

ORACLE

EM Cloud Extension – A deep dive

A step towards EM modernization

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Agenda

1. Background

- Initial feature ideation
- Architecture overview

2. Enablement process

3. Overview of features

- EM Cloud Extension – unplugged
- EM Cloud Extension – enabled

Background...

Initial ideation....

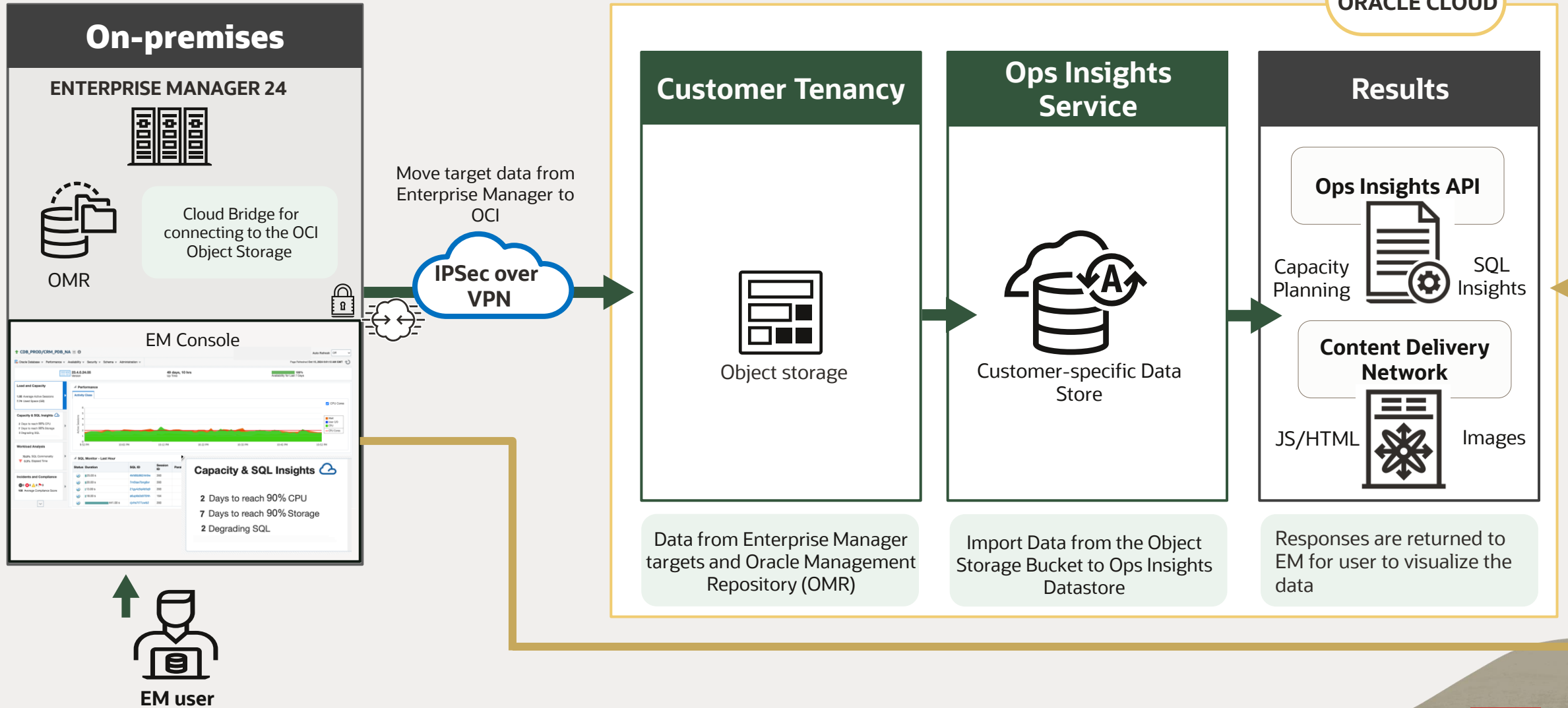


- Idea is to promote Observability & Management services within Enterprise Manager
 - Increase visibility
 - Demonstrate complimentary nature of Cloud Extensions

- Use-cases
 - Enterprise Manager complementary insights
 - Extend Observability & Management complementary capabilities to EM such as ML-based Capacity Planning including forecasting and pattern-based SQL Insights across DB fleet
 - Seamless cloud capabilities without the need to patch EM instance
 - No need for RU patch updates



EM Cloud Extension Architecture overview



Initial setup...

