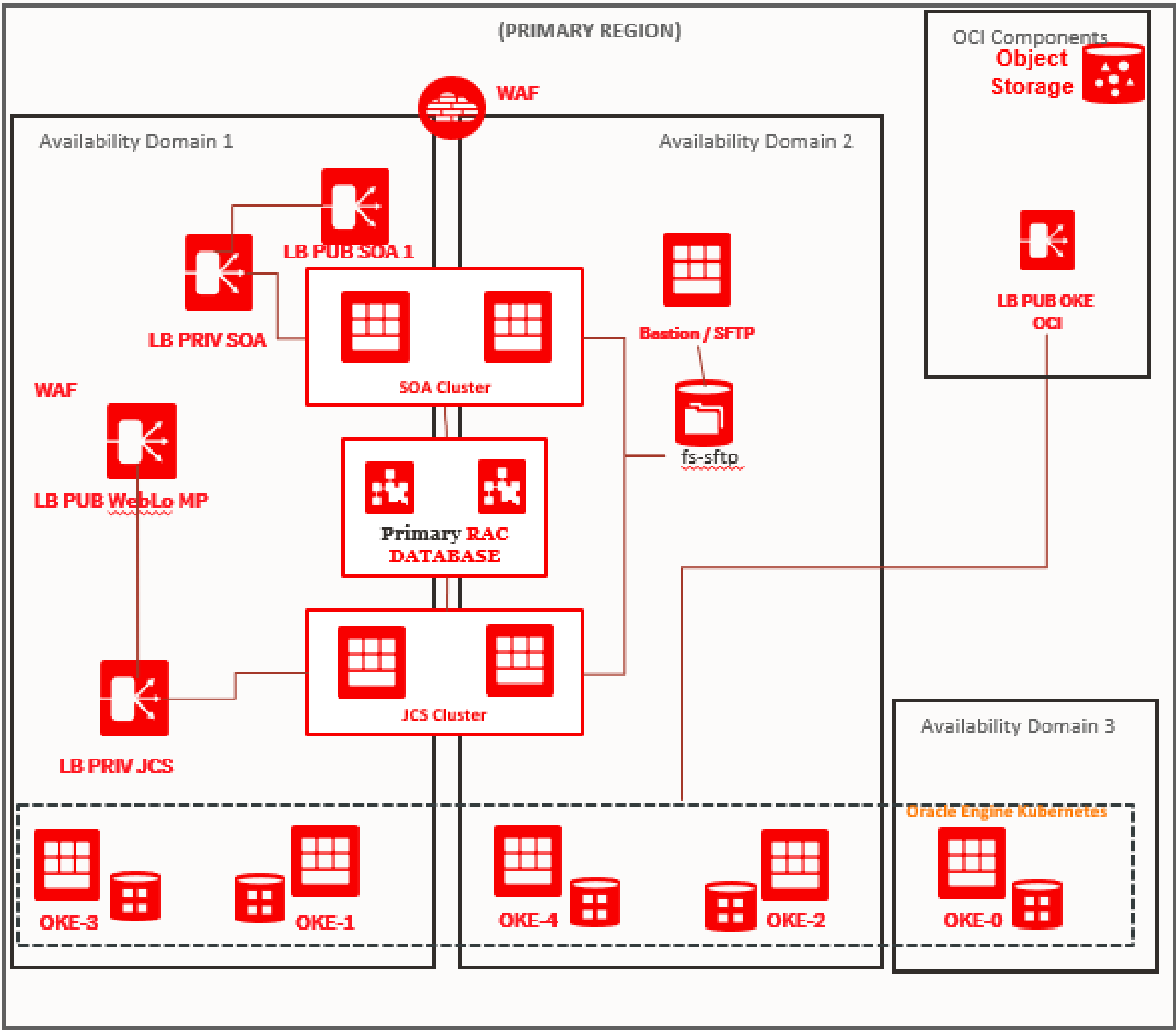


# PaaS DR Solution

- Define a location out in Europe into a different country but with same performances and synchronize all data to this new location

