

ORACLE **AUTONOMOUS DATABASE** **LEARNING LOUNGE**



Migration to ADB Part III: OCI Database Management, the Swiss Army knife for databases

Autonomous Database Learning Lounge

Hosted by Marcos Arancibia

Autonomous Database Product Management

Agenda



Derik Harlow



Germán Viscuso

Topics

- Learn about the **new advanced monitoring capabilities** for **Autonomous Databases**.
- **Obtain deeper insights** and **realtime performance** monitoring for ADB and own performance administration of your code and application.
- From **fleet wide analysis** to a **single resource**, **Database Management in OCI** will provide scalable operations and powerful tools to maximize your database's performance.

Q&A

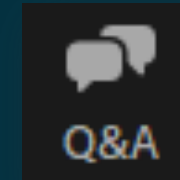
- **Product Managers** will answer any questions



Before we begin...

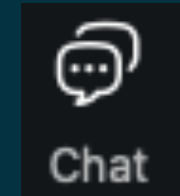
This session is for you !!!

Ask your questions using **Q&A**



Product Managers are monitoring your questions

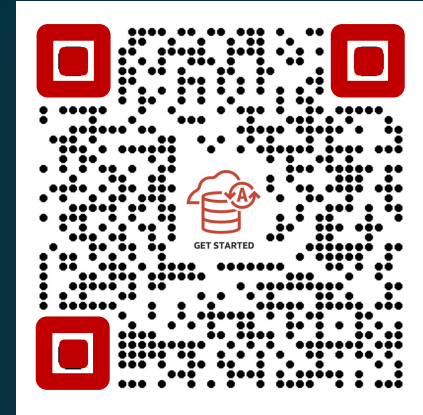
We will share links in **Chat**



The recording will be made available in a few days at
oracle.com/goto/adb-learning-lounge

Important links to bookmark

Links to get you started and to keep up to date with Autonomous Database



1 New Get Started page:
oracle.com/autonomous-database/get-started/

2 Join us: **LinkedIn**
bit.ly/adb-linked-in-grp [@AutonomousDW](https://twitter.com/AutonomousDW)

Bluesky
autonomusdb.bsky.social

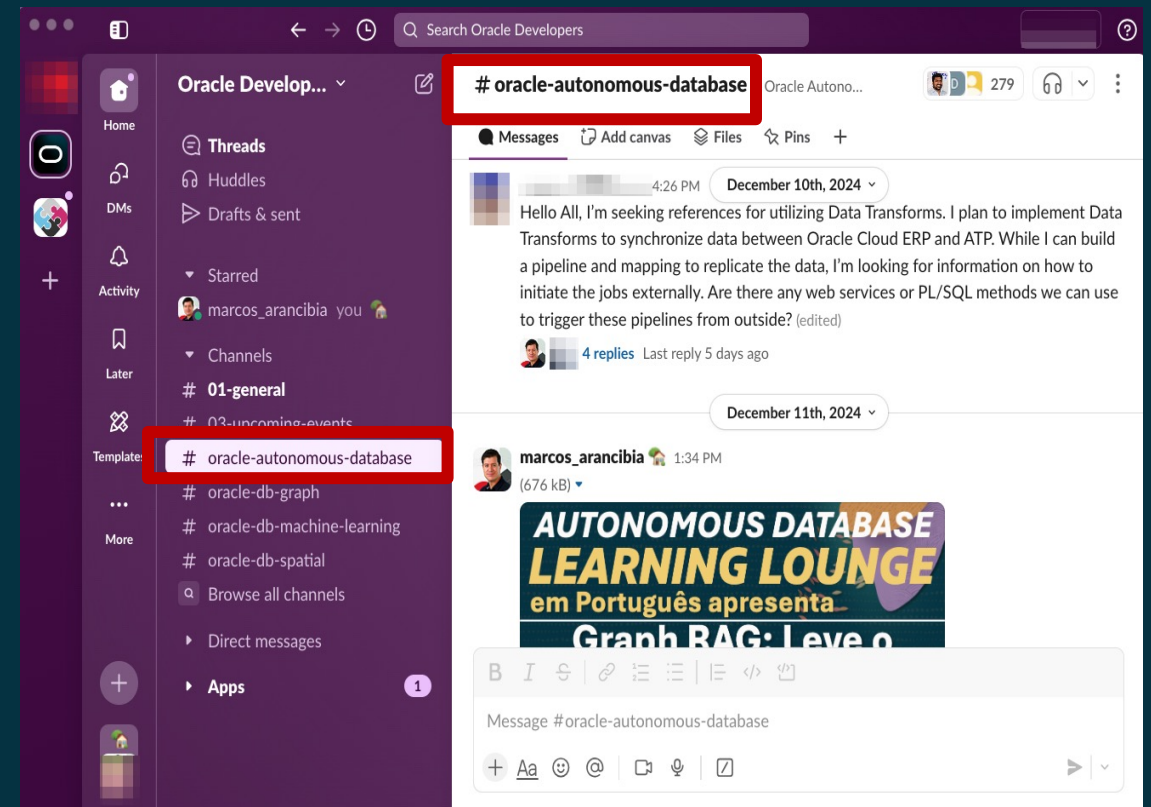
3 Got a question?
We are on stackoverflow
bit.ly/adb-stackoverflow

Join us on Developers Slack
(search #oracle-autonomous-database)
bit.ly/odevrel_slack (odevrel_slack)

Join our External Slack

STEP 1: bit.ly/odevrel_slack (odevrel_slack)

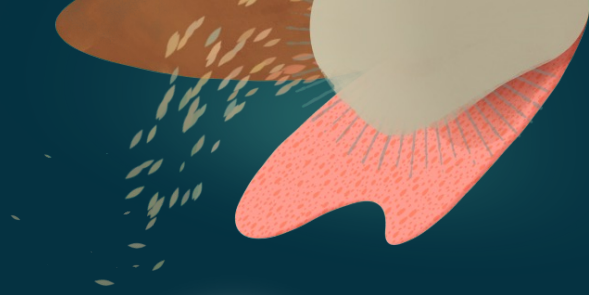
STEP 2: **search for #oracle-autonomous-database at the top and click on the Channel**





Polls

Speakers



**Derik
Harlow**



**Germán
Viscuso**

ORACLE

OCI Database Management and Ops Insights

Autonomous Database and Exadata advanced monitoring

Observability and Management

January 14, 2025



Autonomous, an innovative Oracle Database-as-a-Service

Automated, fully managed for any type of workload, data, operational criticality and at any scale



Converged Database

Any workload, any data type, unified management and security (no data silos).

+



Cloud Native

Industry leading cloud (OCI) with self-service for Oracle Exadata Database.

+



Machine Learning

Self-tuning, self-securing, self-patching, does all the hard work for you.

=

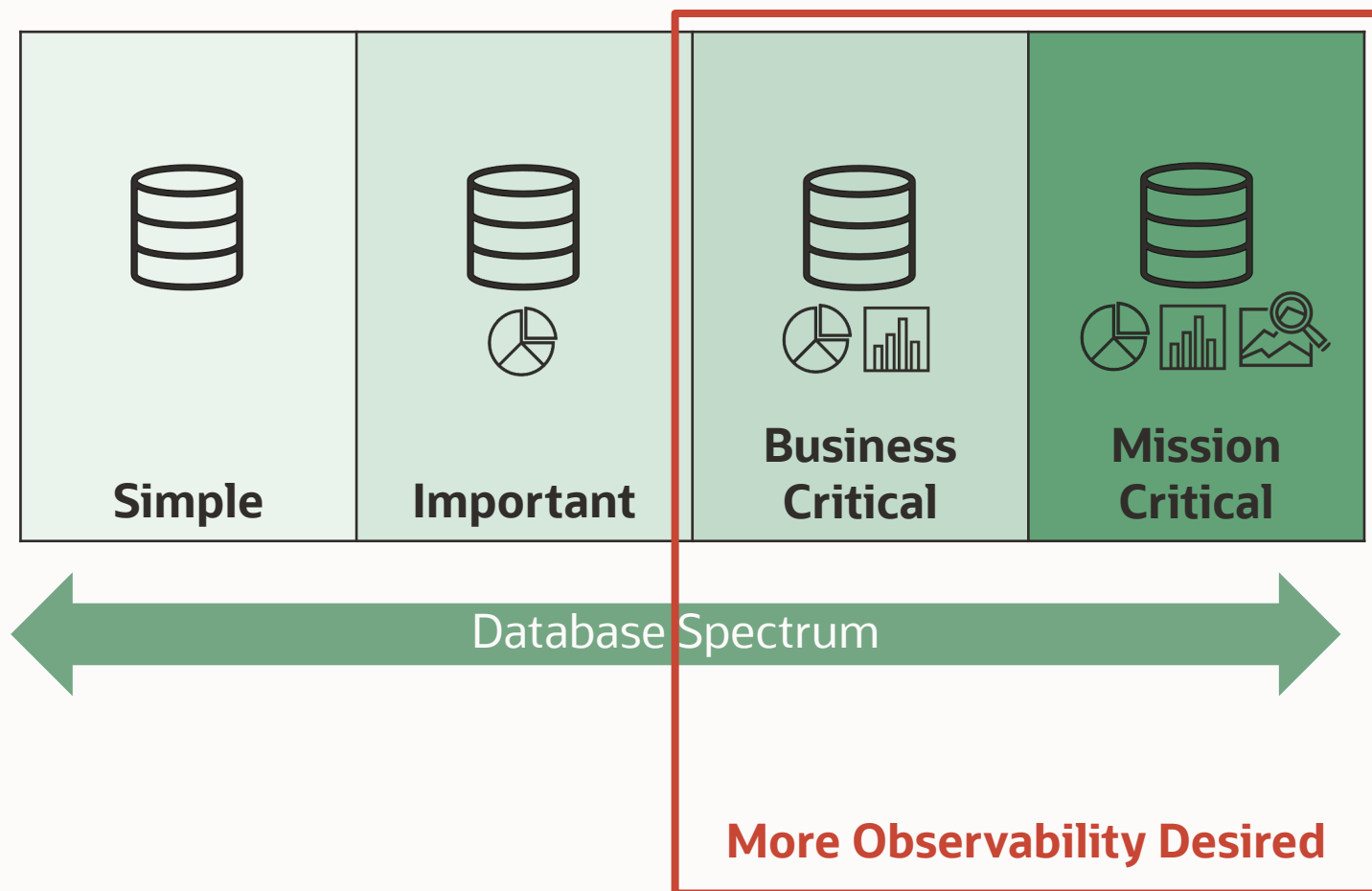


Autonomous Database

Fusion of the best of database, cloud and ML technology for the 21st century.

Why Database Observability is Important?

Business and Mission Critical need to observe Performance and Availability



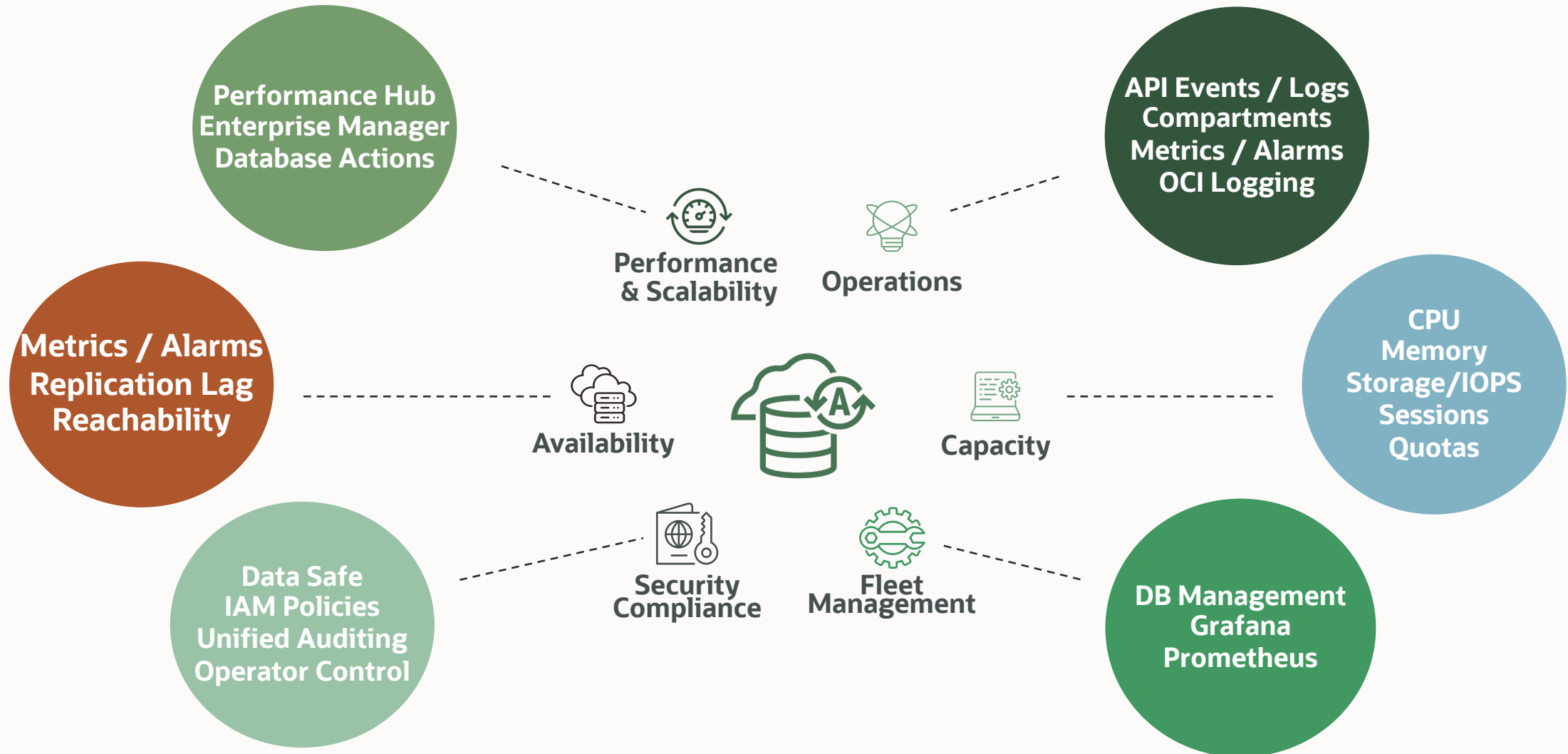
Business and Mission Critical
need
Performance and Availability
Trust-and-Verify Oversight



Autonomous Database



Autonomous Database Observability – key categories and tools





Agenda

1. Observability and Management
2. Database Management overview
3. Fleet management
4. Single database management
5. Performance diagnostics
6. Performance tuning
7. Database administration
8. Exadata infrastructure monitoring
9. Ops Insights features
10. Resources

Oracle Multicloud Observability and Management

Observability and Management Platform



Application
Performance
Monitoring



Stack
Monitoring



Logging
Analytics



Database and OS
Management



Ops
Insights

Ingest all telemetry

Metrics



Events



Logs



Traces



SQL



From all clouds and on-premises

ORACLE
Cloud



Oracle Cloud Infrastructure Database Management service

- 1 View databases in one place**
(on-premises, hybrid, multicloud)
With full insight into Oracle Database availability, performance and infrastructure operations
- 2 Get insight on issues, availability and key statistics**
Active operation drill-down for troubleshooting and diagnostics

- 3 Perform operations on a single database or at a fleet level**
Run a job on databases supporting a specific application or function (DEV, TEST, PROD)

Benefits

- Get information on your databases within minutes of subscription
- Latest Oracle Database support removes risk of unmanaged databases
- Replace silo'd 3rd party tools, recover hardware and resources, save money
- Database information for who needs it, when they need it for their job role
- In-depth diagnostic and SQL metric detail no other vendor can provide
- Common, shareable source of information enables faster troubleshooting, eliminates "finger-pointing"
- Create once, run across many databases, reduces error, saves time
- Aids database security, configuration and compliance management
- "Modernize" management on your own terms, don't have code or rip and replace

Oracle Cloud Infrastructure Database Management service

Leading database performance diagnostics

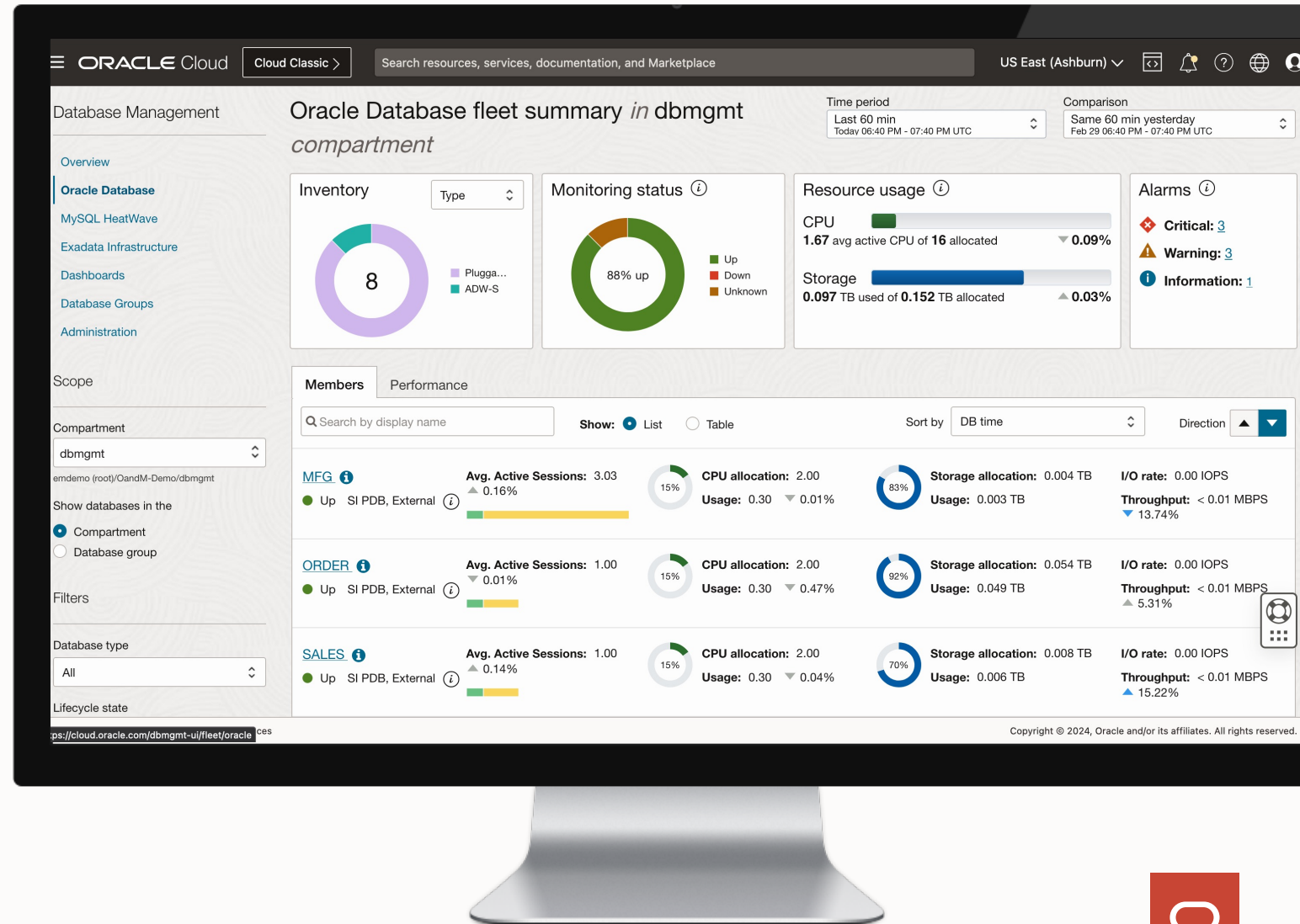
- Single pane of glass management view
- Visualization driven interfaces