Setup EM Cloud Extension

EM's Extension into Oracle Cloud



Set up Enterprise Manager Cloud Bridge for OCI connectivity

- Use the Enterprise Manager Cloud Bridge to transfer data from Enterprise Manager to OCI Object Storage

Enable the database in Ops Insights

- Use an Ops Insights EM Bridge to move data from the OCI Object Storage bucket to Ops Insights for analysis

Verify the configuration

- Navigate to the Enterprise Manager database home page and click Capacity & SQL Insights from the left side menu

For more details, check the documentation [Configuring Cloud Extension](#).

Cloud Extension is available starting with Enterprise Manager 13c Release 5 Update 23 (13.5.0.23)
Oracle Database types supported: Standalone (non-CDB), RAC database (non-CDB), PDB and PDB on RAC

Feature overview ...

EM Cloud Extension

Integration with Observability and Management services

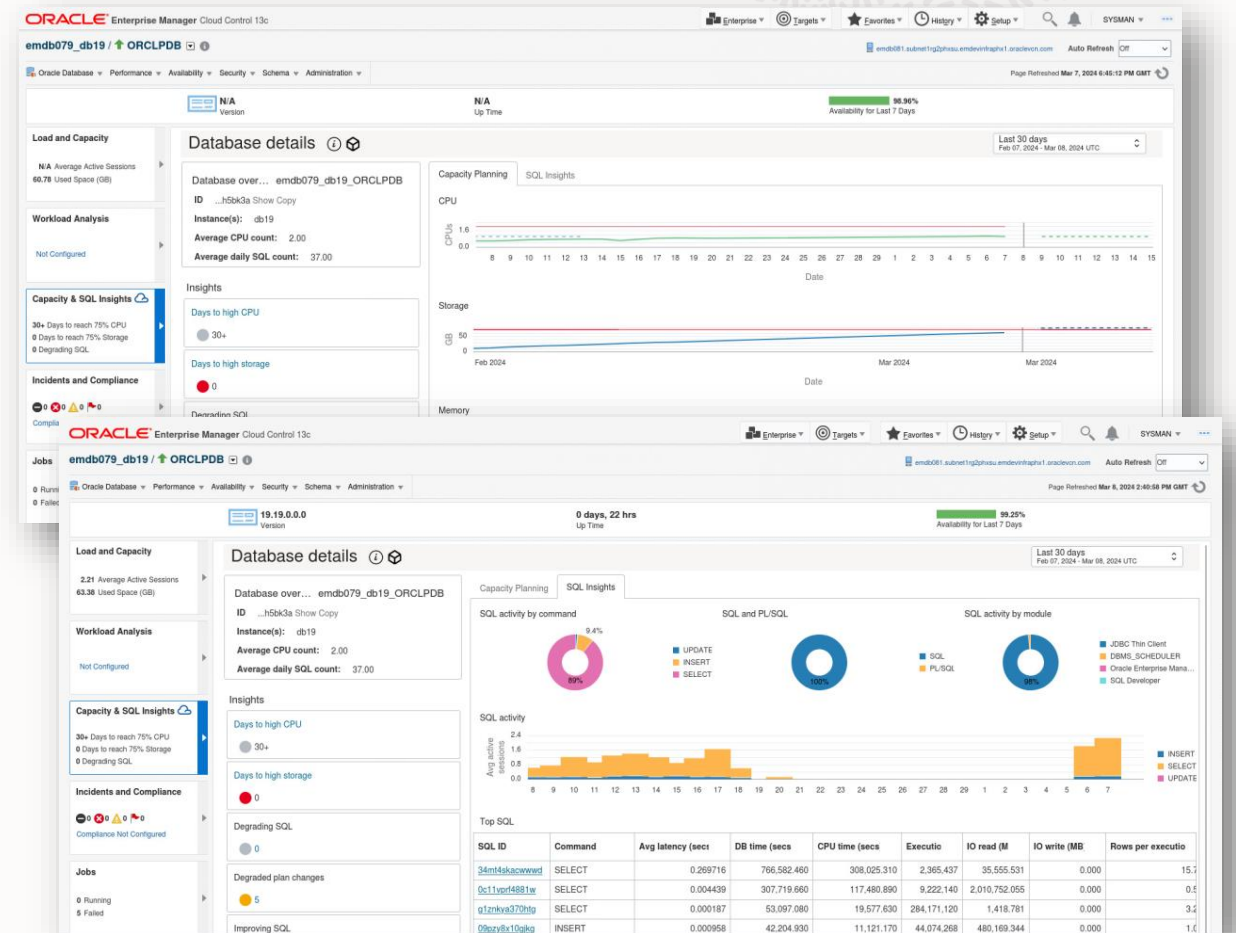
Cloud extension highlight cloud capabilities in context of EM targets