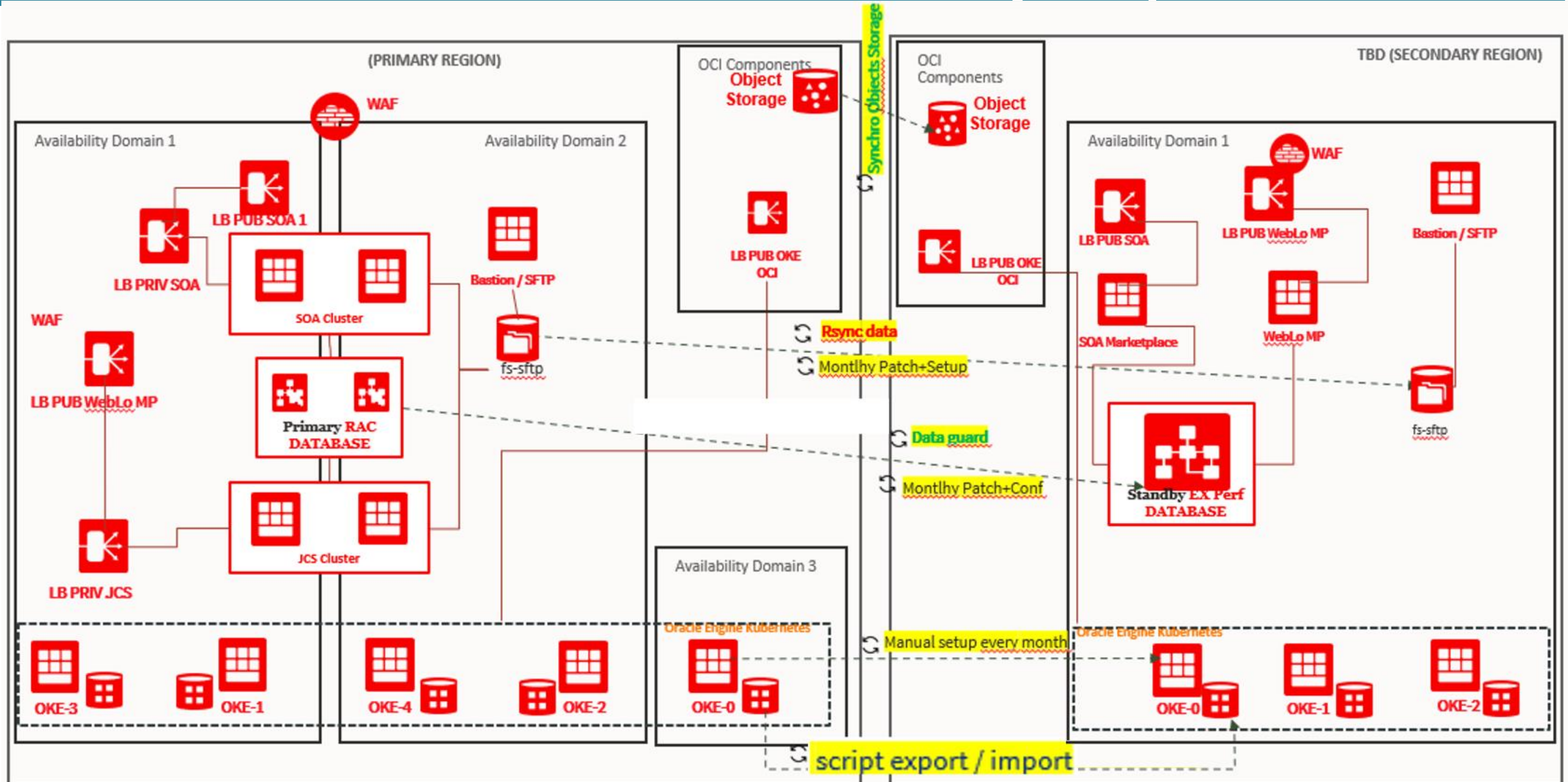


# Source Architecture


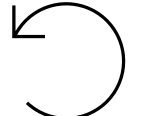





# Architecture with Disaster Recovery components



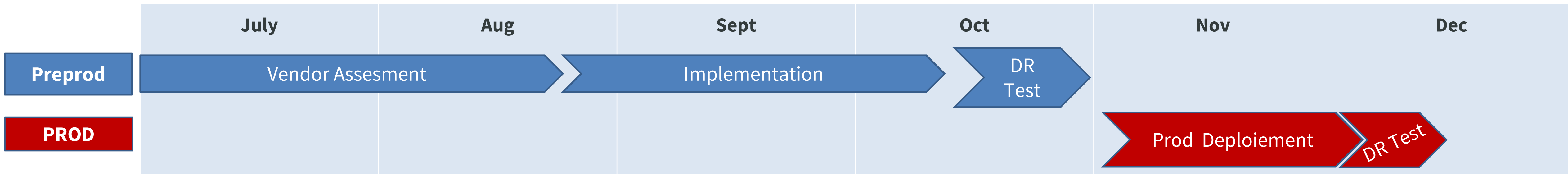
# Synchronization tools

 <b>Component</b>	 <b>Tool</b>	 <b>Frequency</b>
Oracle <b>SOA Suite</b>	Oracle Data Guard ( <b>rsync</b> )	Automatic
OKE components ( <i>Gravity / jasper..</i> )	<b>Velero</b> (can run with OKE and use Oracle Object storage to backup and restore Kubernetes objects)	Automatic <b>daily</b>
Oracle <b>Objects storage</b>	a replication policy on the source bucket that identifies the region and the bucket to replicate to	Automatic (minutes)
VM Shared <b>Files</b> System and <b>sFTP</b> Server	Lsyncd (free) open source, and configurable data replication solution that can deliver RPO	Automatic (minutes, s)
Oracle <b>Weblogic</b>	manually apply configuration changes	<b>monthly</b> during maintenance
<b>OCI</b> configuration (setup, security rules, users...)	Manual apply configuration changes	<b>monthly</b> during maintenance



# Project Planning / Cost

# Project Planning and Cost



## ■ Plan:

- **Vendor Assessment** (+ Inventory / scoping) :validate the Vendor DR capacity
- **Implementation** DR Site with all components, Unit Tests, Test Flow setup
- **DR Test**: Perform a full switch from Preprod PAAS platform (primary site) including DNS switch; Validate the PAAS Test availability/functionalities into **secondary site**, provide expected documents, proof, DR status. Synchronize data from PAAS Test back (Secondary site -> primary site), switch back, Test PAAS (primary site), reactivated Synchronization (Primary -> Secondary). Validate end of operation
- **Production Deployment**: Deploy production setup to DR Site, **Flow** setup and activate synchronization mechanism
- **Production DR Test**: Perform a switch from PAAS Prod platform (primary site) including DNS switch; Validate the PAAS Production availability / functionalities into **secondary site**, provide expected documents, proof, DR status. Synchronize data PAAS back (Secondary site -> primary site), switchback, Test PAAS (primary site), reactivated Synchronization (Primary -> Secondary). Validate end of operation

# Cost

- **Project Team**

- **Architects, Administrators:** BAU Mode : 40-50 MD of senior consultant
- **Infrastructure Costs :** DR new **services** cost (DB / LB /WAF / APEX / SOA / VM / Network)  
1/4 of Current Production platform cost
- **Oracle Consulting :** included in BAU Contract

- **Third Party Team**

- PAAS Integration Team (5 pers) : to validate / test / adapt program
- **2 PAAS Solution Leader**
- **10 Local Integration IT Leader** (to manage local changes, DNS, tests)