Cloud native

- Fully managed by Oracle
- Cloud elasticity
- Low operations cost

Key use cases

- Real-time performance monitoring
- Manage multi-cloud or on-premises databases



Database Management features

Monitor and manage many database

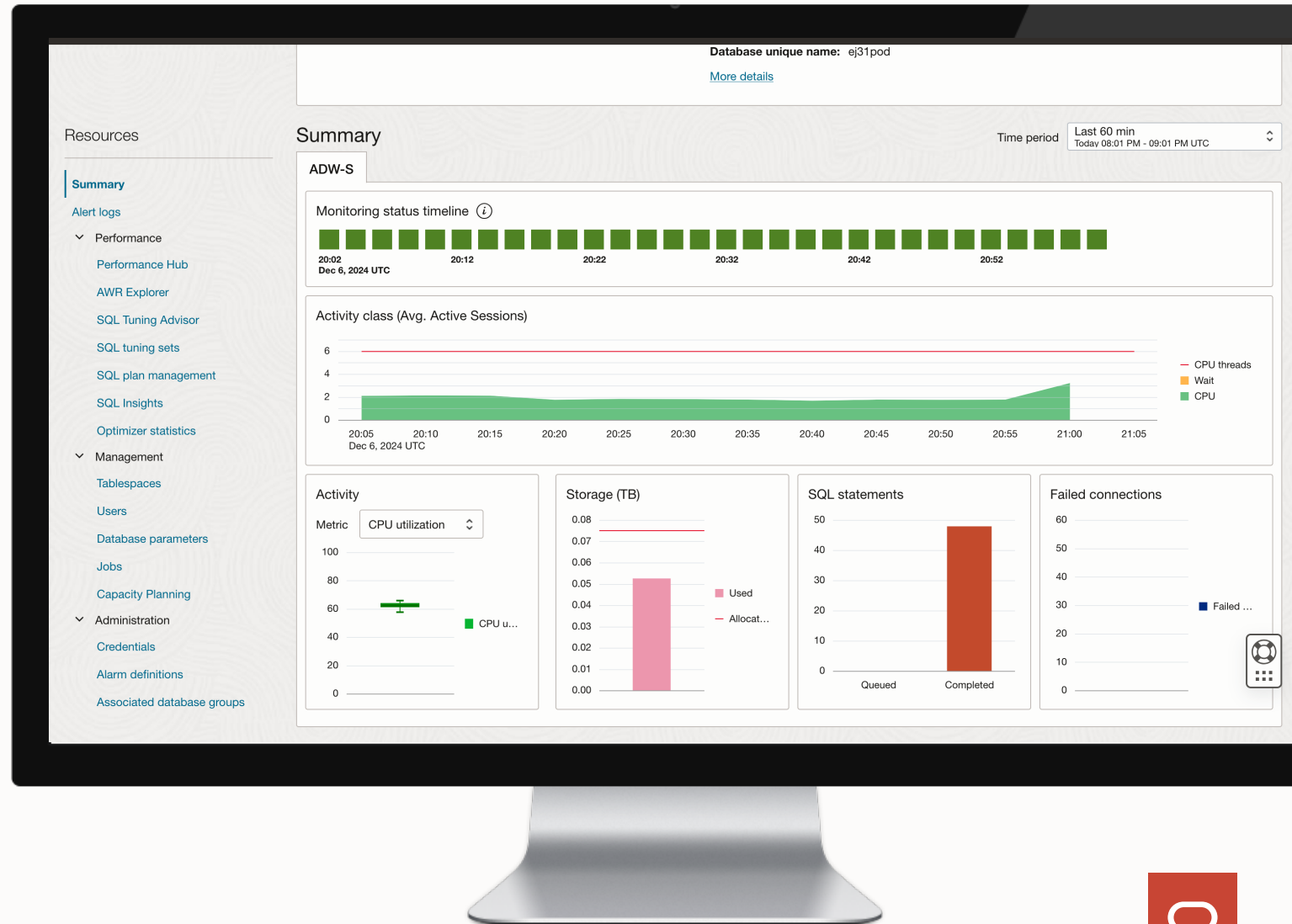
- Unified view for monitoring and managing Oracle Databases across on-premise and cloud
- Out-of-the-box performance dashboards to quickly monitor single and fleet of databases

Performance diagnostics

- Integrated view of database activity
- ASH Analytics, SQL/Session details, blocking sessions, SQL Tuning Advisor, etc.
- Advanced SQL execution plan analysis

Database administration

- Tablespace management, database parameter configuration, user management, TCPS support, etc.



Key Autonomous Database advanced features

Feature		Comments
Database performance administration	<ul style="list-style-type: none">• SQL Tuning Advisor• SQL tuning sets• SQL Plan Management	<ul style="list-style-type: none">• Optimizer Statistics• AWR Explorer• SQL Insights integration
Performance Hub	<ul style="list-style-type: none">• Top Activity Lite• SQL Monitoring• Blocking sessions list	<ul style="list-style-type: none">• Instance level AWR report• ASH report• On-demand ADDM
Alert Log view	Alert Log: Same support as Cloud and External DB	
Storage administration	ADB-S: Read-only view of tablespaces ADB-D: Full management. Same support as Cloud and External DB	
Optimizer Statistics	ADB Admin user has privilege to collect stats, enable stats advisor and implement advisor recommendation	
Database parameters	List of updatable parameters for ADB	
Out-of-the-box alarm creation	Quickly create alarms for ADB resources with integration to OCI Monitoring service	





Fleet management

Database Management service for hybrid fleet-monitoring

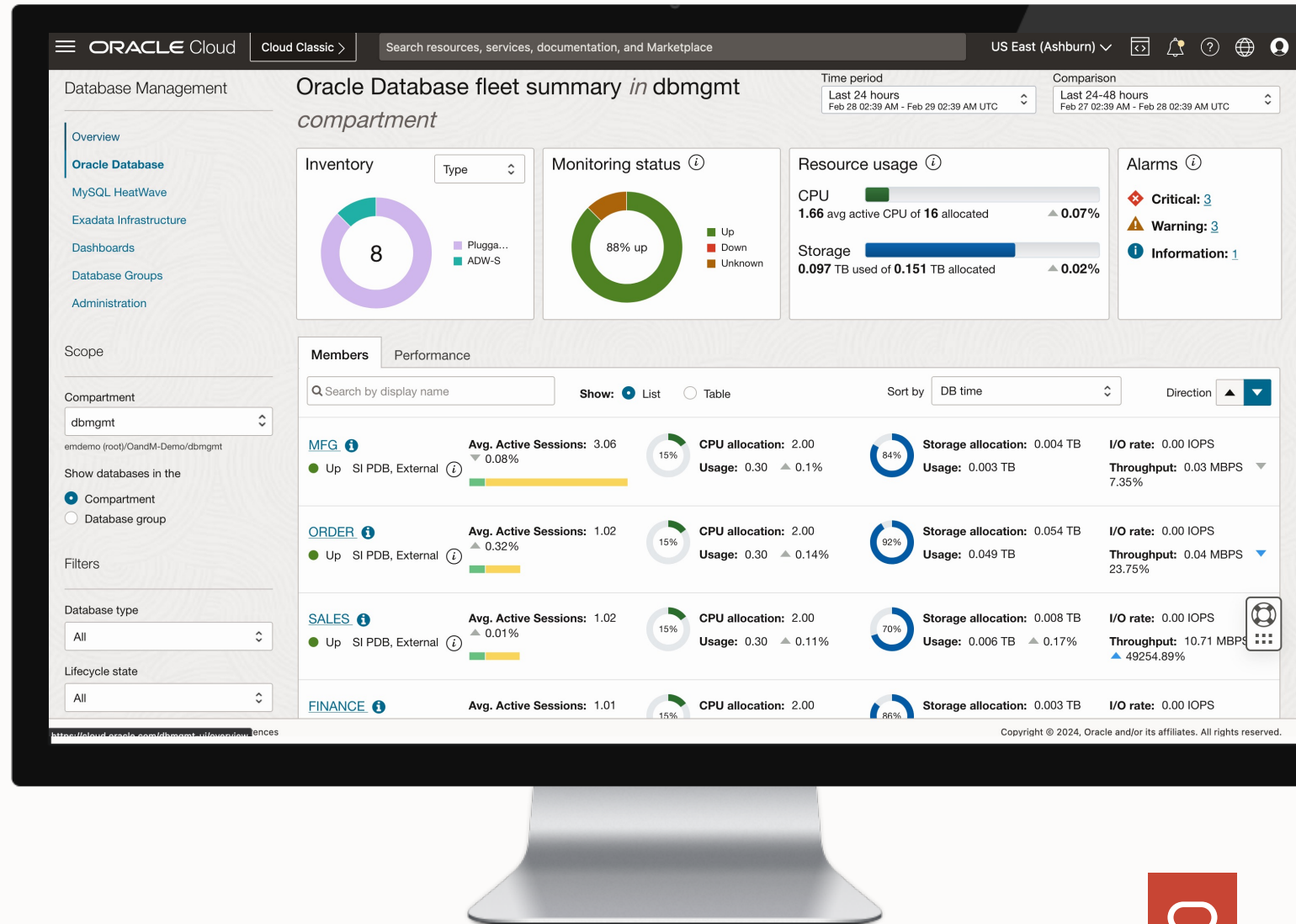
Unified fleet view of databases across Oracle Cloud, other clouds, and on-premises

- On the Fleet Summary page, you can monitor multiple Databases
- Deployment type and tag integration for grouping resource views

Native OCI metrics for DevOps event alarms and monitoring

Drill down from the Fleet Summary page to a specific database of interest

Visualization-driven load and performance analysis



Database Management service for hybrid fleet-monitoring

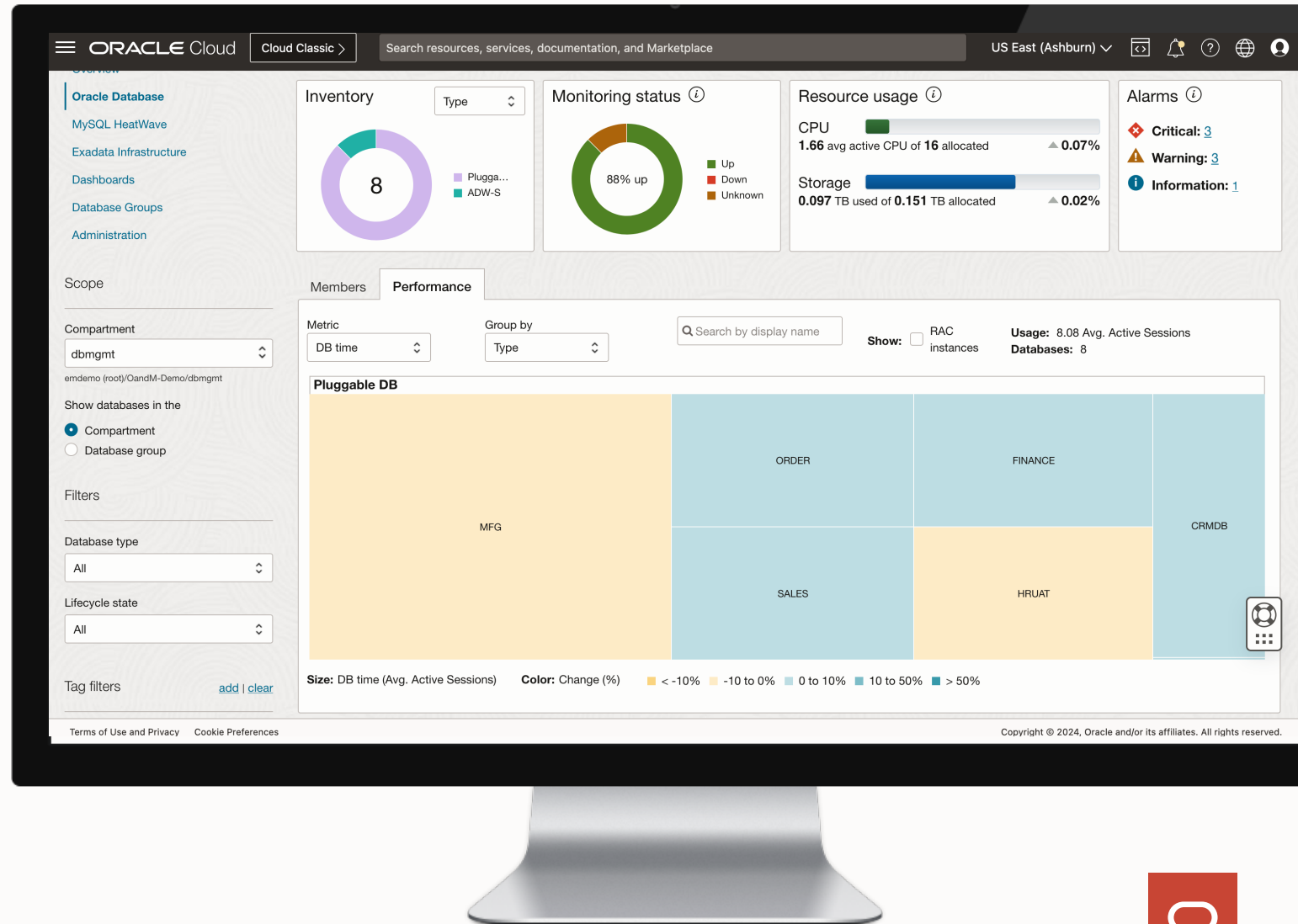
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Monitor and manage a specific database

Database details page

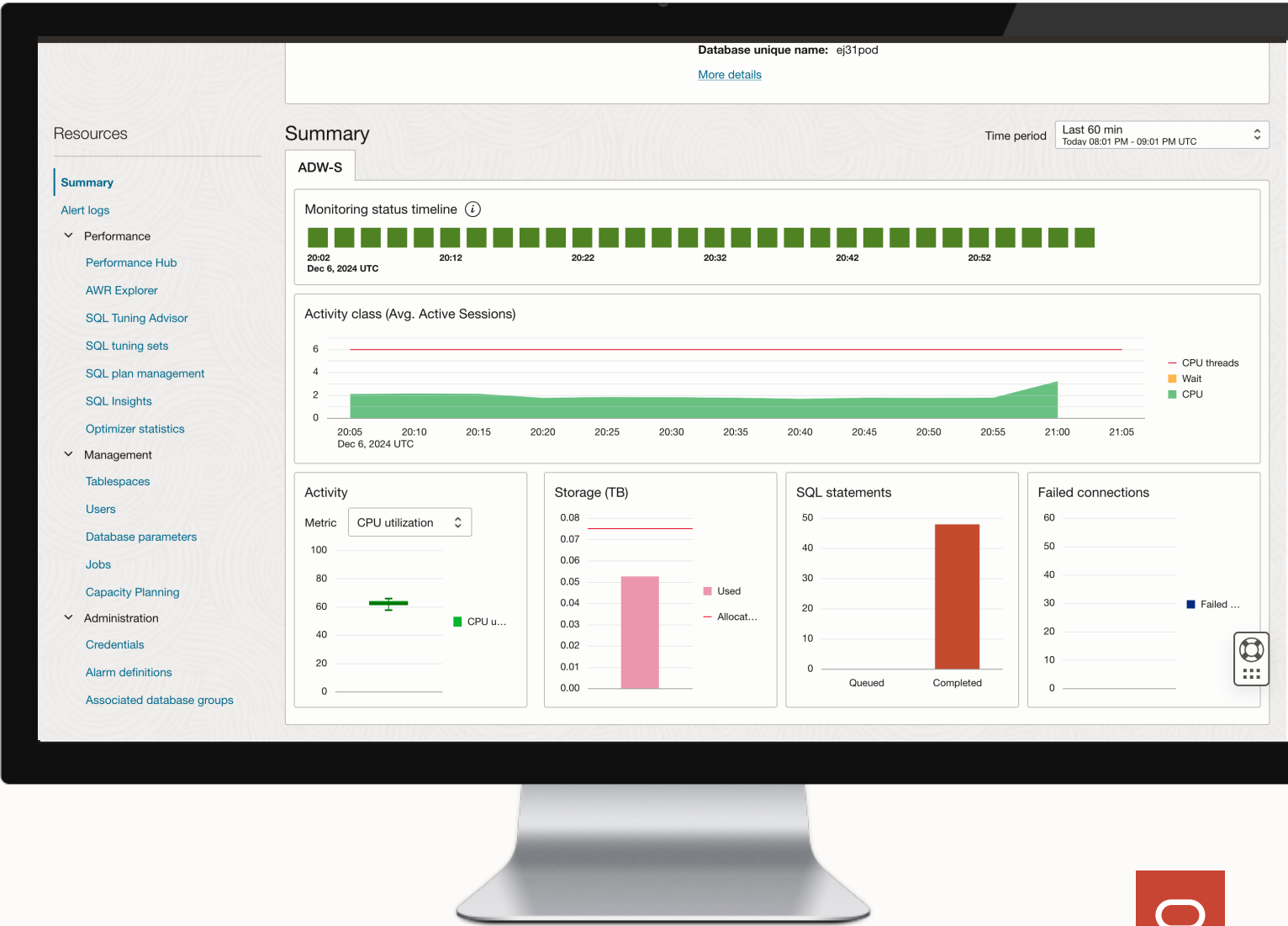
Detailed database performance and configuration details