- Complementary cloud services natively extended

EM database resource page showcases OCI Ops Insights capabilities

- Capacity Planning & Forecast
- SQL Insights

Plan to add other cloud services in the future



EM Cloud Extension – unplugged


Provides overview of the feature and how to get started

Help with initial enablement

- Introductory content to help users with understanding of the feature in context of OCI Ops Insights service
- Read, view and test drive key complementary features
- Understand the prerequisites for feature enablement

Key Features

- [Capacity Planning](#)
- [SQL Insights analysis](#)
- [SQL performance analysis](#)



EM Cloud Extension Enabled – Capacity Planning w/ forecasting

ML based capacity planning to help predict future consumption

Historical analysis to plan for future

- Trend and forecast resource demand using up to 25 months of historical data
- Analyze average CPU, Storage, Memory and I/O demand WRT to total allocation
- Utilize embedded ML-based forecasting to predict future resource needs
- Identify over-allocated systems for reclamation process



EM Cloud Extension Enabled – SQL Insights by database

Aggregated view of SQL level performance insights across database

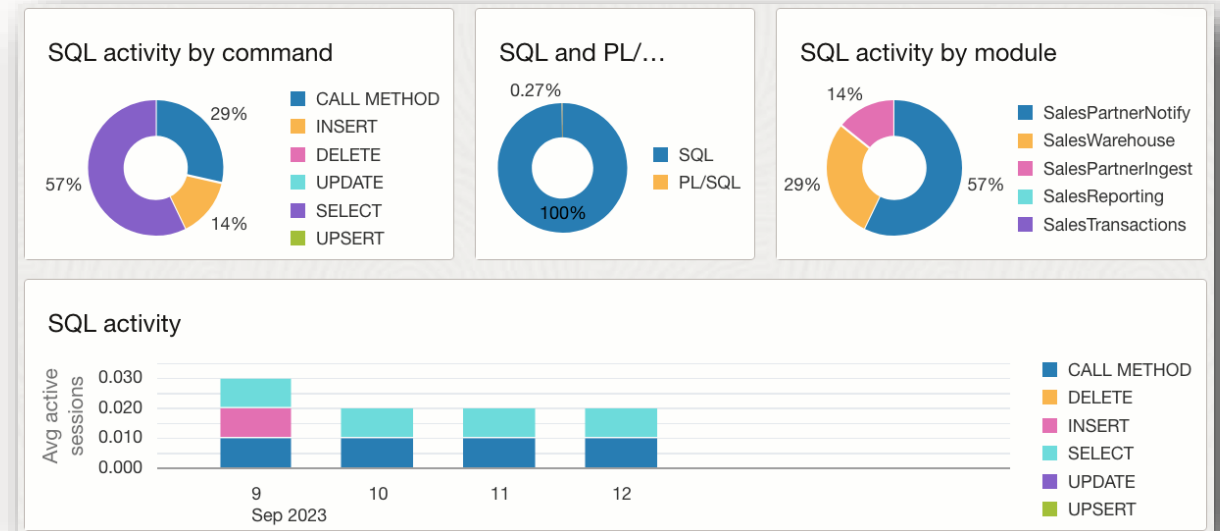
Performance insights and history for a SQL

Insights into SQL

- Degraded plan changes
- Improved or degraded SQL
- Gradual SQL performance degradation
- Invalidation storms

Data

- Total DB time broken down by SQL command, PL/SQL cursors and module
- SQL activity by command type over time
- Top SQL by various numerous performance measures



Learn More

- [Explore Ops Insights](#)
- [Hands-on lab: Get Started with Oracle Cloud Infrastructure Ops Insights](#)
- [Ops Insights Videos](#)
- [Ops Insights Blogs](#)
- [Ops Insights Technical Content](#)

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