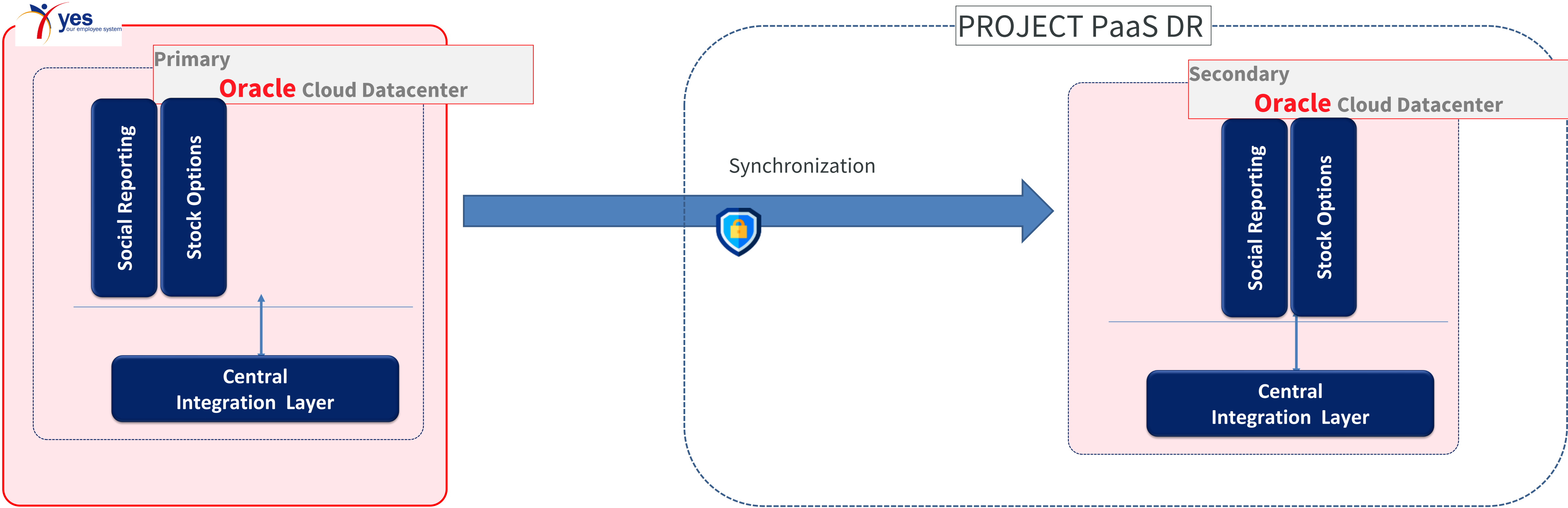


# DR Implementation

# PaaS DR Implementation

UPDATED

- After implementation the **synchronization** is done one way on delta mode every day (DB, OKE, sFTP), a dedicated control is done on data synchronized to confirm run of synchronization (no control on data quality)
- **Setup** is deployed on monthly basis manually and a full DB synchronization is redo