Summary provides key metric details including availability

Enhanced performance tools with key visualizations

Seamless navigation between monitoring and administration tasks

Cross-service integration and dashboard links





Performance diagnostics

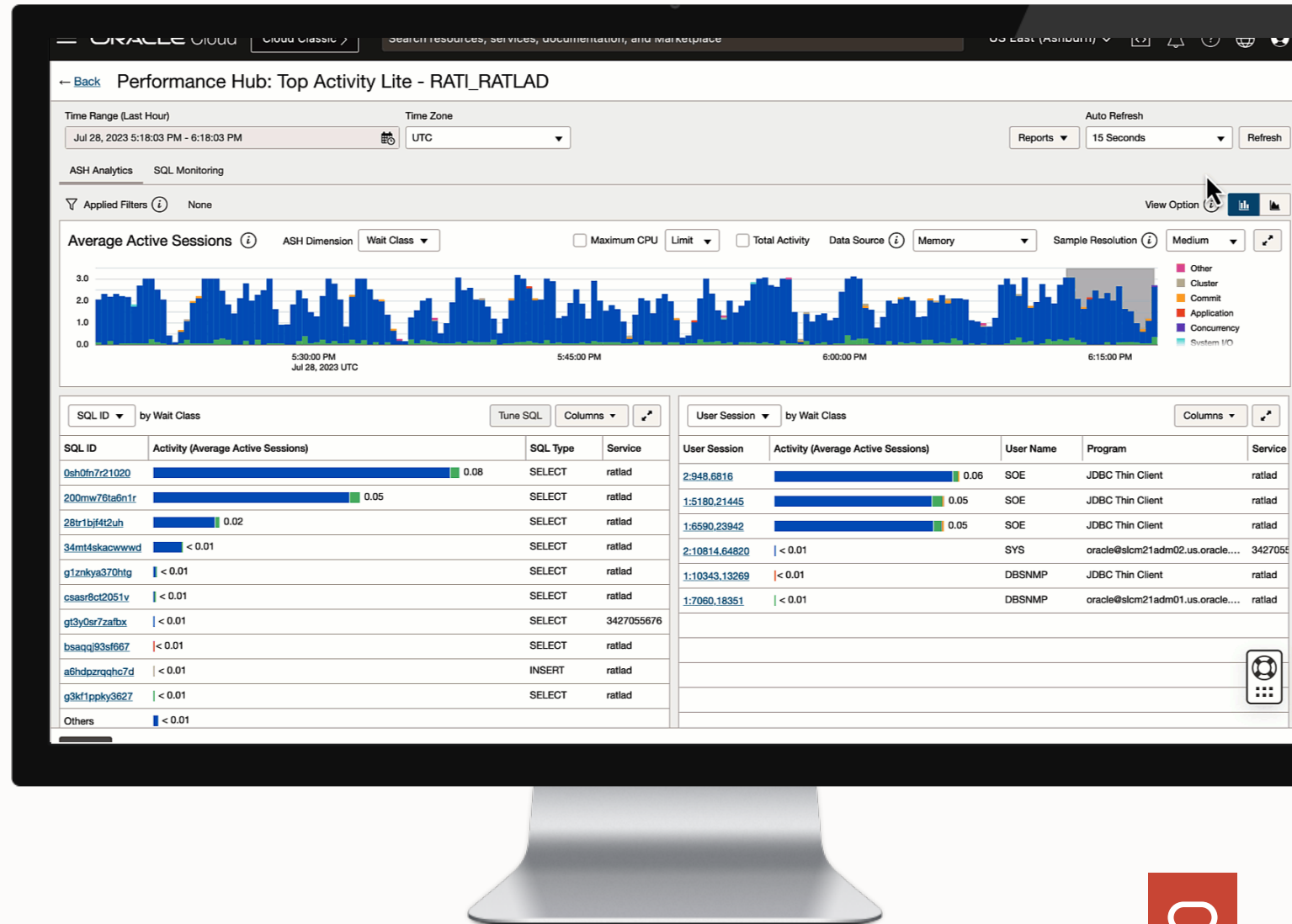
Diagnose persistent and transient performance problems

Integrated system-wide and session-specific views of database activity

- ASH Analytics
- SQL Details
- Blocking Sessions
- Guided problem resolution
- Historical SQL Monitoring reports

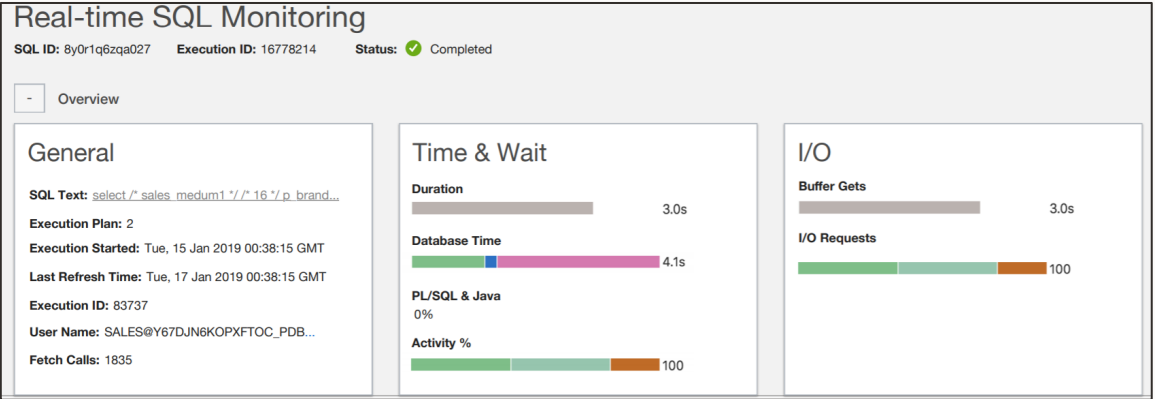
Top Activity Lite

- Simplified version of Performance Hub, optimized for near real-time performance diagnostics
- Displays last-hour activity efficiently even under heavy load
- Single screen with easy visualization of issues through compact UI
- Suitable for NOC-like display on large screens



Real-time SQL Monitoring

- In-depth application performance analysis
 - Identifies poorly written and designed SQL statements
 - Identify and guide optimization of application calls in the data tier
- Captures fine-grained SQL statistics at each step of the execution plan
- Interactive Visualization
- Analyze current and historical SQL statements



Plan Statistics		Parallel	SQL Text		Activity	Metrics						
Plan Hash Value 287562055												Plan Notes
	Operation	Object	Informat	Est. Rows	Timeline	Executio	Rows	Mem(Ma	Temp(Mi	I/O Requests	Activity %	
0	SELECT STATEMEN				<div></div>	1						
1	RESULT CACHE	djf00chbps			<div></div>	1						
2	PX COORDINA				<div></div>	5	28K					
3	PX SEND QC :TQ10005			15K	<div></div>	2	28K					
4	SORT ORI			15K	<div></div>	2	28K	1.8MB				
5	PX REC			15K	<div></div>	2	28K					
6	PX SI :TQ10004			15K	<div></div>	2	28K					
7	H			15K	<div></div>	2	28K	3.6MB				
8	PX RECEIVE			15K	<div></div>	2	55K					
9	PX SEND HASH	:TQ10003		15K	<div></div>	2	55K					
10	HASH GROUP BY			15K	<div></div>	2	55K	7MB				



Blocking sessions

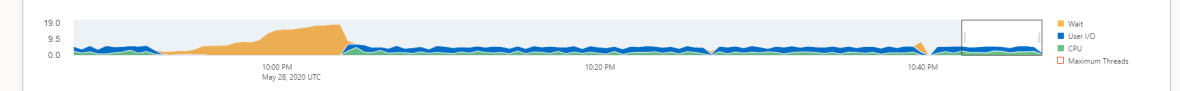
- In-depth application wait analysis
 - Displays the current blocking and waiting sessions in a hierarchical manner
 - Detailed information about each blocking session
- Inspect or drill down into the SQL involved, to determine the cause of the blocking
- Perform kill operations on one or more of the listed sessions to resolve a waiting session problem

Performance Hub

Perfhub ADW Test

QUICK SELECT TIME RANGE
Last Hour May 28, 2020 9:46:55 PM - 10:46:55 PM Refresh

Active Sessions ⓘ



ASH Analytics SQL Monitoring Blocking Sessions Workload

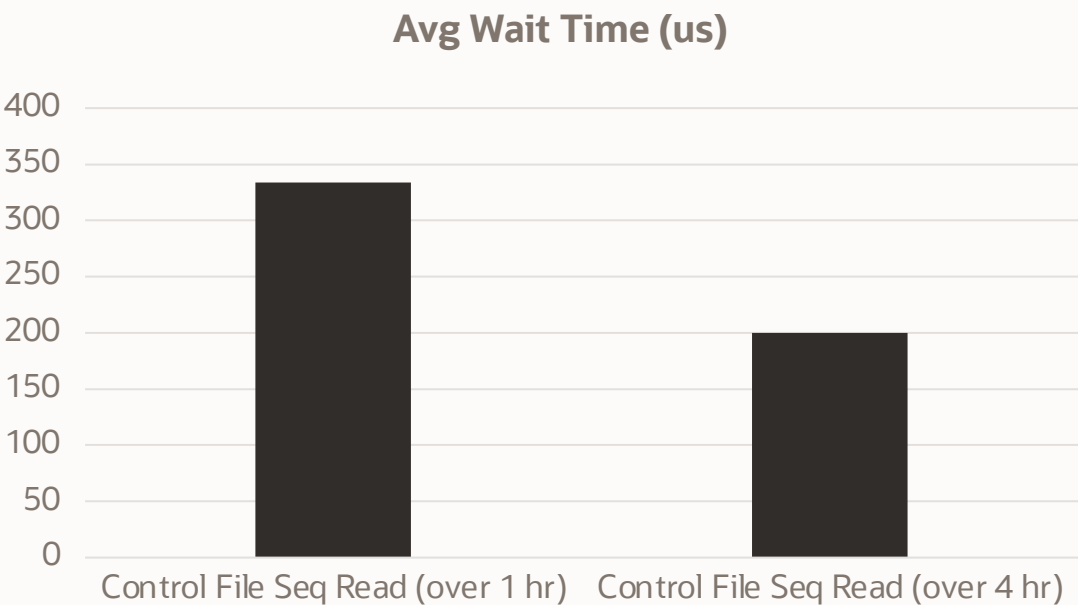
Kill Session		MINIMUM WAIT TIME (SEC) ⓘ 5							
User Name	Status	Lock	User Session	SQL ID	Wait Event	Object Name	Blocking Time	Wait Time	
<input type="checkbox"/> DBSNMP (2) ⚠	Inactive	Exclusive Lock	1.444.18148 ⓘ	-	SQL*net message from client	-	15.00 sec	3.13 min	
<input type="checkbox"/> DBSNMP (1) ⚠	Active	Exclusive Lock	1.113.26392 ⓘ	d02c0b3wvd3g5 ⓘ	enq:TX - row lock contention	BLOCKING_SESSION_TEST	3.00 sec	6.00 sec	
<input type="checkbox"/> DBSNMP	Active	Lock	1.349.580 ⓘ	gff0ck48fd7ay ⓘ	enq:TX - row lock contention	BLOCKING_SESSION_TEST	-	3.00 sec	
<input type="checkbox"/> DBSNMP	Active	Lock	1.176.1902a ⓘ	gk0byyK5fazah ⓘ	enq:TX - row lock contention	BLOCKING_SESSION_TEST	-	6.00 sec	
0 Selected									Showing 4 Items

Close

AWR performance data review without Database Management Challenges

Single AWR report over several snapshots

- For e.g., Avg Wait Time is 200 sec for Control File Seq Read over 4 hours
- Still one data point, and metric data is averaged over 4 hours
- Is it good or bad?



Foreground Wait Events (Global)

• s - second, ms - millisecond, us - microsecond, ns - nanosecond
• Summary 'Avg Wait Time': Per-instance 'Wait Time Avg' used to compute [Avg/Min/Max/Std Dev]
• ordered by wait time desc, waits desc (idle events last)

Wait		Event		Wait Time			Summary Avg Wait Time			
Class	Event	Waits	%Timeouts	Total(s)	Avg Wait	%DB time	Avg	Min	Max	Std Dev
System I/O	control file sequential read	441,360	0.00	140.98	319.42us	3.23	334.19us	298.27us	370.11us	50.80us
Other	recovery area: computing backed up files	2,653	0.00	551.30	207.84us	43.63	208.15us	204.84us	344.40us	4.70us
Other	Sync ASM rebalance	18,238	0.00	139.90	7.67ms	3.20	7.67ms	7.67ms	7.67ms	
User I/O	direct path read temp	150,399	0.00	110.57	735.15us	2.53	733.90us	713.25us	754.56us	29.21us
Scheduler	acknowledge over PGA limit	9,500	75.23	70.46	7.42ms	1.61	7.40ms	6.84ms	7.95ms	783.01us
Other	PX Deq: Slave Session Stats	145,026	0.00	52.78	363.94us	1.21	364.36us	358.57us	370.15us	8.19us
Other	log switch/archive	523	100.00	52.37	100.13ms	1.20	100.13ms	100.13ms	100.13ms	2.29us
User I/O	Disk file operations I/O	1,214,358	0.00	50.48	41.57us	1.16	41.57us	41.54us	41.59us	35.35us
User I/O	direct path write temp	136,721	0.00	49.95	365.33us	1.14	364.06us	343.66us	384.45us	28.84us
Other	name-service call wait	840	0.00	44.19	52.61ms	1.01	54.03ms	34.18ms	73.88ms	28.08ms
Administrative	switch logfile command	15	0.00	43.37	2891.13ms	0.99	2540.66ms	1489.27ms	3592.05ms	1486.89ms
User I/O	Disk file Mirror Read	73,699	0.00	37.08	503.14us	0.85	555.02us	451.98us	658.06us	145.73us
Administrative	Backup: MML extended initialization	160	0.00	35.78	223.60ms	0.82	223.58ms	223.21ms	223.96ms	534.64us
Other	enq: PS - contention	78,609	1.30	20.38	259.31us	0.47	259.51us	246.51us	272.51us	18.39us
Other	CRS call completion	400	0.00	17.10	42.74ms	0.39	42.74ms	42.29ms	43.19ms	635.99us
Other	recovery area: computing backed up files	24,367	0.00	16.78	688.45us	0.38	689.34us	680.24us	698.43us	12.86us
Concurrency	library cache: mutex X	38,942	0.00	13.51	346.99us	0.31	341.11us	297.10us	385.12us	62.24us
Other	PX Deq: reapi credit	2,869,736	99.97	11.90	4.15us	0.27	4.15us	4.11us	4.18us	50.46ns
Administrative	JS kgl get object wait	100	0.00	9.96	99.59ms	0.23	99.61ms	99.58ms	99.65ms	47.93us
Other	PX Deq: Join ACK	36,642	0.00	8.01	218.61us	0.18	250.86us	206.70us	295.03us	62.46us
Other	PGA memory operation	616,760	0.00	7.18	11.65us	0.16	11.61us	11.11us	12.11us	706.46ns
System I/O	control file single write	6,910	0.00	6.75	.98ms	0.15	.98ms	.95ms	1.01ms	38.35us
Other	GPhP Get Item	400	0.00	6.16	15.41ms	0.14	15.41ms	15.37ms	15.45ms	54.97us
Other	reliable message	10,147	0.00	4.28	421.62us	0.10	391.93us	333.87us	449.99us	82.11us
Other	enq: JQ - contention	12,263	100.00	4.05	329.93us	0.09	329.94us	323.26us	336.61us	9.44us
User I/O	cell single block physical read	5,030	0.00	3.44	683.78us	0.08	682.18us	521.74us	842.63us	226.90us
Other	enq: WL - contention	44	52.27	3.26	74.15ms	0.07	68.49ms	52.95ms	84.04ms	21.98ms
Other	ASM file metadata operation	2,685	0.00	2.72	1.01ms	0.06	530.44us	8.17us	1.05ms	738.60us
Other	recovery area: computing dropped files	31	0.00	2.07	66.66ms	0.05	66.66ms	66.65ms	66.67ms	12.49us
Other	CSS initialization	1,052	0.00	1.81	1.72ms	0.04	1.72ms	1.67ms	1.77ms	72.83us
Other	KSV master wait	4,762	0.00	1.68	353.27us	0.04	352.69us	342.07us	363.30us	15.01us
Other	enq: IV - contention	4,920	8.66	1.64	332.46us	0.04	332.33us	331.42us	333.24us	1.29us
Concurrency	cursor: pin S wait on X	60	0.00	1.51	25.21ms	0.03	26.40ms	8.60ms	44.20ms	25.18ms
System I/O	log file sequential read	388	0.00	1.39	3.58ms	0.03	3.52ms	3.19ms	3.85ms	465.82us
Other	CSS operation: action	1,073	0.00	1.35	1.26ms	0.03	1.26ms	1.26ms	1.27ms	7.69us
Other	PX qrel latch	822,999	100.00	1.28	1.56us	0.03	1.59us	1.55us	1.62us	51.18ns
Other	oracle thread bootstrap	13	0.00	1.20	92.25ms	0.03	92.25ms	92.25ms	92.25ms	
Concurrency	library cache: bucket mutex X	3,444	0.00	0.95	274.53us	0.02	273.05us	249.48us	296.62us	33.34us



