

# High level plan for integration of Oracle cloud Database resources in CERN IT BC&DR project

2023 CERN openlab Technical Workshop

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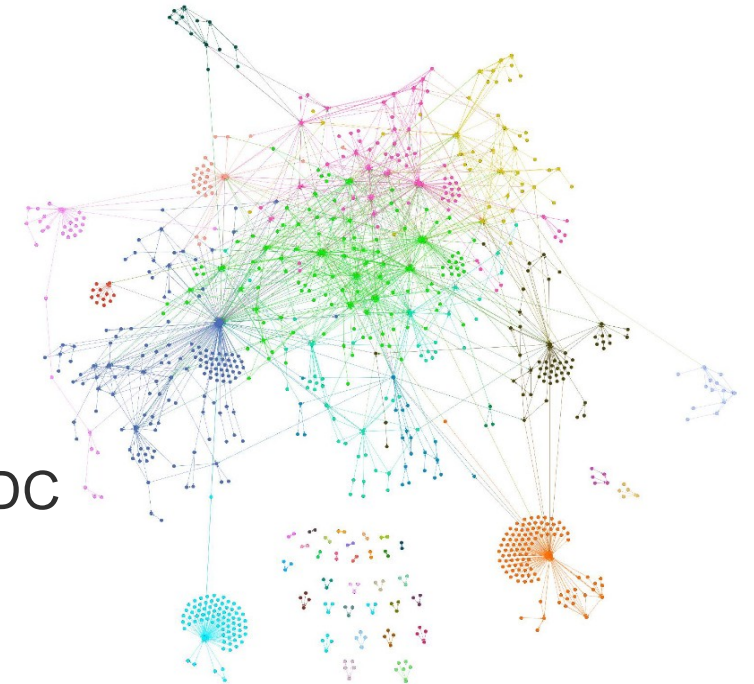
# Scope of Project

- Databases & Analytics group / Database services
  - Administrative, Experiment, General-purpose and Accelerator related databases
- Opportunity to establish a BC and DR setup
  - Continue building on PoC project from last year
  - For critical Oracle databases
  - Selection of specific databases driven by dependencies
- Two tiered with common management
  - Oracle managed Customer Cloud (Exadata Cloud@Customer)
  - Oracle Cloud Infrastructure (OCI)



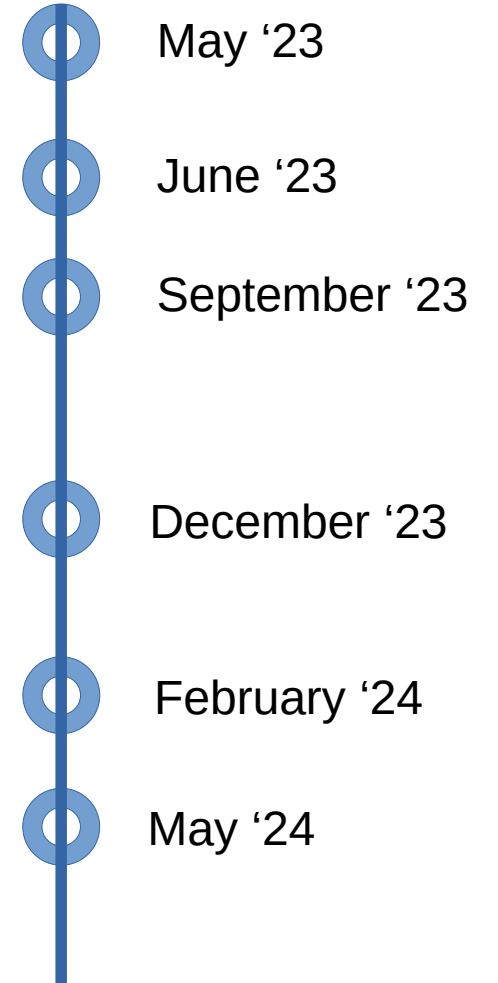
# Overview and Challenges

- Successful completion would provide:
  - **full switchover capability for critical CERN Oracle databases into Cloud**
- Inter database and application relations (database links) review
  - Dependency tree between applications is extremely complicated
- Network connectivity and security review
  - Latency for interactive applications
  - Encryption requirements during switchover exercises
- Exadata Cloud@Customer system is already deployed in CERN DC
- Exadata Cloud@Customer is part of Oracle Cloud Infrastructure
  - Similar deployment model
  - Deployments are easily migrated to public cloud offering of OCI



# 2023/2024 Plan Specifics

- Timed disaster recovery into Exadata Cloud@Customer
- Timed disaster recovery into Oracle Cloud Infrastructure
- Asynchronous replicas deployed in Exadata Cloud@Customer
- Live switch of application to replica in Exadata Cloud@Customer
- Asynchronous replicas in Oracle Cloud Infrastructure
- Live switch of application to replica in Oracle Cloud Infrastructure





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