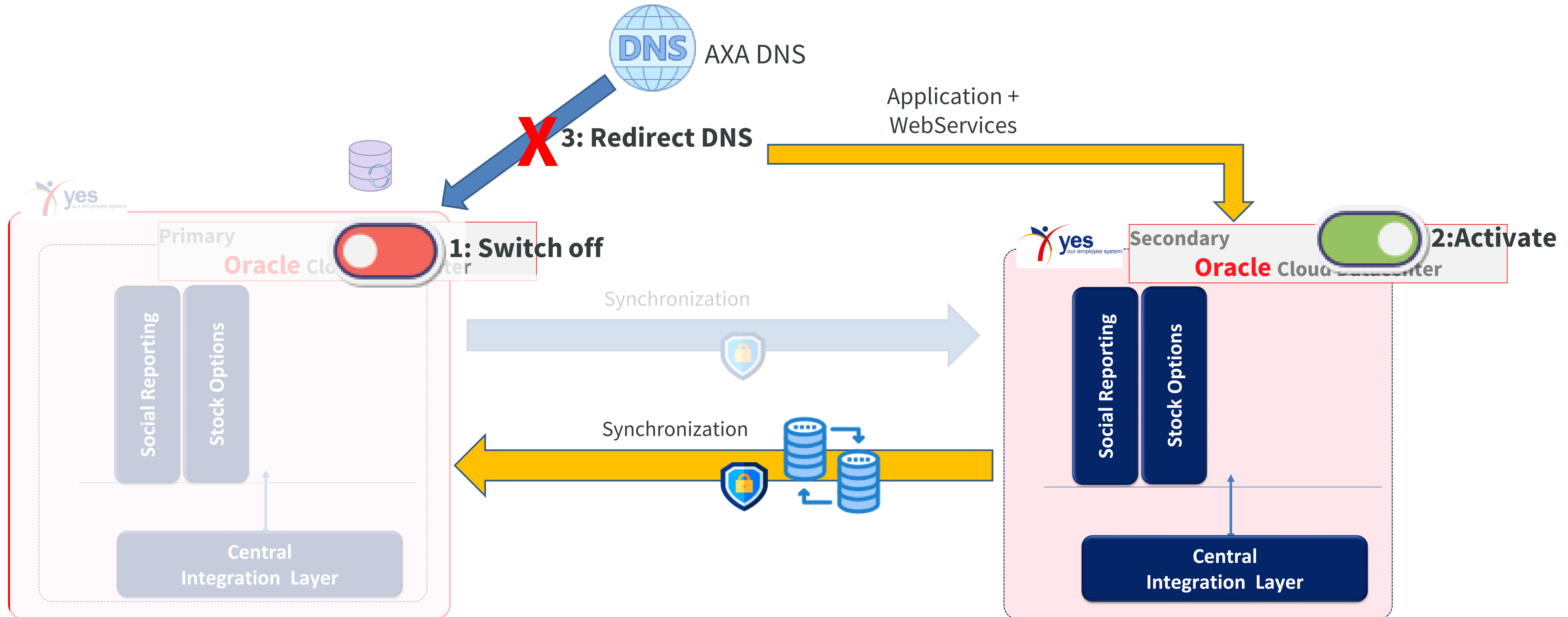


# DR Exercice



# PaaS DR Run Test

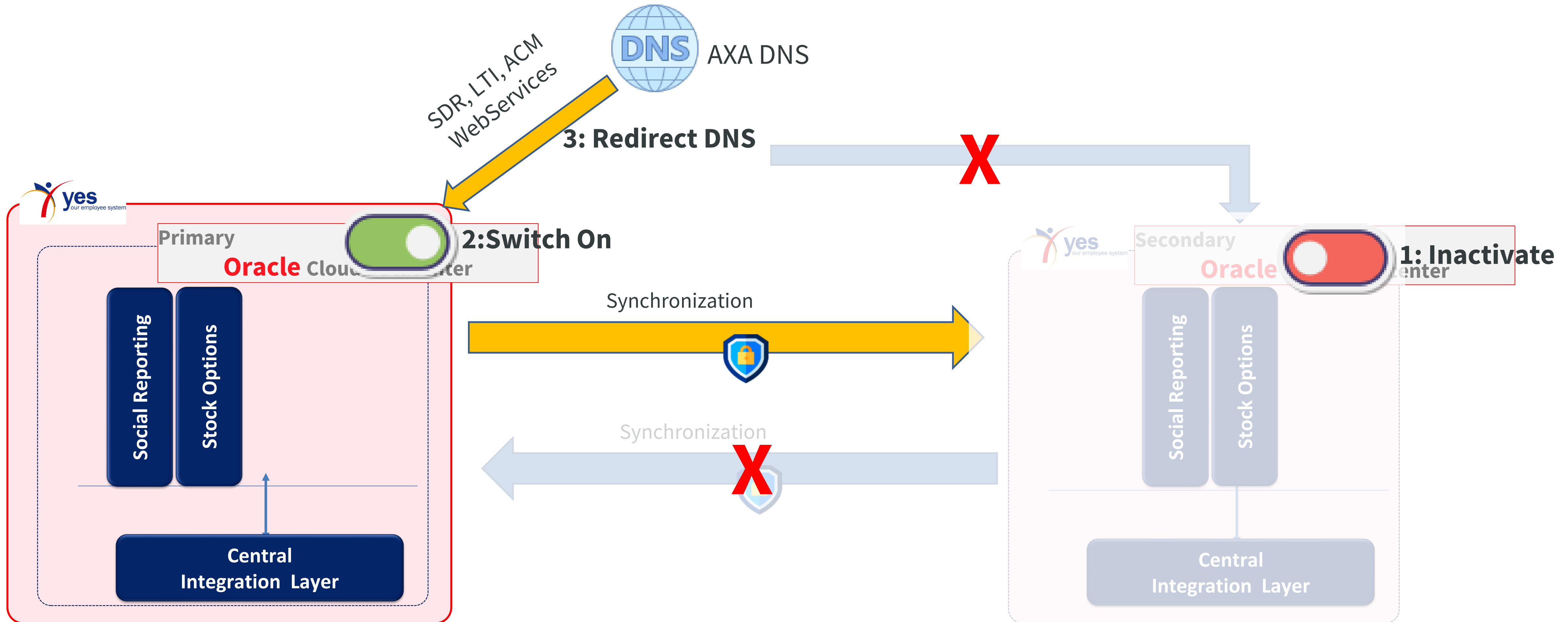
- Disaster Recovery Plan Exercise **rules** are Switch **OFF** the **primary** site, activate the **secondary** site (Action 2) with a DNS switch (Action 3)
- Confirm **secondary** site is working fine (technical test, volume, data, interfaces and functional) and collect evidences
- Inactivate Secondary site and reactivate primary site



FTP yes paas ODS : sftp.YESPAAS2..

# END OF - PaaS DR EXERCICE

- After the control, Reactivate primary site and synchronization





# Conclusion

# Conclusion

- What run **Well**:
- Oracle CSM involved in this project. Oracle Assessment on solution / Architecture
- **Efficient** Technical Workshop with **Senior Architect** to identify /test best solution
- All actors good **coordination** have followed the synchronization (Senior consultant)
- Recommendation
- Challenge business need why they want to have a Disaster Recovery Plan
- Verify to have all up-to-date documentation on current solution and have good project skill/competencies involved
  - Experimented Project **Senior** with efficient **Communication** / **Coordination** plan
  - Senior IT Consultant to identify the best DR Solution and synchronization tools
- Define Go Live and Test planning and get agreement of all impacted users to avoid any escalation
- Define clearly the expected result (Test result, RTO, RPO)
- What **difficulties** exposed
- **\$\$** Budget (project done in BAU mode)
- Get **scheduling** approval for production DR Exercise
- Get all up-to-date architecture flows network including in-progress projects
- Coordinate and monitor all synchronization tools
- Areas of improvement



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