AWR Explorer visualization of reports for advanced diagnostics

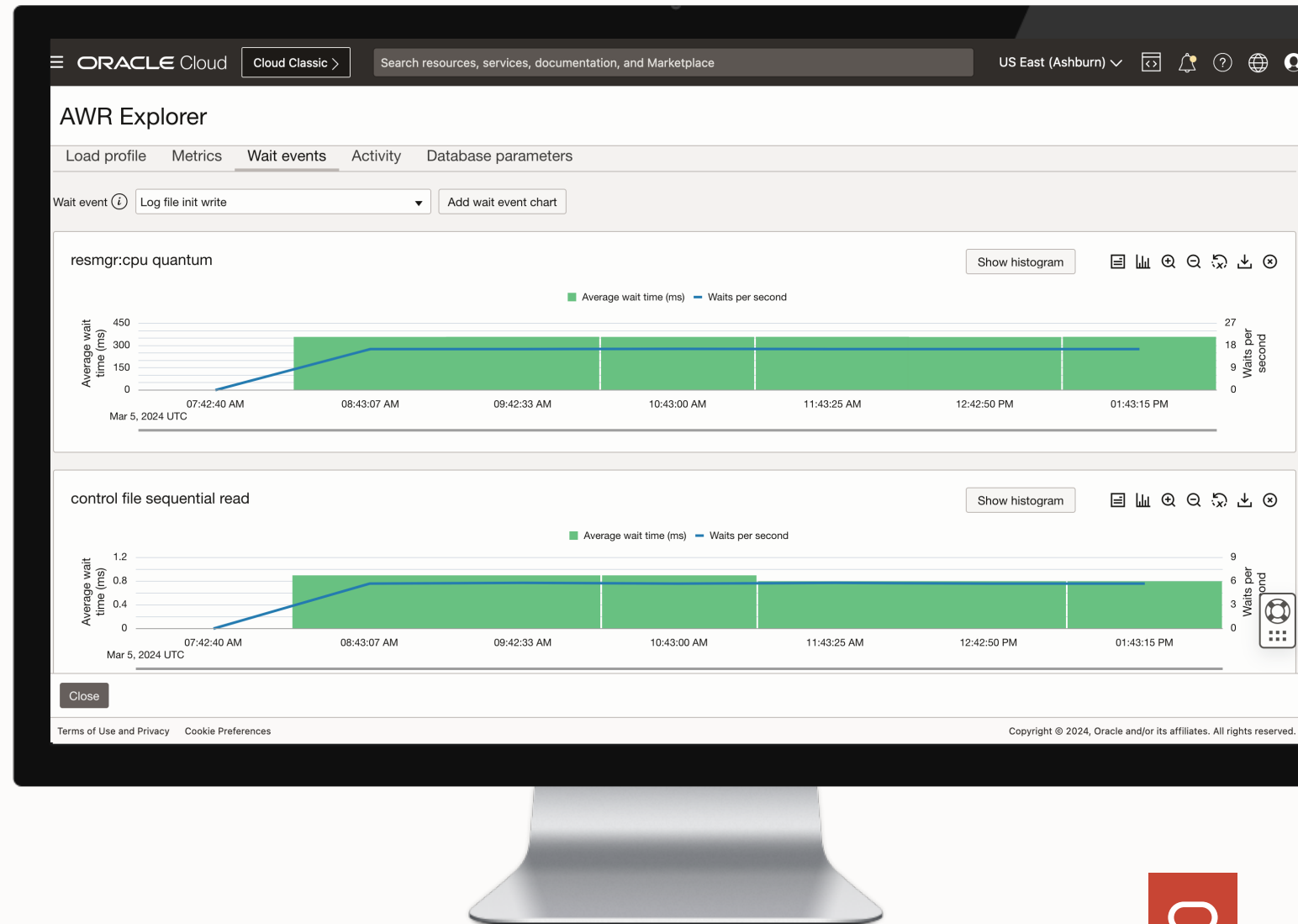
Enables DBAs to perform advanced performance analysis

Integration of Oracle performance tools plus data visualization

Provides different aspects of Oracle Database performance data which can be very helpful in issue detection

Visualize performance trends easily without needing to toggle between hourly AWR reports

Generate AWR, ASH, SQL reports, etc.



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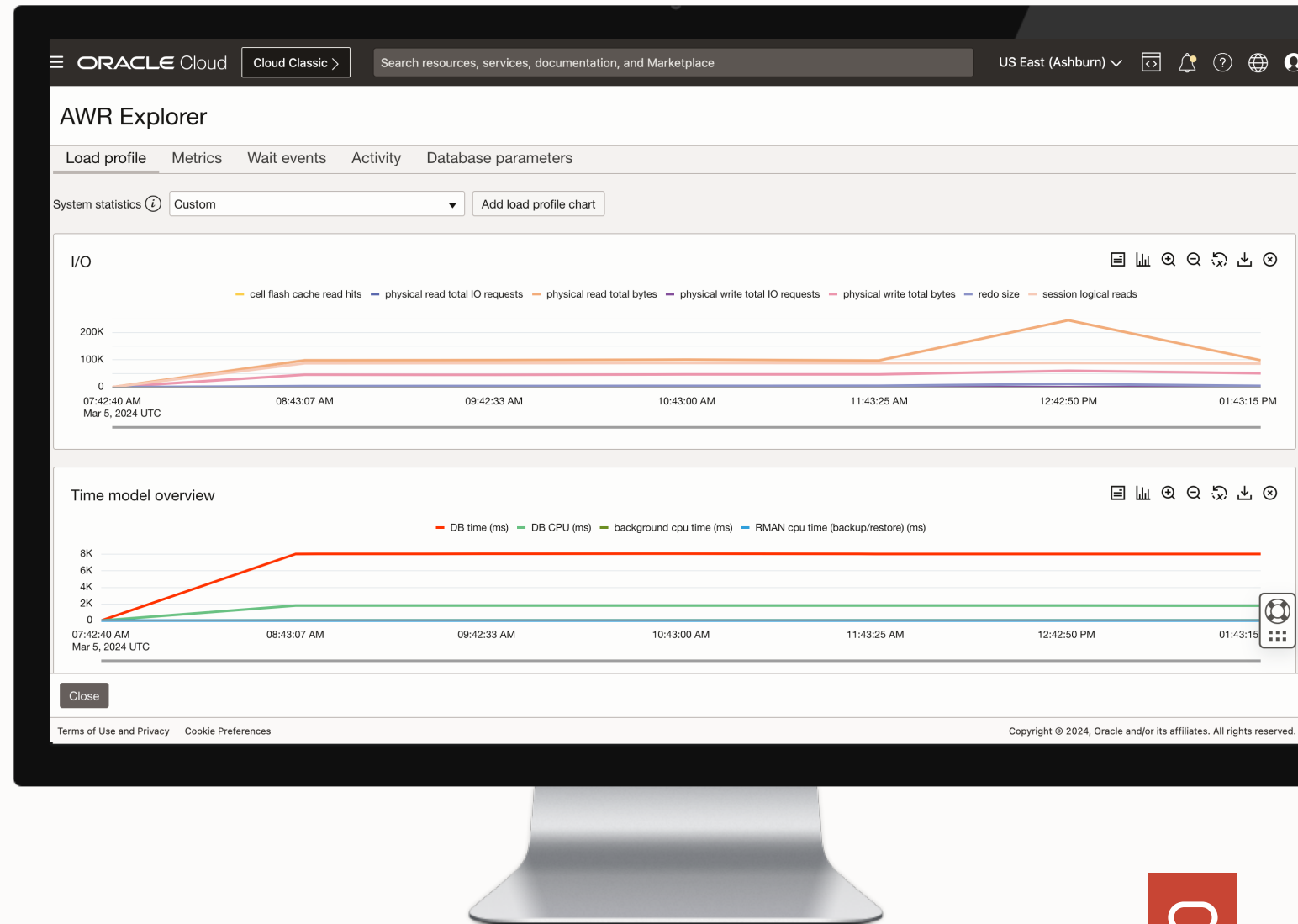
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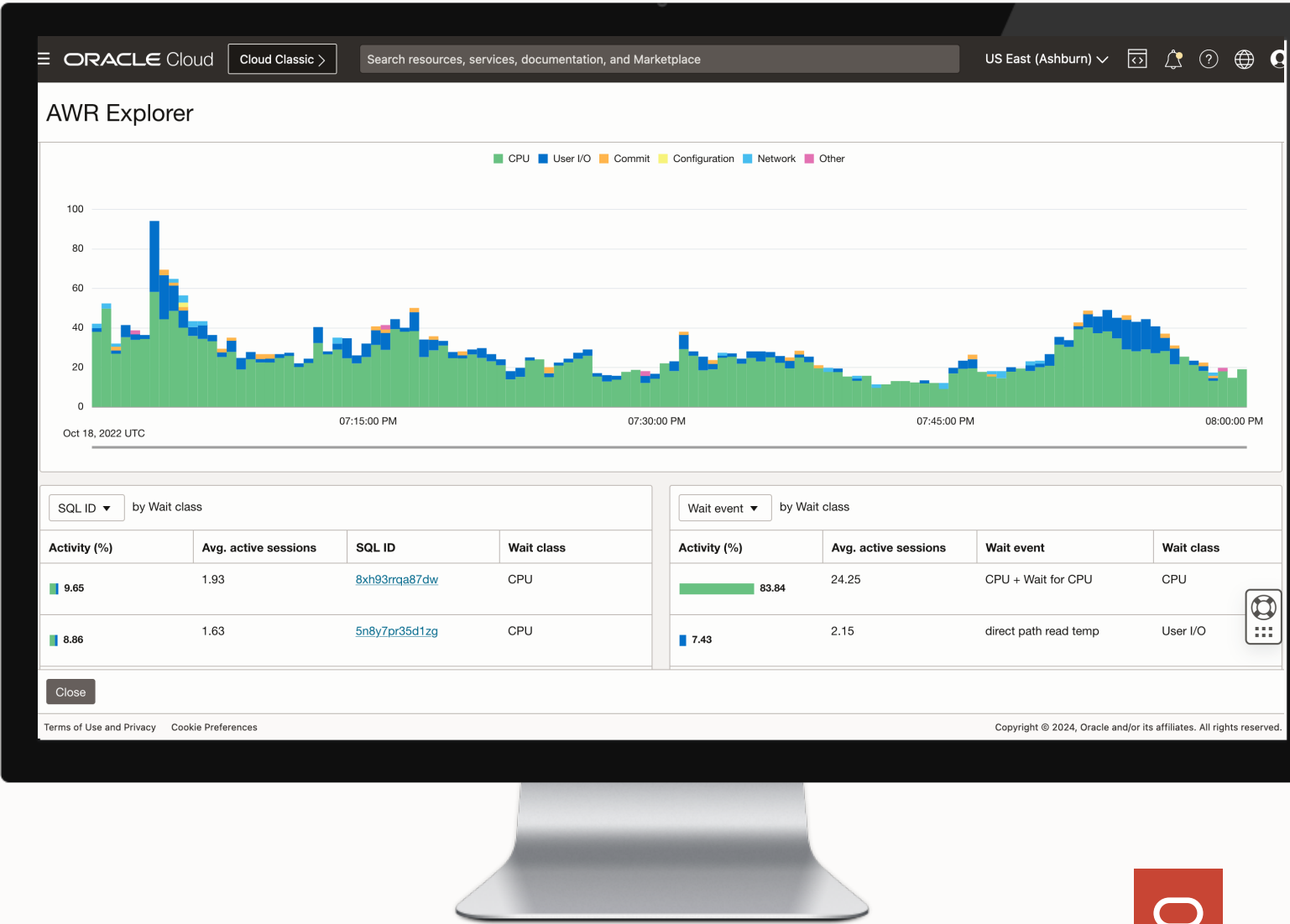
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Performance tuning

Rapidly identify and tune SQL performance issues

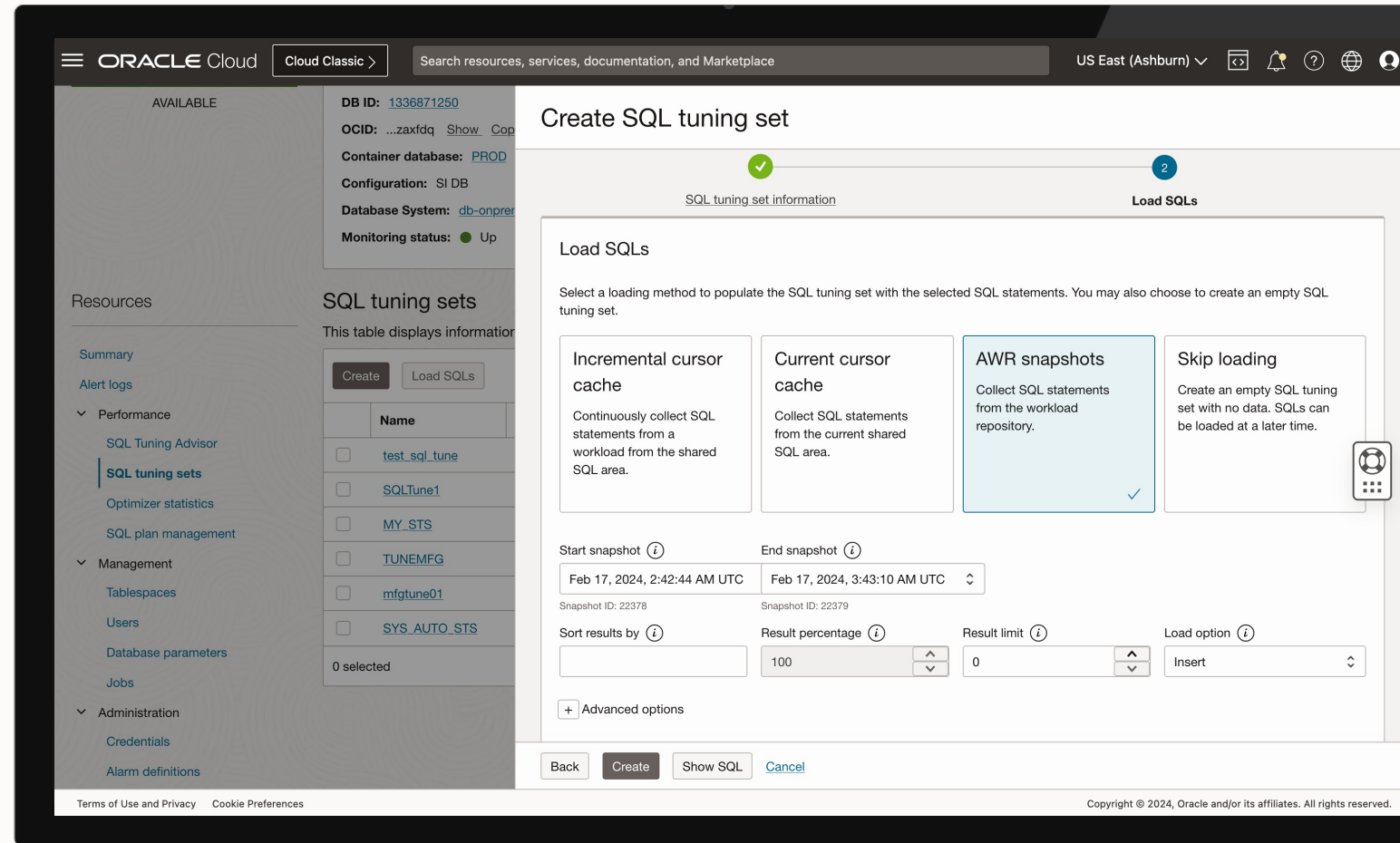
Integrated tools to optimize performance tuning

- SQL tuning sets (STS)
- SQL Tuning Advisor (STA)
- SQL plan management (SPM)
- Optimizer Statistics monitoring

Full tuning workflow from running SQL Tuning Advisor to managing SQL plans

Large scale tuning operations by collecting STS for input into STA

Scheduled runs to automate STS and STA capabilities



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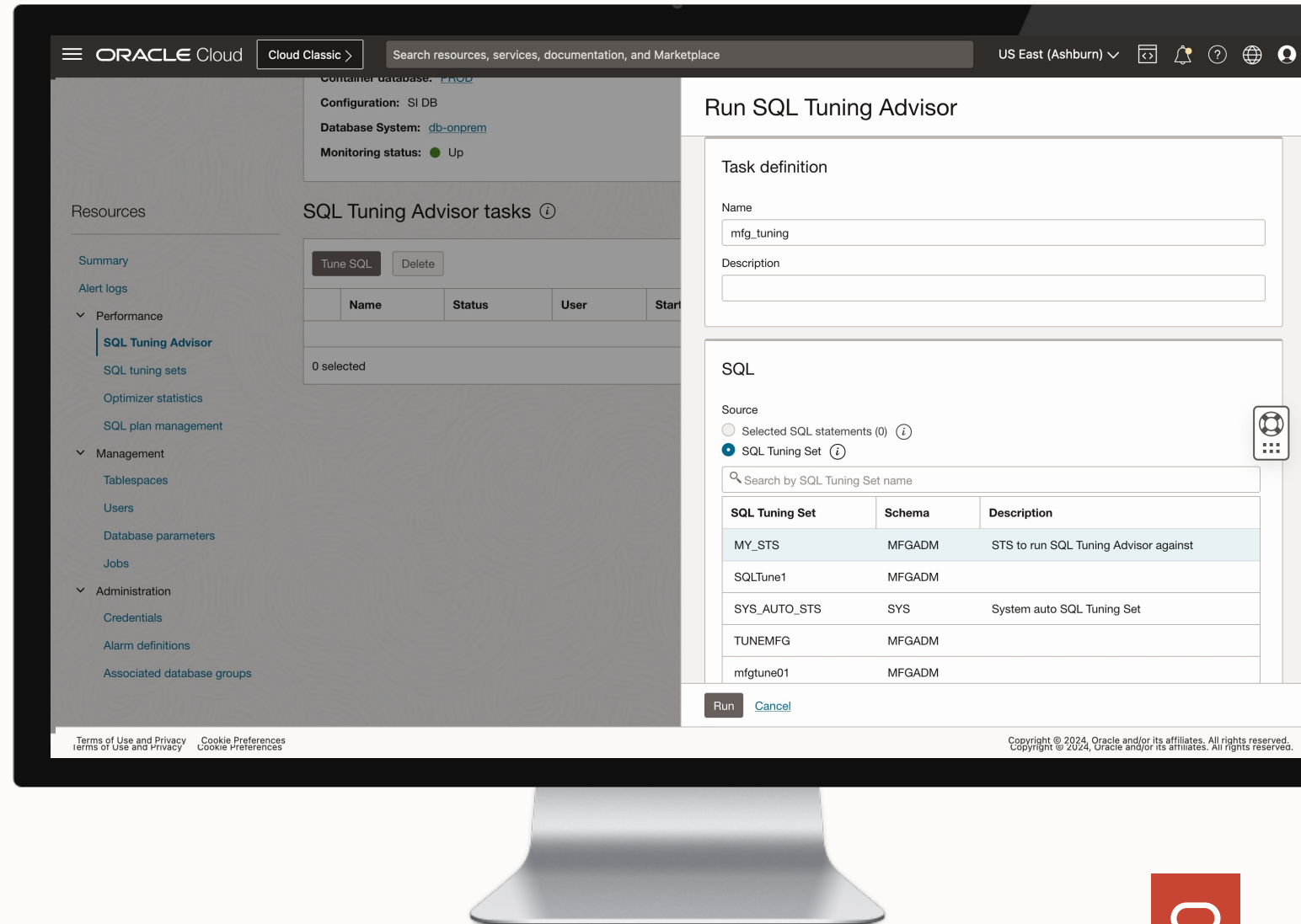
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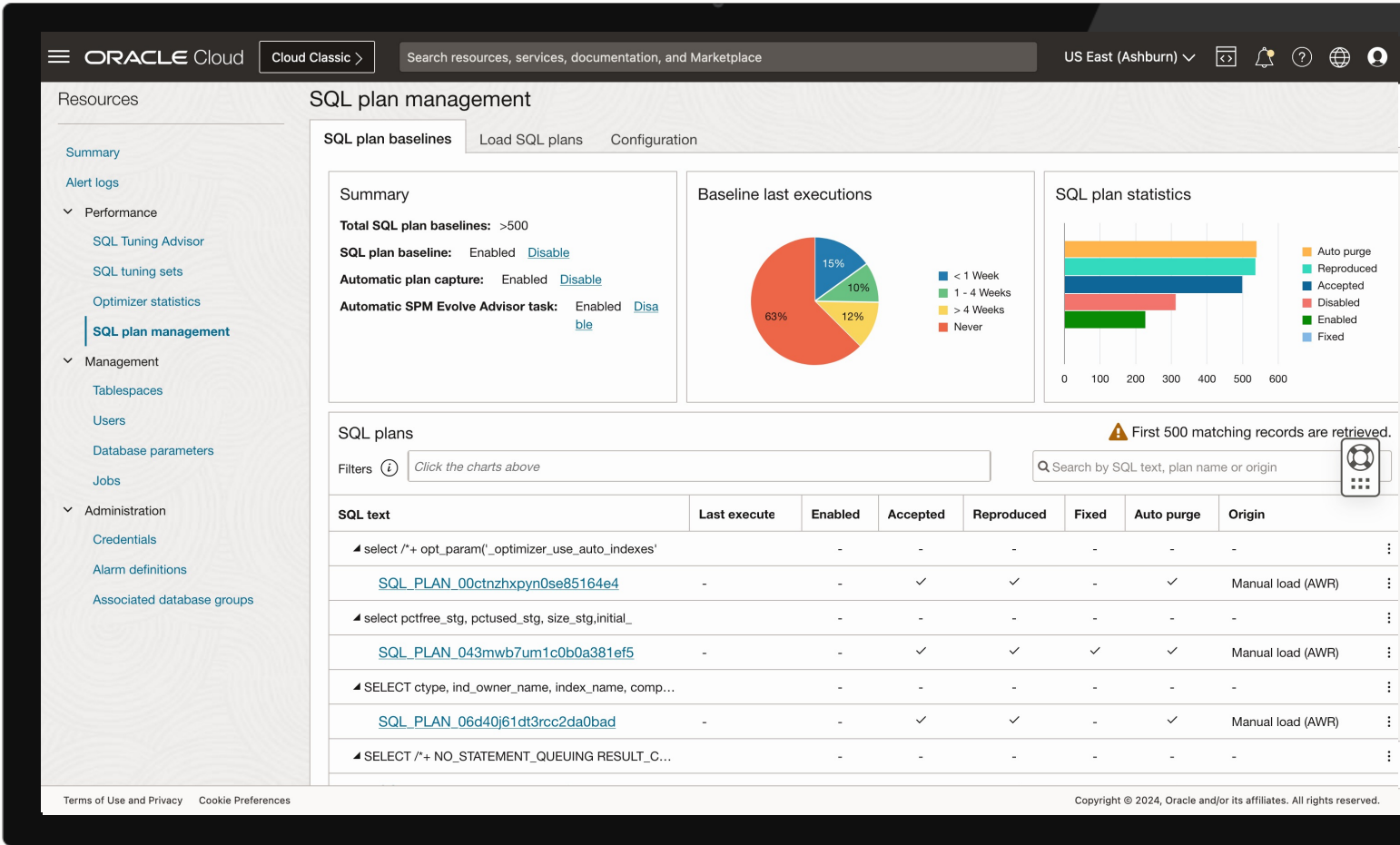
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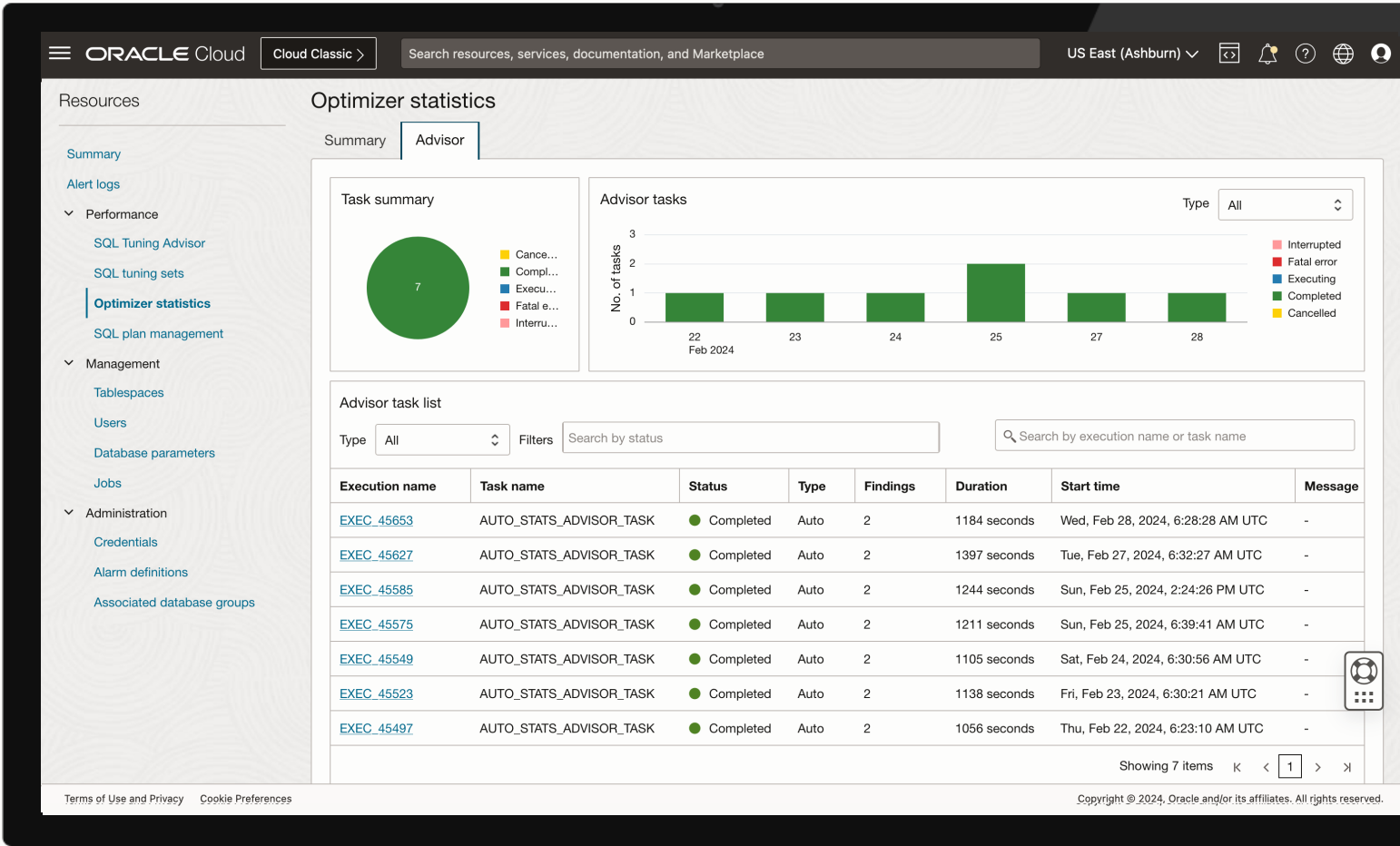
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Database administration

Database administration

Basic administration

- Database configuration parameters
- Group and manage databases by purpose
- Database user configuration
- Monitor Database Alert log and Attention Log

Storage management

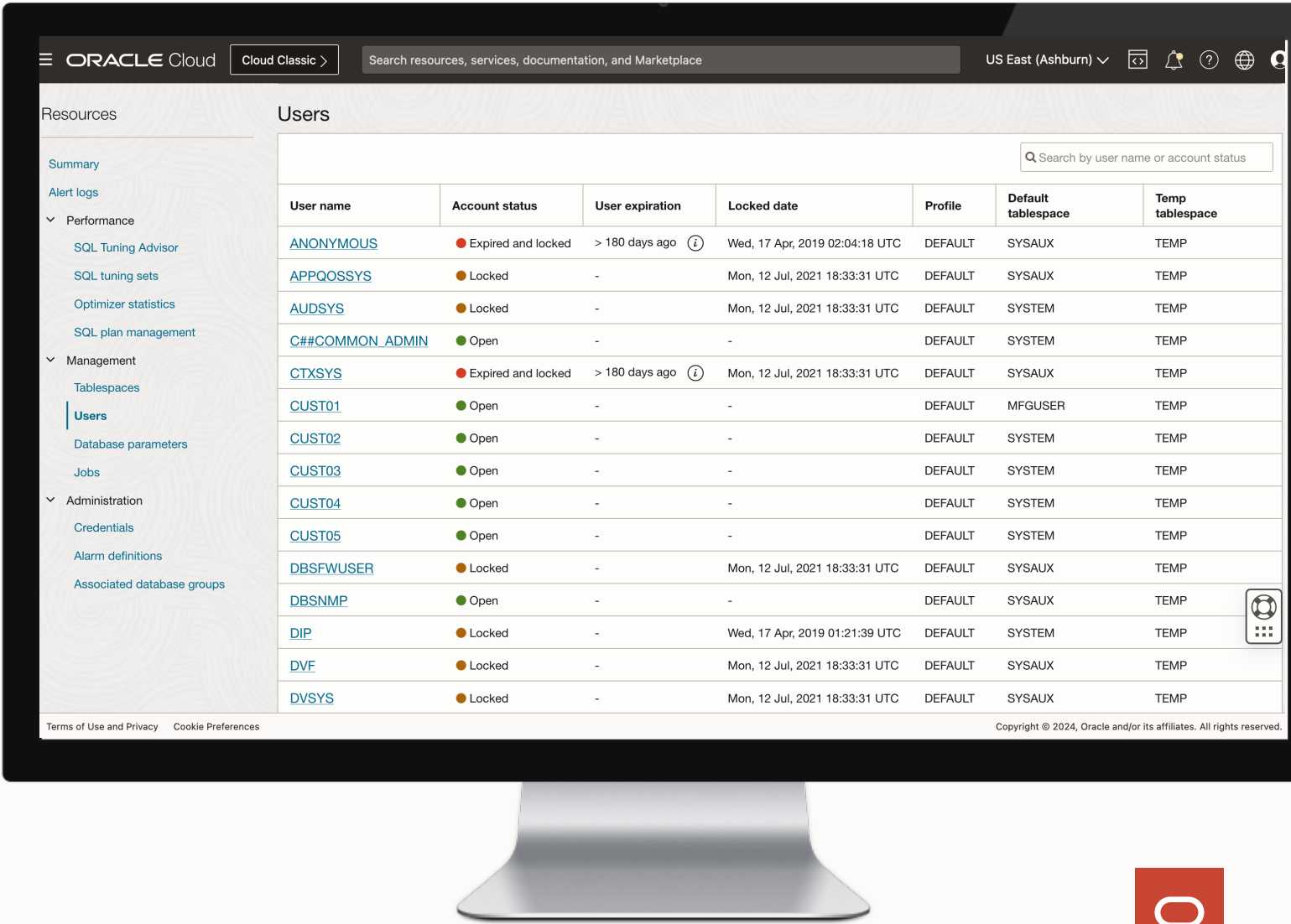
- Tablespaces, data files

Alarm configuration

- OCI Monitoring integration
- View and create alarms
- Out-of-the-box alarms

Job automation

- Jobs templates for SQL scripts on a single or group of databases
- Developers can create templates to perform work across compartments within a group



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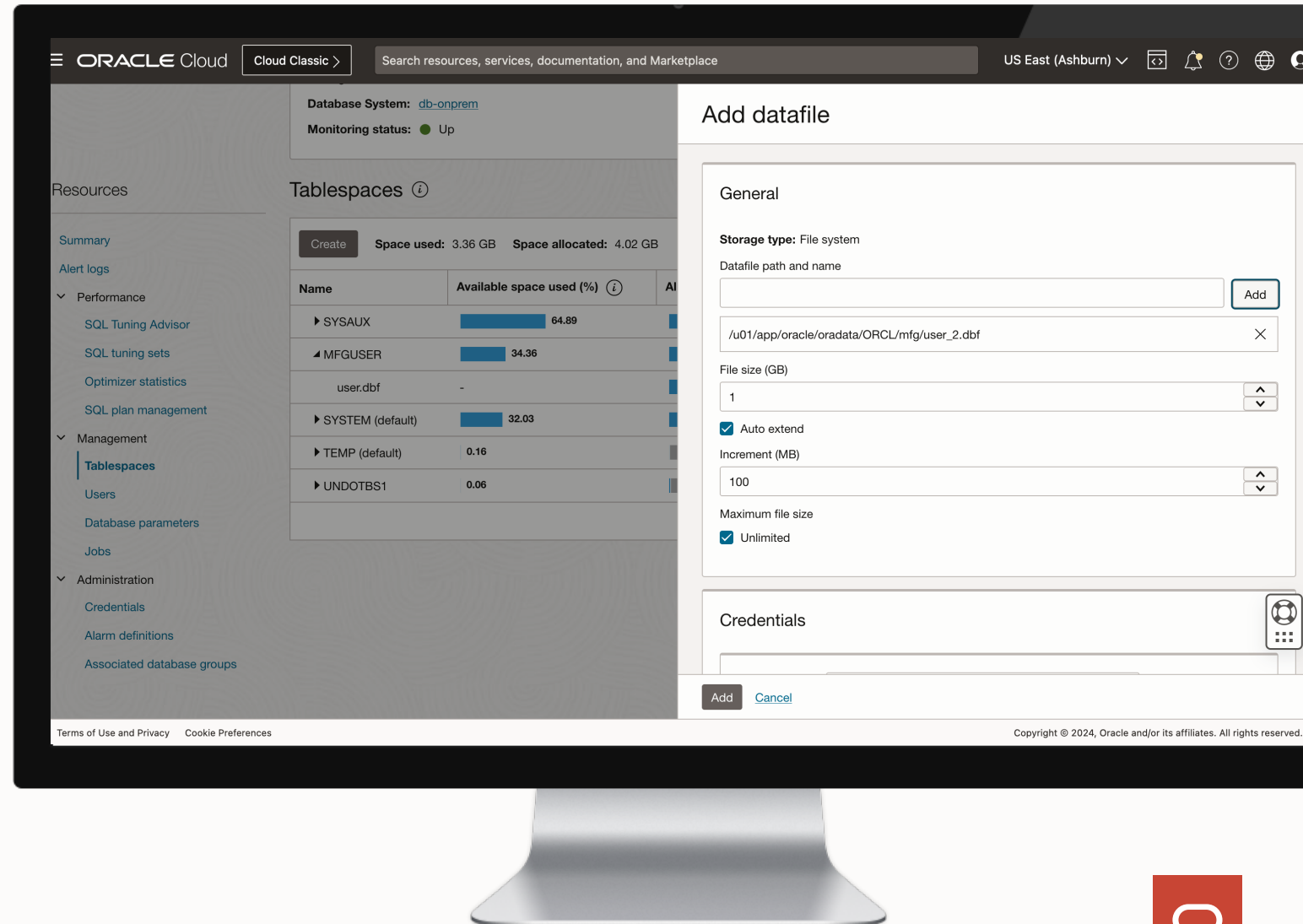
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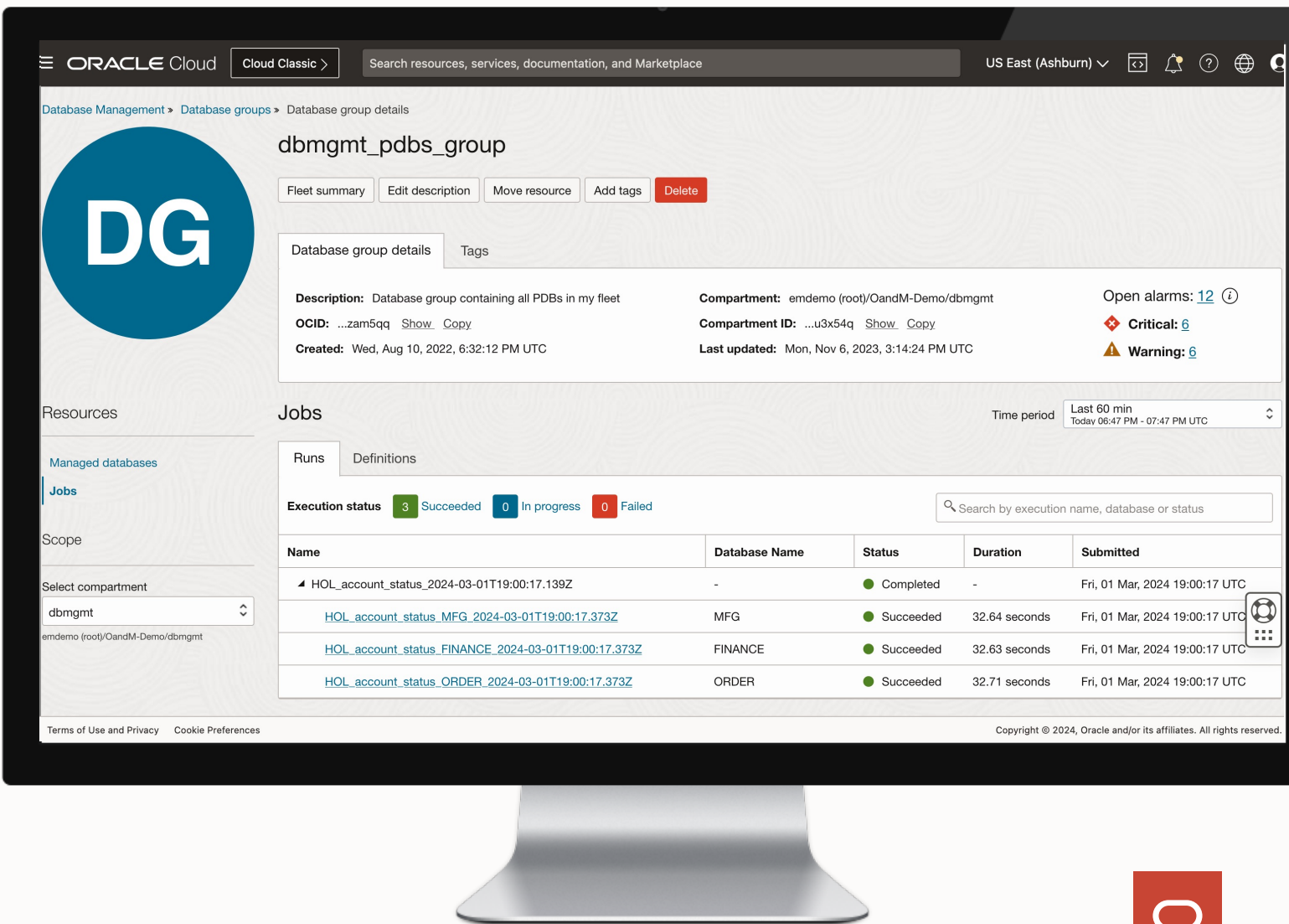
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Job automation

- Jobs templates for SQL scripts on a single or group of databases
- Developers can create templates to perform work across compartments within a group





Exadata infrastructure monitoring

Exadata fleet infrastructure monitoring

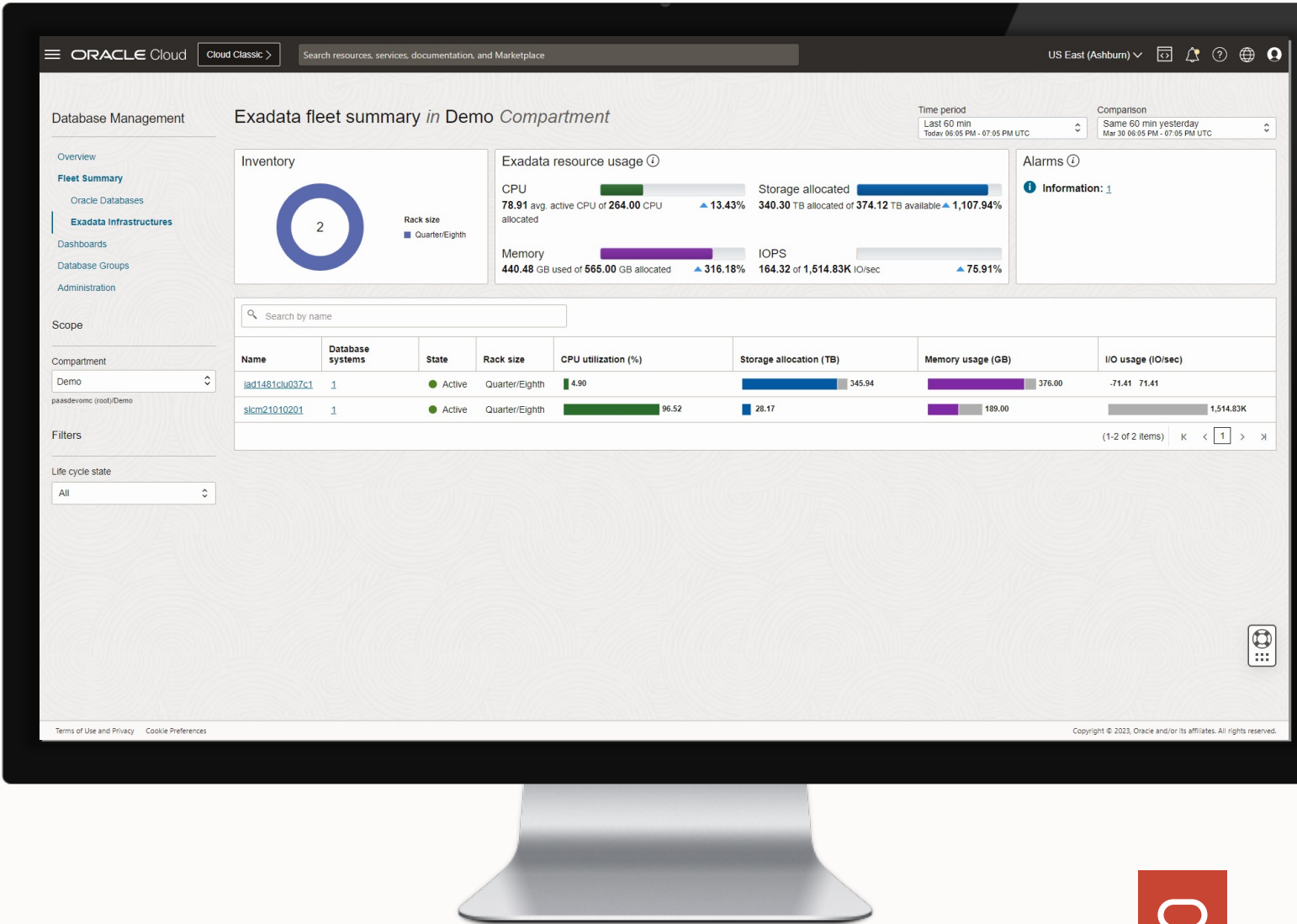
Exadata fleet overview displaying entire inventory in a single view

Find outliers in resource utilization and view short-term trend analysis

- CPU
- Storage Allocated
- Memory
- IOPS

Consolidated fleet Exadata alarms to triage and correlate performance activity

Drill down into Exadata infrastructure details



Exadata infrastructure monitoring

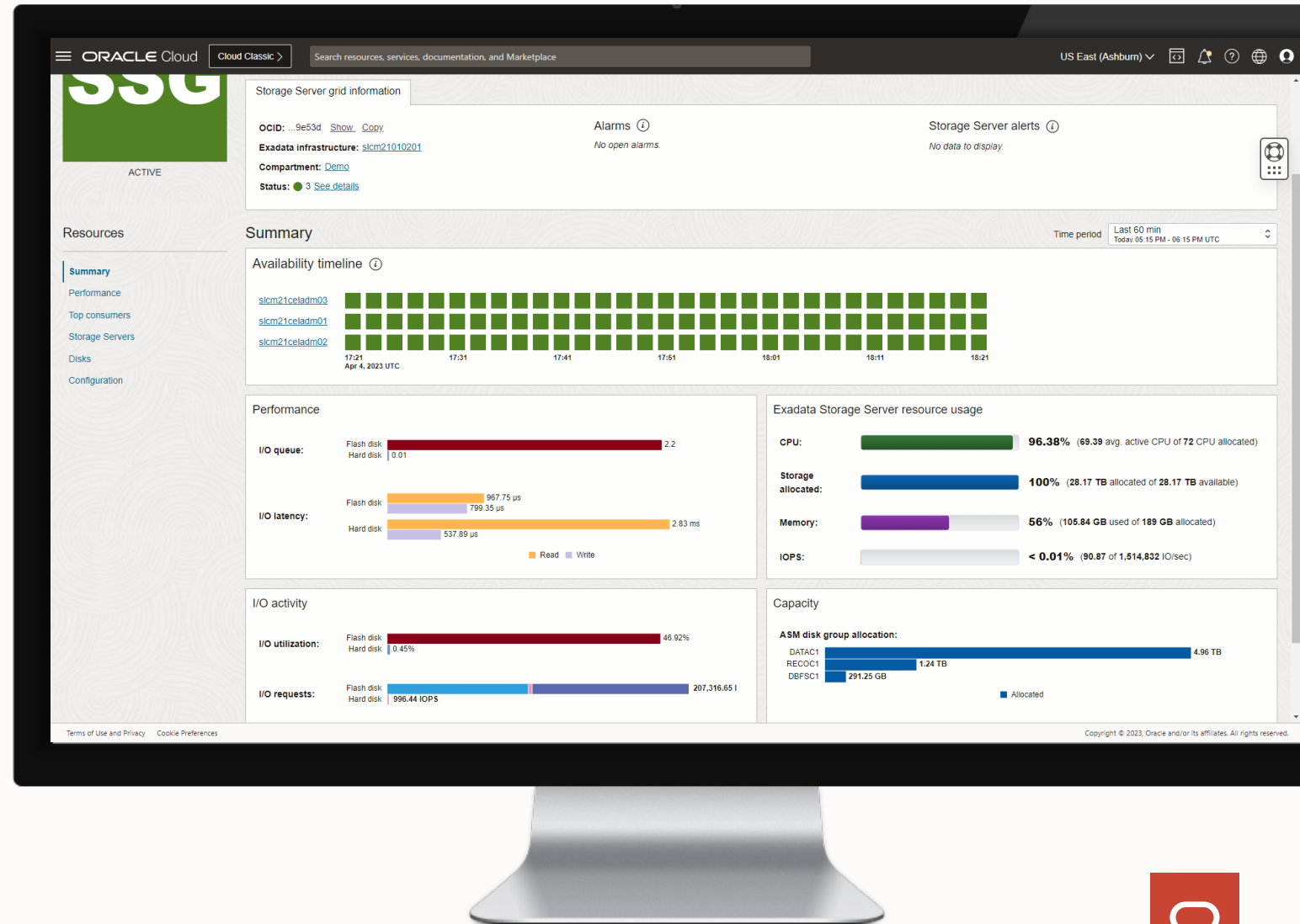
Storage server health

- Track throughput usage and utilization
- Review flash latency, IORM, and disk latency wait times
- Relate metrics with the performance charts to compare the I/O distribution across databases
- Top activity by SQL statement within the storage cells

Top DB Resource utilization

- Holistic view of I/O distribution
- Top I/O consumers
- Flash cache usage

Drill down to the Storage server details to monitor the availability, flash and disk latency, and IORM waits of individual cell disks





Exadata performance diagnostics

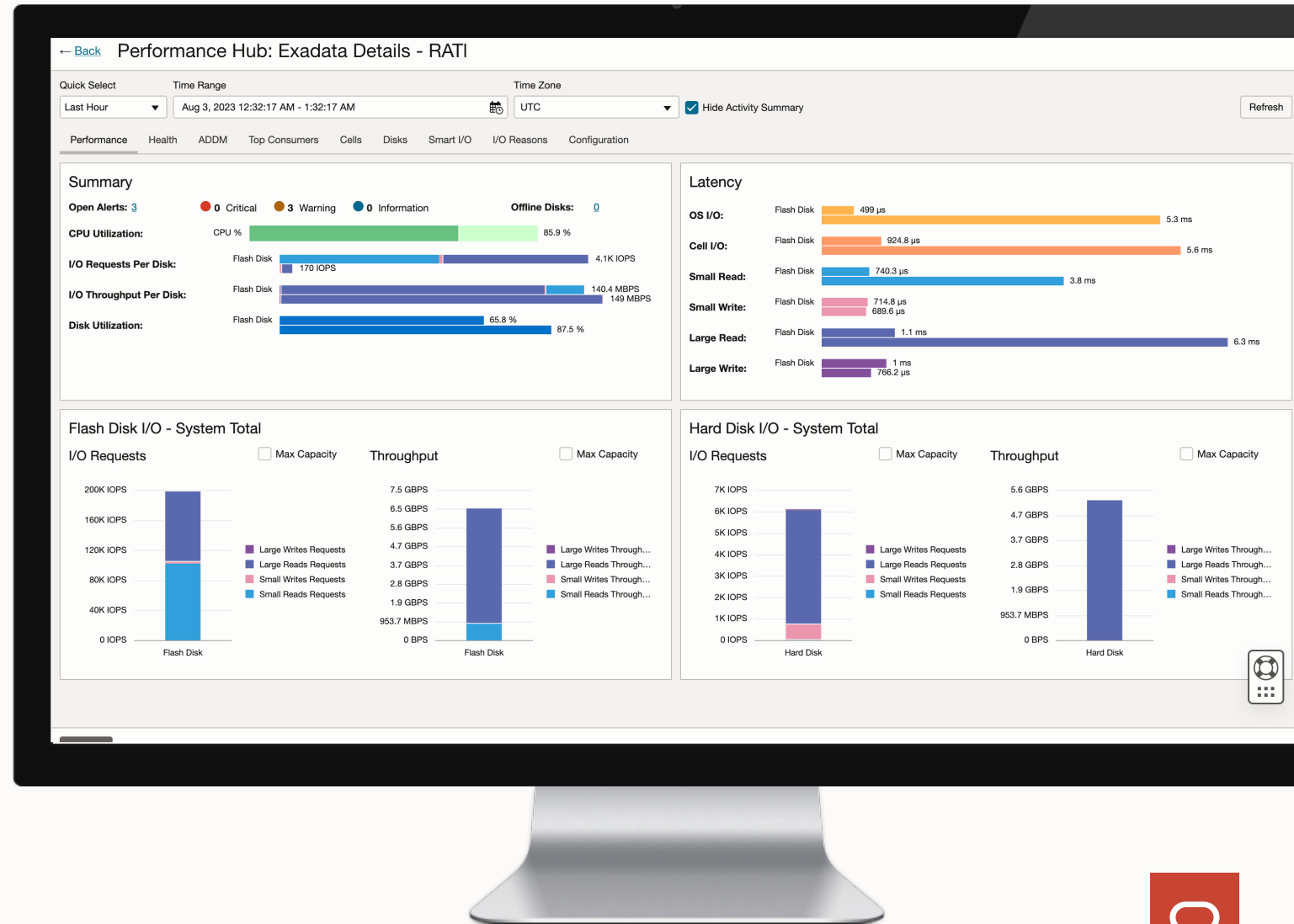
Performance Hub – Exadata tab

Exadata tab in Performance Hub

- One Click Away

Key use cases:

- Uneven workload on cells or disks
 - Spot I/O bottlenecks
 - Instrument small I/O vs large I/O requests
 - Understand I/O correlation to database single block reads
- Noisy neighbor
 - Instrument I/O resource load per database, resource consumer group, or resource category
- Configuration differences
 - Differences in flash cache or flash log sizes
 - Number of cell disks or grid disks in use



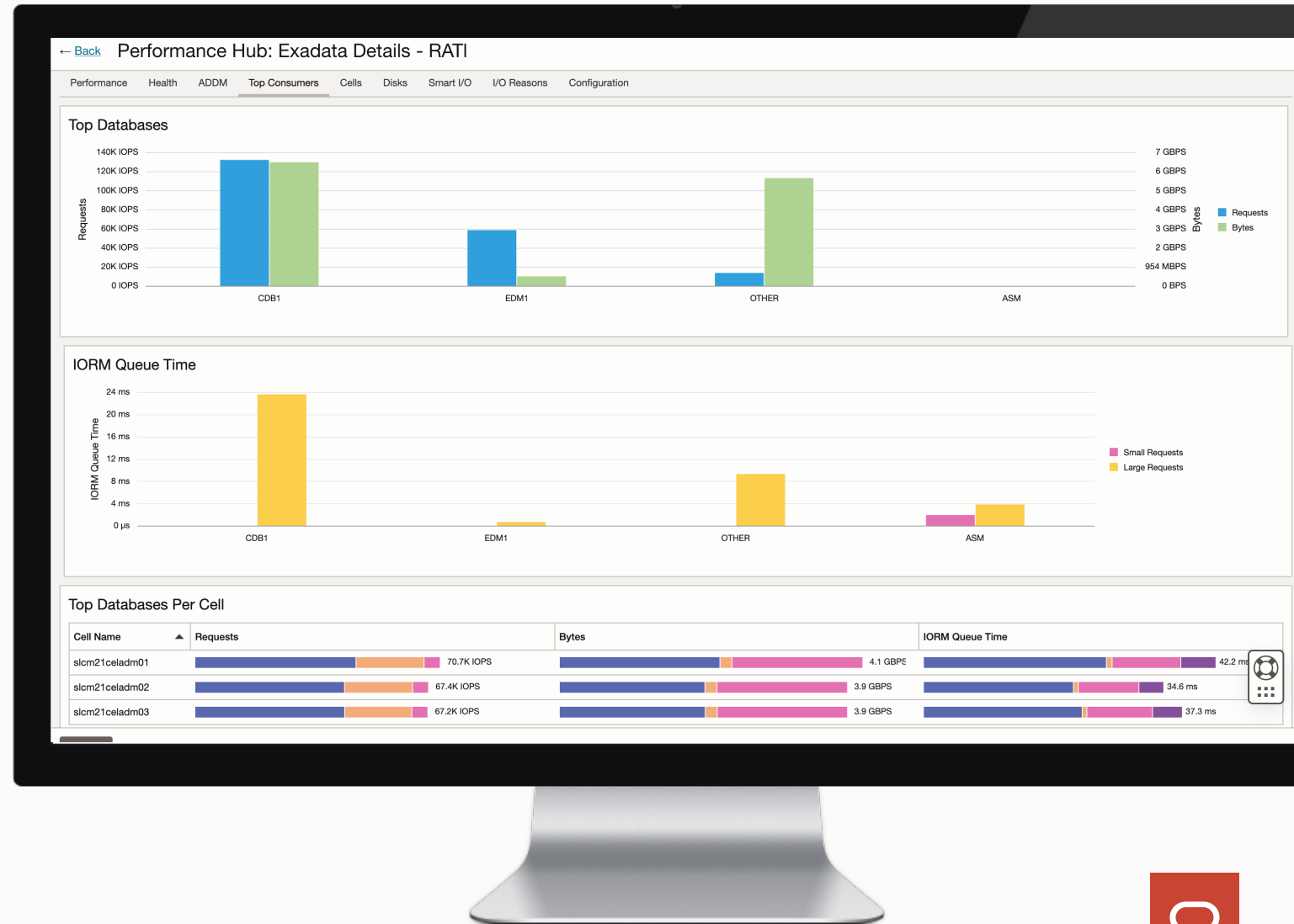
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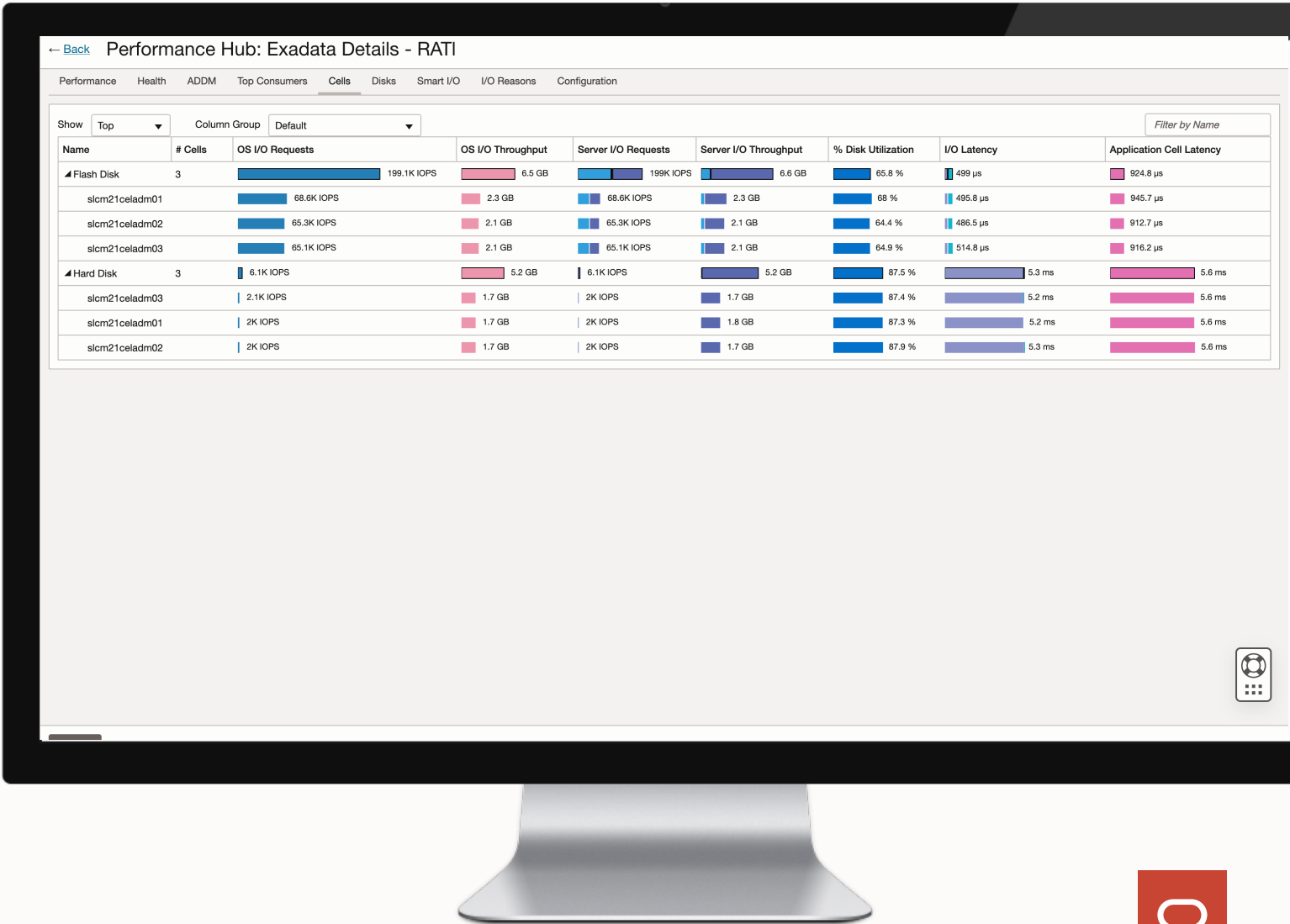
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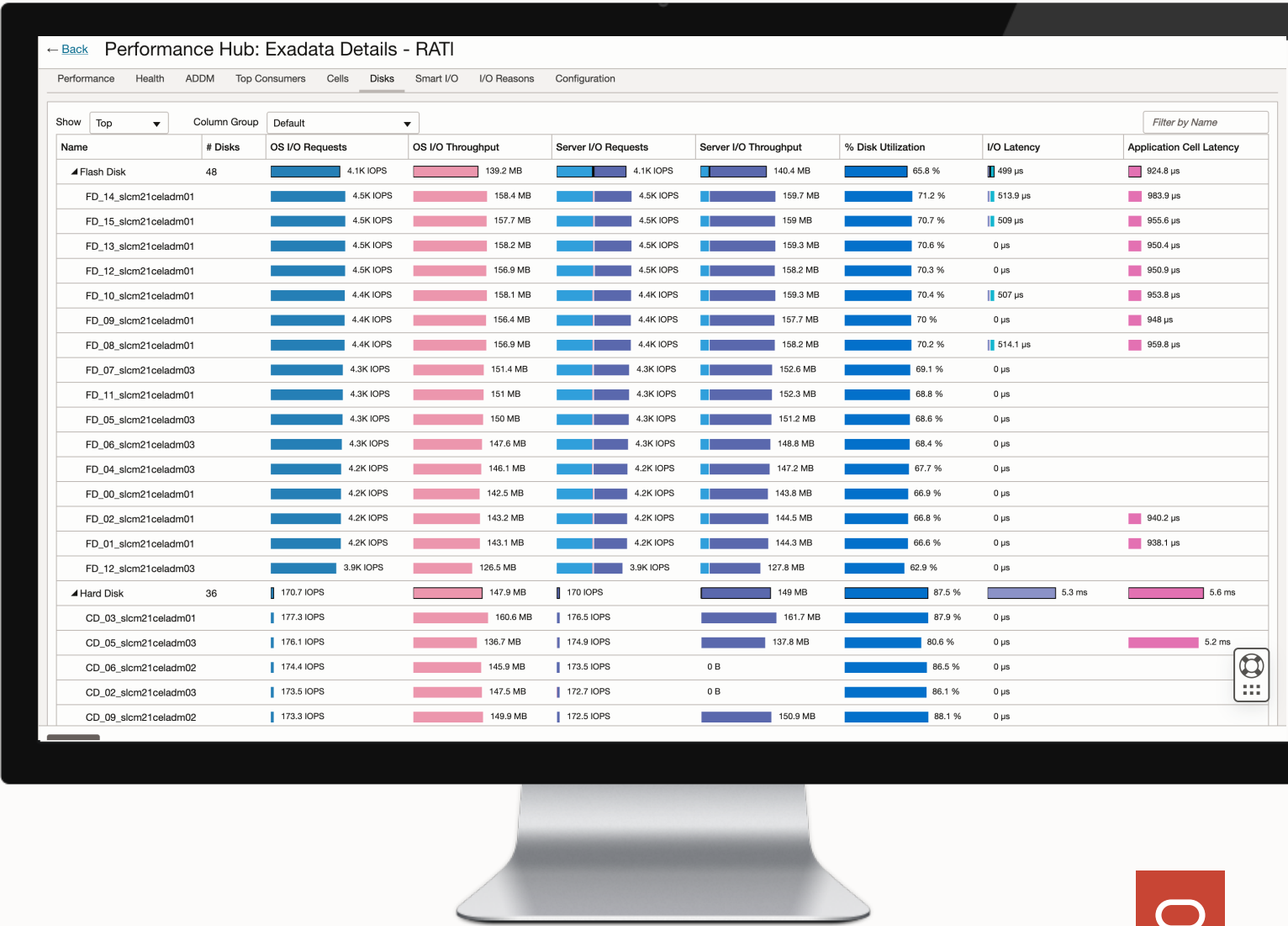
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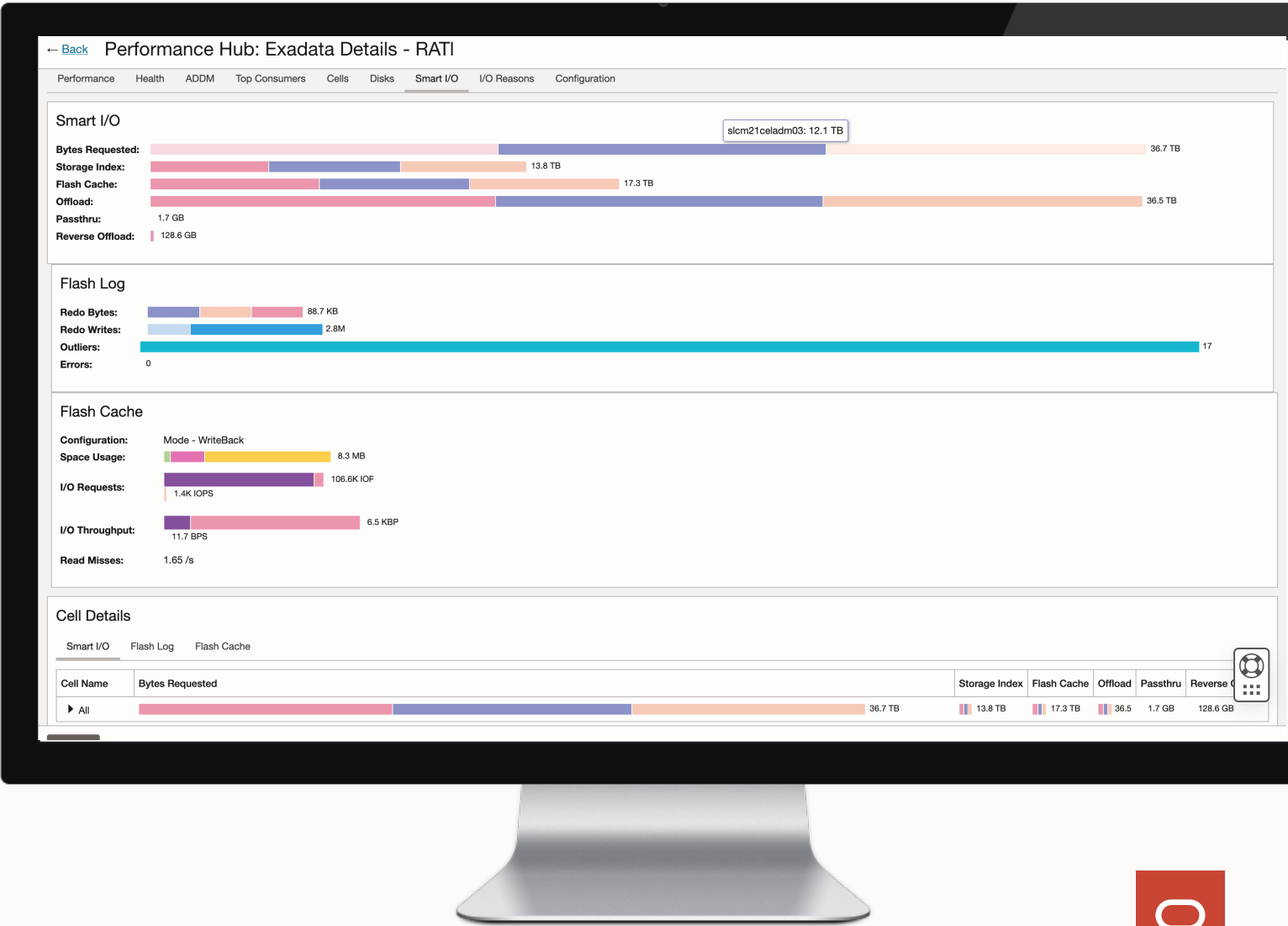
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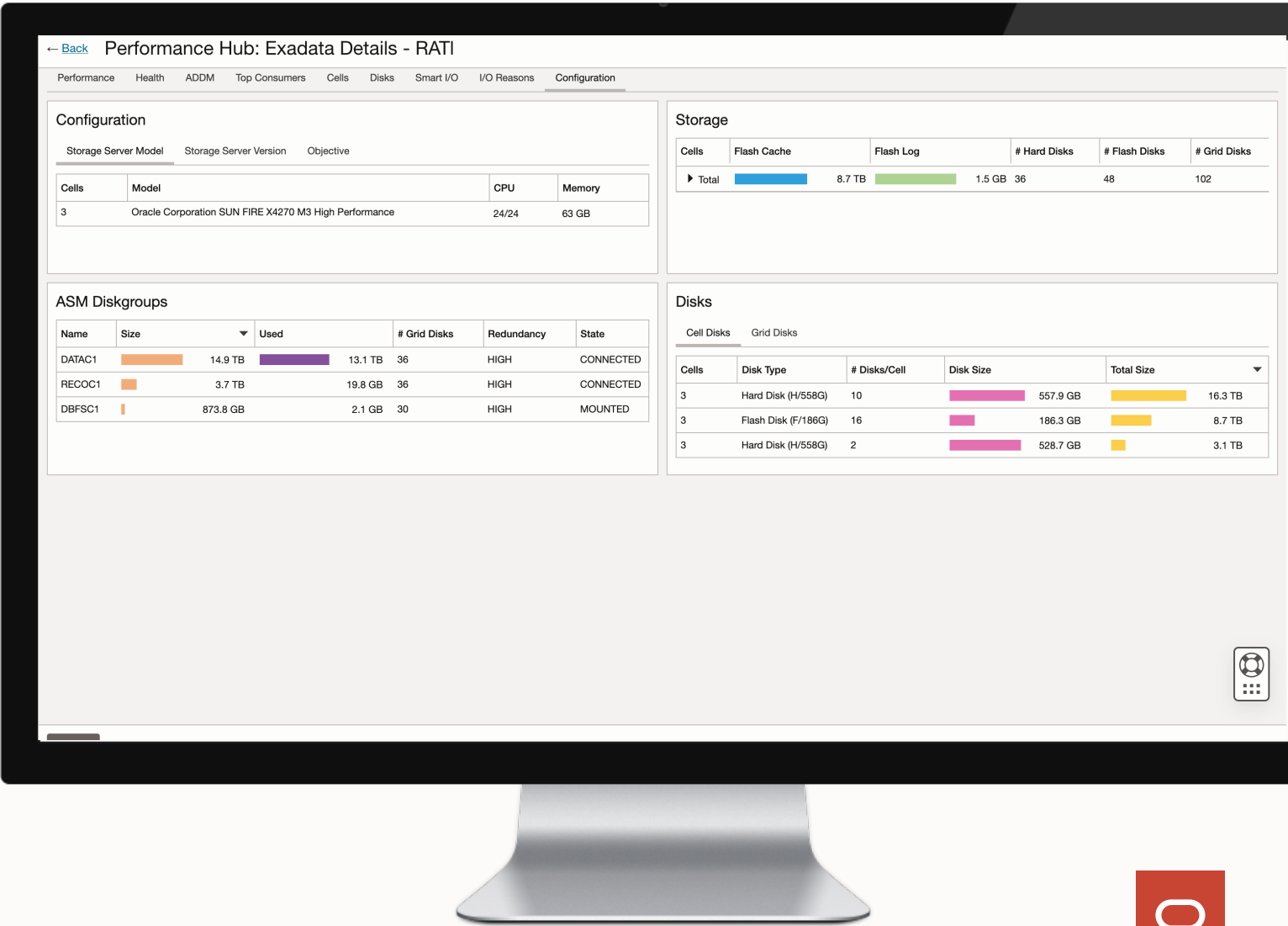
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Features and more...

Database Management features

Manage many-as-one

- Database fleet management
- Database Summary
- Database groups
- Scheduled jobs
- Out-of-the-box performance dashboards

Cloud Native multi-cloud Monitoring

- Exadata infrastructure
- Exadata AWR analysis
- Monitoring RAC
- Supports CDB & PDB
- Monitor entire Database system (Cluster, ASM, Listener etc.)

Performance Diagnostics & Tuning

- Performance Hub
- Top Activity Lite
- ASH analytics
- Blocking sessions
- ADDM
- AWR Explorer
- AWR reports
- SQL Tuning Advisor
- SQL plan management
- SQL tuning set management
- SQL details
- SQL Monitoring reports
- Optimizer Statistics & Advisor

Database Administration

- OOB alarm configuration
- Guided policy setup
- Database parameters
- Tablespace management
- User management
- Alert log monitoring
- Preferred credentials
- Named credentials
- TCPS support
- Search session
- Search SQL

Database Management supported deployments

Feature / Deployment Type	Autonomous DB	BaseDB/ExaDB-D*	ExaDB-C@C	Multicloud (DB@A, GCP)	Exadata (on-prem)
Database Fleet	Yes	Yes	Yes	Yes	Yes
Database Summary	Yes	Yes	Yes	Yes	Yes
PDB Support	Yes	Yes	Yes	Yes	Yes
Performance Hub	Yes	Yes	Yes	Yes	Yes
Exadata storage infrastructure monitoring	N/A	Yes (PerfHub tab)*	Yes (PerfHub tab)	Yes (PerfHub tab)	Yes
Exadata fleet monitoring	N/A	Roadmap*	Roadmap	Roadmap	Yes
Database system monitoring	N/A	Roadmap*	Roadmap	Roadmap	Yes
RAC monitoring	Yes	Yes	Yes	Yes	Yes
AWR Explorer	Yes	Yes	Yes	Yes	Yes
Tablespace monitoring	Yes	Yes	Yes	Yes	Yes
Scheduled Jobs	Yes	Yes	Yes	Yes	Yes
SQL Tuning Advisor, STS, SPM	Yes	Yes	Yes	Yes	Yes
Metric Extensions	N/A	Yes	Yes	Yes	Yes
Optimizer Statistics Advisor	Yes	Yes	Yes	Yes	Yes

Ops Insights

Make informed, data-driven compute resource & performance management decisions using long term data

Personas

- Business executives
- Database admins
- DevOps personnel

Holistic insights into database, host resource utilization and capacity to reduce costs

Anticipate and control Cap Ex spend using aggregated demand forecasts

Improve application throughput by tracking and trending SQL execution performance across the enterprise



Ops Insights

Make informed, data-driven compute resource & performance management decisions using long term data

Capacity Planning

- Analyze and forecast database and host resource usage based on long-term historical data
- Improve costs by identifying over and underutilized database and servers

Exadata Insights

- Enterprise-wide analysis of resource utilization, trending, capacity planning and performance insights for Exadata

ADDM Spotlight

- Strategic database performance insights

SQL Insights

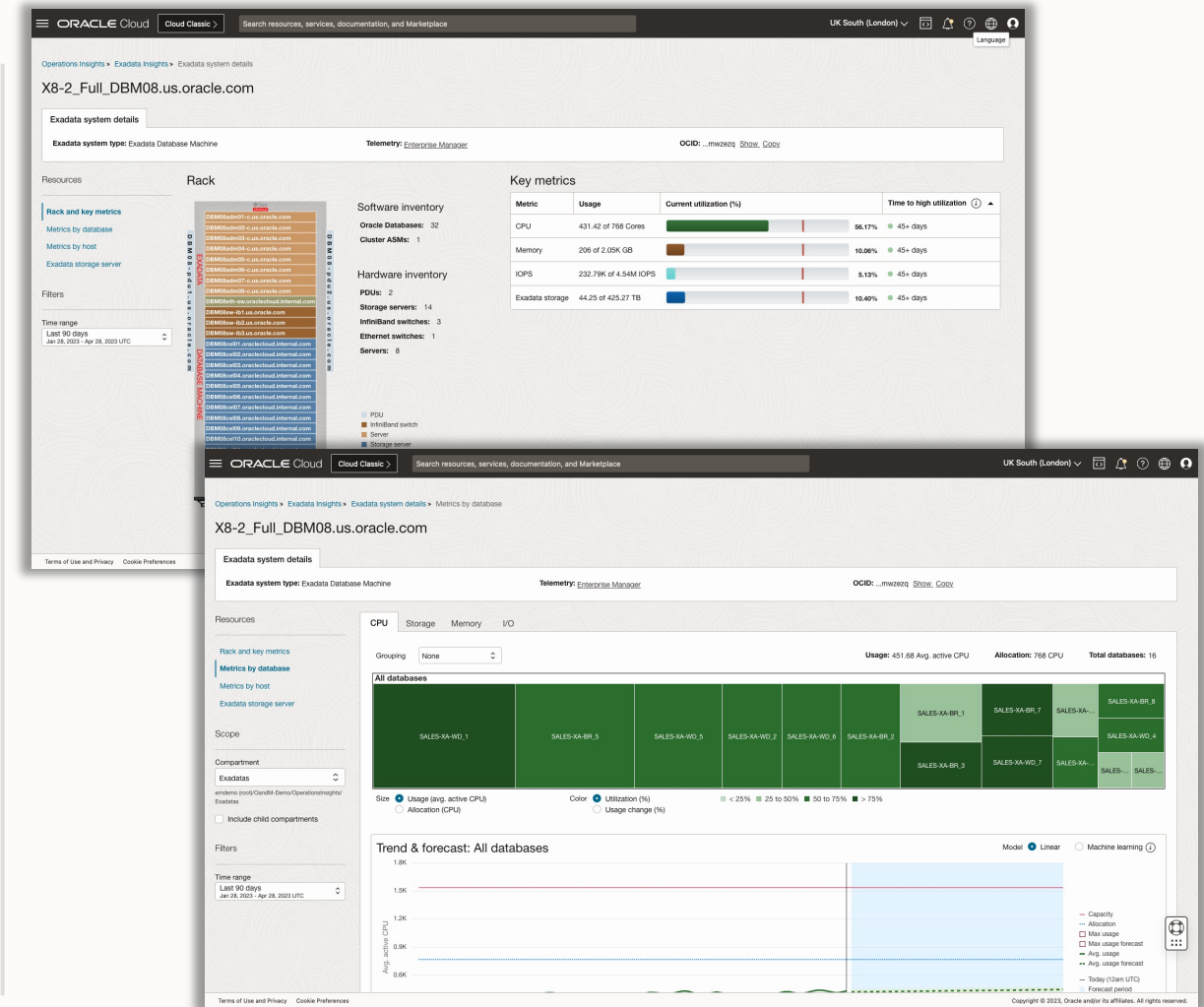
- Long-term SQL store for performance and trend analysis, with interactive data exploration of SQL statistics
- Interconnected dashboards with context-sensitive drill-downs from fleet-level to database to individual SQL level



Exadata Insights

Consolidate Oracle Databases on Exadata

- Use Operations Insights - Exadata Insights feature to identify Exadata servers that satisfy resource requirements
- Find low resource utilization servers
- Use forecasting and capacity planner functionality to ensure that Exadata satisfies future needs of databases being consolidated
- Plan ahead using performance history and seasonality
- Ensure service levels can be met over time



ADDM Spotlight

Aggregate expert tactical advice into strategic optimization insights

ADDM findings are deep performance diagnostics

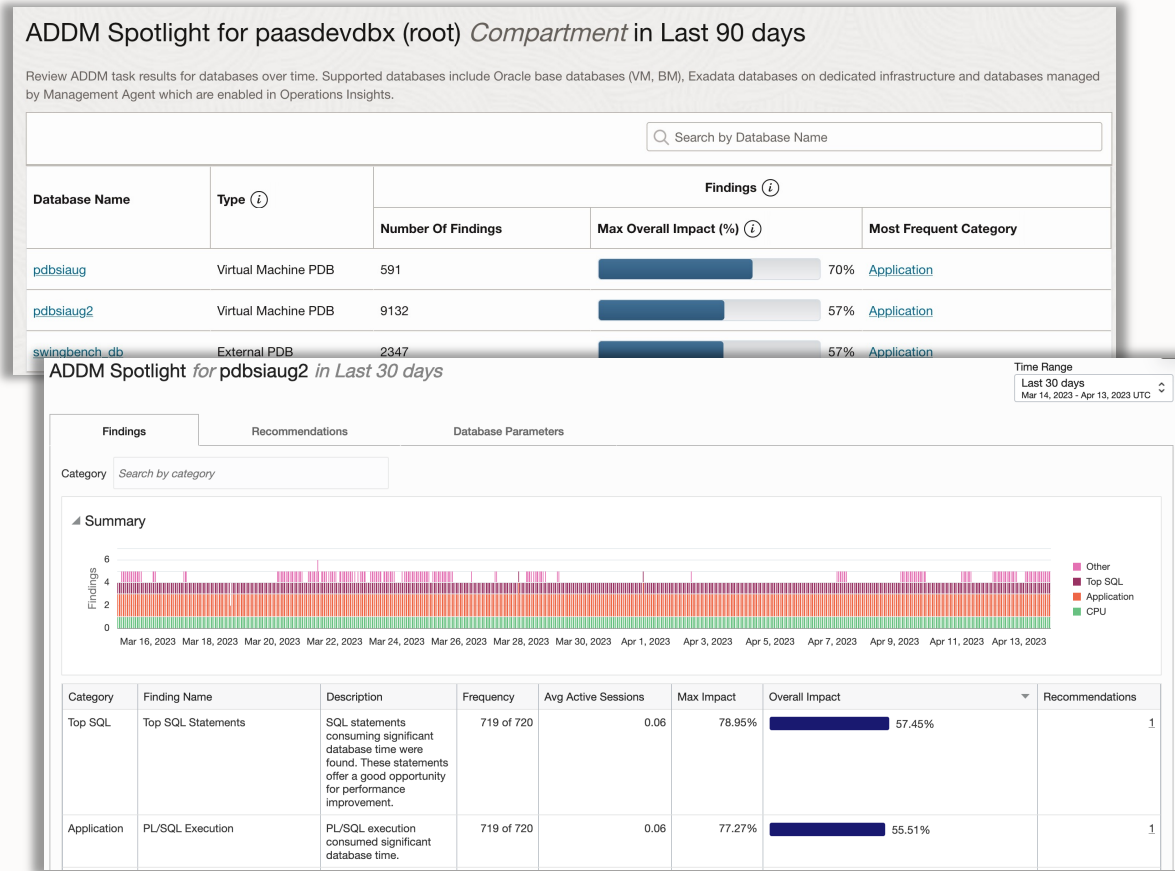
- Generated over 1-hour AWR snapshots
- Tactical in nature, diagnose incidents

ADDM Spotlight

- Categorizes and aggregates findings over longer periods and many ADDM runs
- Identify chronic issues over entire workload

Aggregates by finding and recommendation

- Frequency of occurrence
- Overall Impact and benefit
- Maximum impact and benefit



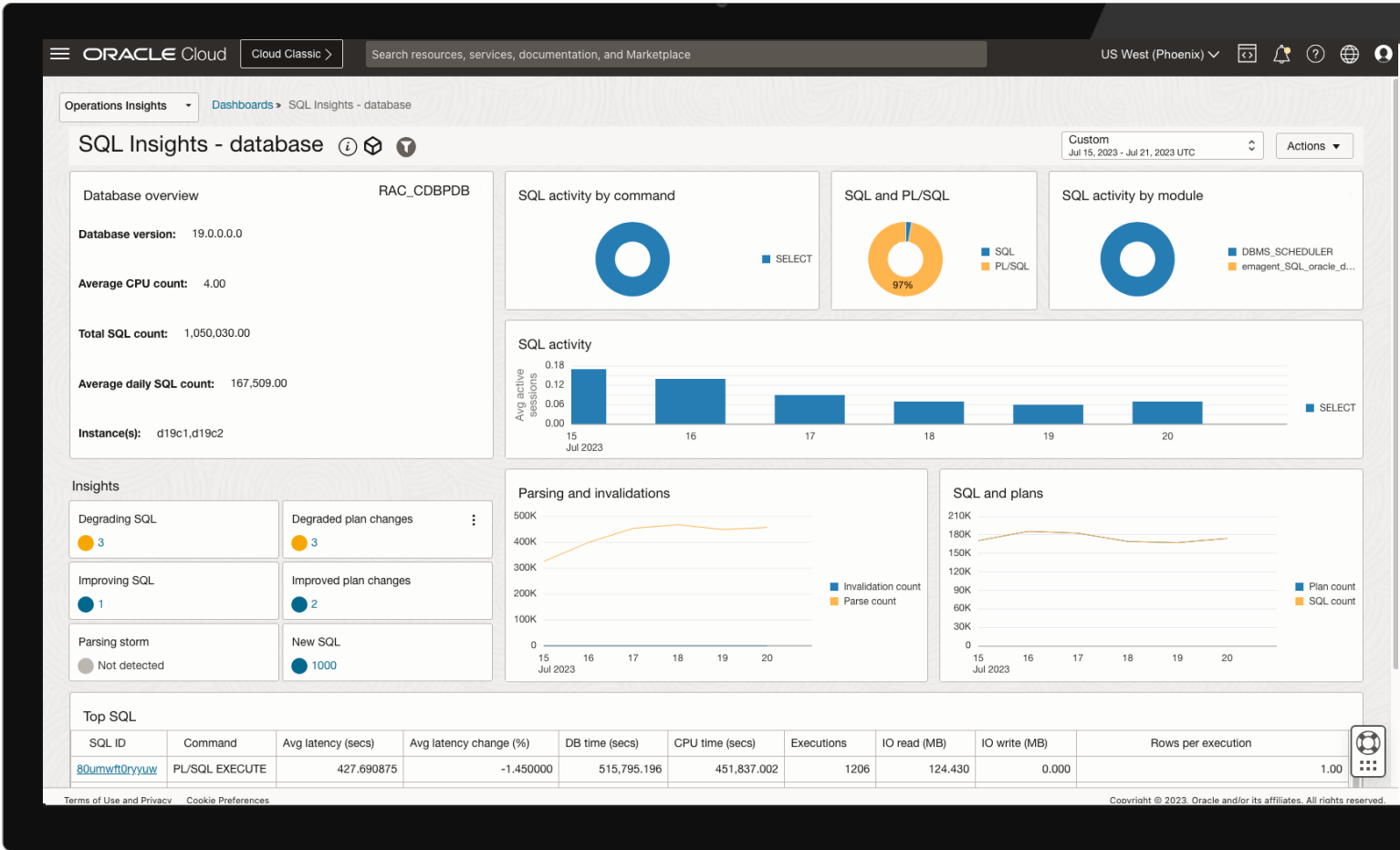
SQL Insights

Detailed insights and historical performance data for SQL executions aggregated on multiple fleet levels

- **SQL:** Key performance metrics for a SQL running on a single database
- **Database:** Performance summary for all SQL statements running on a database
- **Fleet:** Global tree-map view of SQL performance running on multiple database environments

Context sensitive drill-downs in performance

Dashboard framework SQL performance details



SQL Explorer

Exploratory query-driven interface

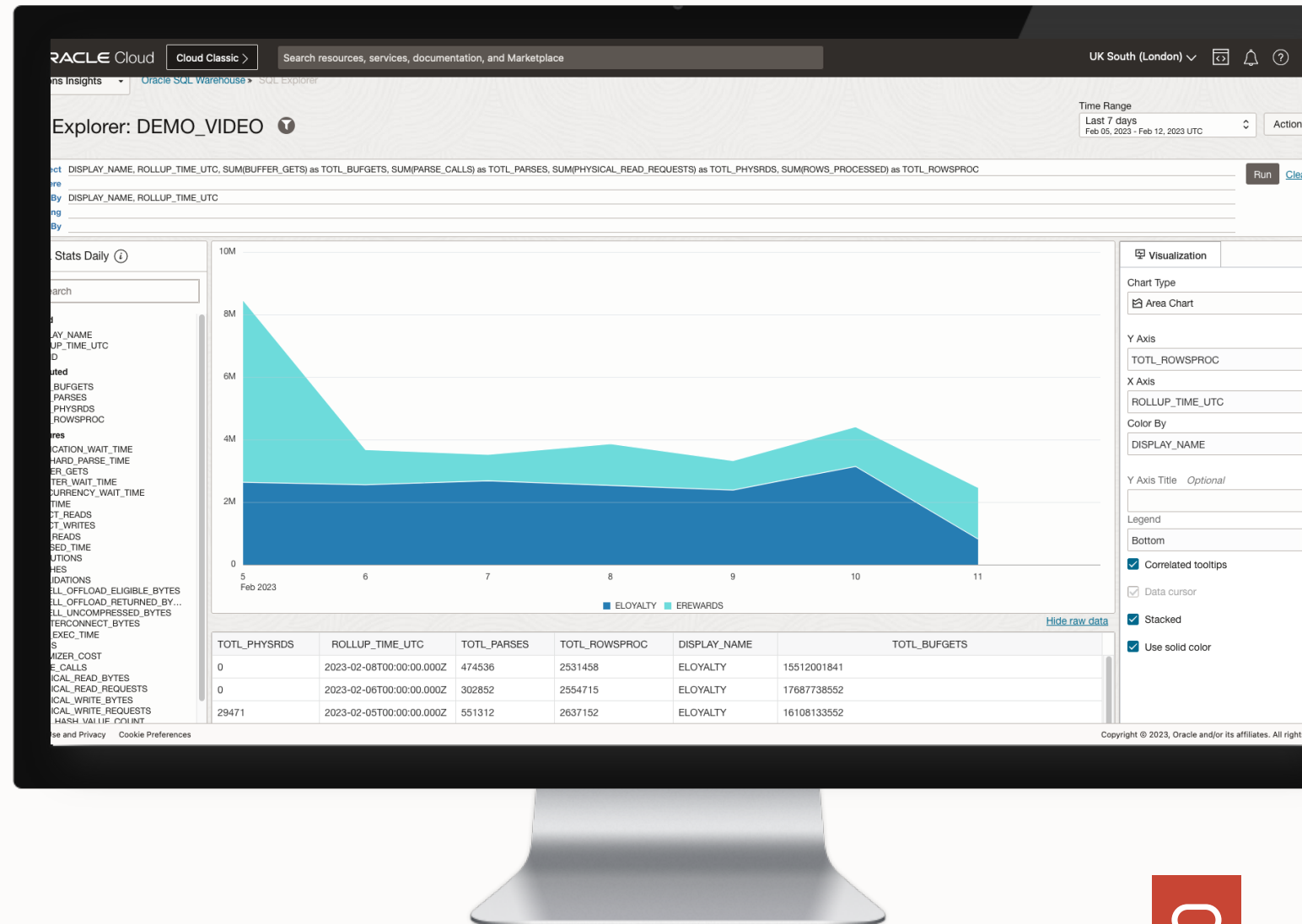
- Interactive, easy to use query builder for rapid experimentation
- Uses SQLSTATS DAILY data object
- Ships with collection of searches
- Visualization of result sets (pie, line, bar, table)

SQL statistics data object

- Daily roll-up of SQL performance stats by SQL_ID
- Built-in time and entity dimensions

Dashboard integration

- Create widgets from saved queries
- Add widgets to enterprise observability dashboards



Support Matrix for Heterogeneous Oracle DB Deployments

Categories	Features	Autonomous DB Shared/Dedicated*	ExaDB-D	Enterprise Manager managed ExaDB-C@C, ExaDB-D, Exadata (On-prem) (EM13.5 RU10+)
Capacity Planning	Database	Yes	Yes	Yes
	Host	N/A	Yes	Yes
	SQL Insights	Yes+	Yes	Yes
SQL Insights	SQL Explorer	Yes+ (With Full feature only)	Yes (Database running on it)	Yes (EM13.5 RU13+)
	Exadata Insights	N/A	Yes	Yes
Exadata Insights	Exadata Explorer	N/A	Yes	Yes
	ADDM Spotlight	Yes+	Yes	Roadmap
Other	News Reports	Yes	Yes	Yes
	AWR Hub	Yes (No database patches needed)	Roadmap	Yes (Needs database patches)
Warehouses	AWR Explorer	Yes	Roadmap	Yes
	AWR Hub Explorer	Yes	Roadmap	Yes
	Exadata Warehouse	N/A	N/A	Yes

Note*: Capacity Planning for ADB on ExaDB-C@C is not supported
Note*: Requires Full Features availability

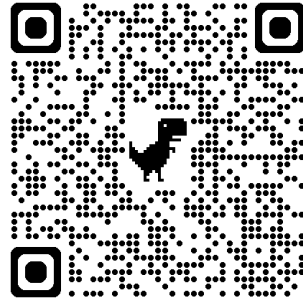




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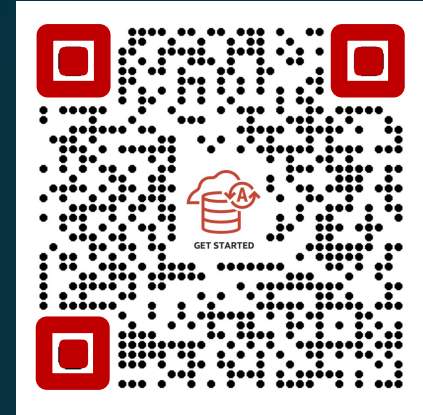
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3 Got a question?
We are on stackoverflow
bit.ly/adb-stackoverflow

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Marcos Arancibia, Derik Harlow, German Viscuso

English

1 Hour

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Melli Annamalai

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Jorge Martinez

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Migration to ADB Part I: Visualize and Evaluate your entire database estate with Oracle Estate Explorer

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