accenture

Great love or just a flirt? ❤

On a first date with Oracle Enterprise Manager 24ai.

Martin Berger / Accenture

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Cloud Enthusiast

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www.martinberger.com

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ASG DATA PLATFORMS

WHY? We are the game changer for our client's data platform projects

HOW? Maximum automation, maximum efficiency, maximum quality!

WHAT? We build innovative data platforms based on our blueprints, assets and tools.

3 key benefits

1 Architecture expertise from hands-on projects

2 Delivery of tailor-made data platforms

3 Integrated Teams - Like a Rowing team, perfect alignment and interaction.

Tools and Blueprints

Key enabler for the implementation of modern data platforms at a high speed and quality.

Continuous Optimization

Tools and Blueprints are continuously optimized to the customer and project’s needs.

Expertise

Expert group for modern data platforms from technical implementation to project management and organization

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Agenda

01 It’s here

02 Setup

03 Architecture

04 New Features

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It’s here

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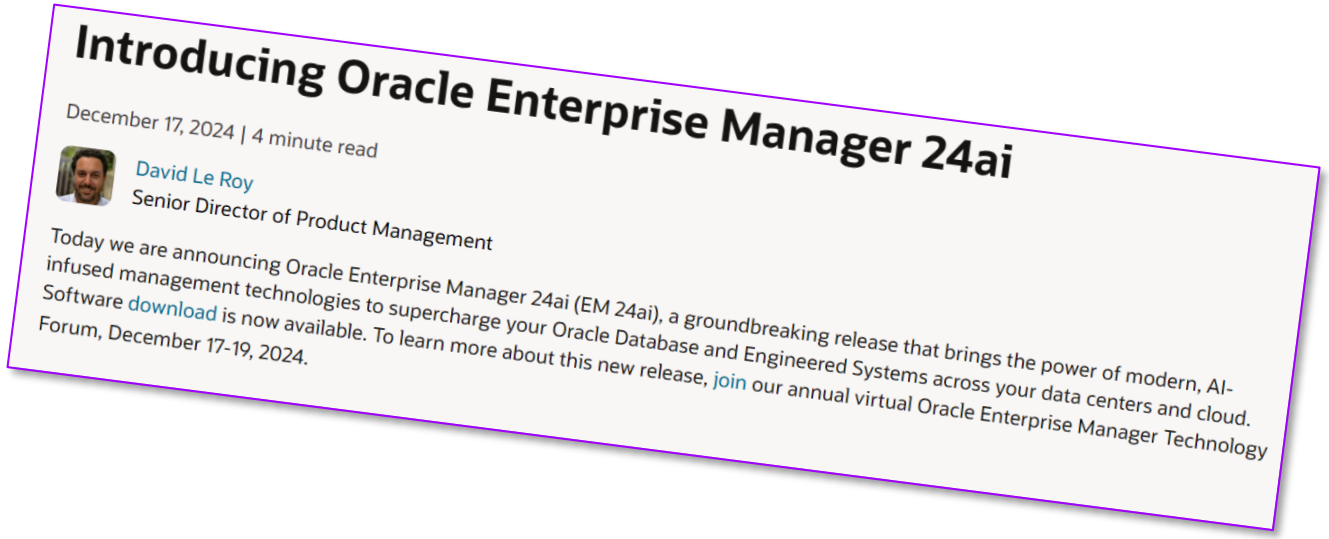
It’s here

20 New Features:

- Zero Downtime (ZDT) Monitoring
- New Navigation Menu
- Monitoring Using Remote Agents
- New Job System Console
- REST APIs for Blackouts Management
- and many more…



Introducing Oracle Enterprise Manager 24ai

December 17, 2024 | 4 minute read

David Le Roy
Senior Director of Product Management

Today we are announcing Oracle Enterprise Manager 24ai (EM 24ai), a groundbreaking release that brings the power of modern, AI-infused management technologies to supercharge your Oracle Database and Engineered Systems across your data centers and cloud. Software download is now available. To learn more about this new release, join our annual virtual Oracle Enterprise Manager Technology Forum, December 17-19, 2024.

Link

https://docs.oracle.com/en/enterprise-manager/cloud-control/enterprise-manager-cloud-control/24.1/emcon/new-features-release.html#GUID-1F9951DF-5115-46C3-BE3F-C2620216FA6C

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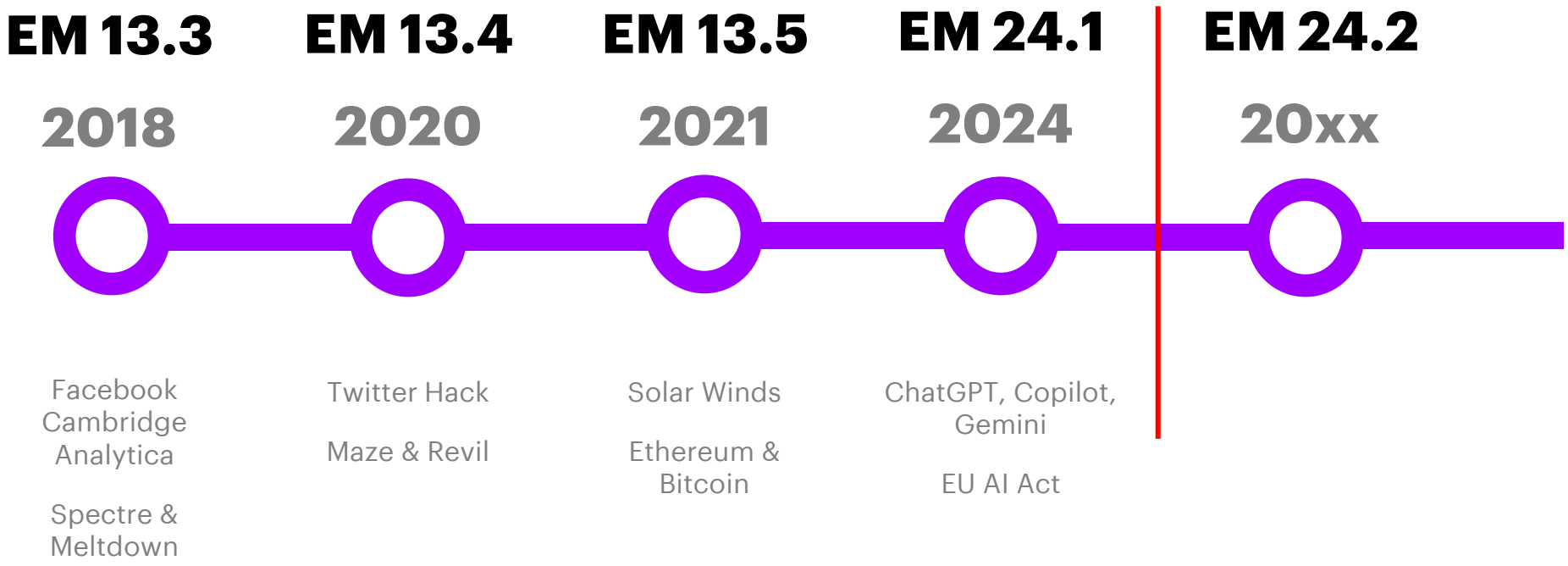
Timeline



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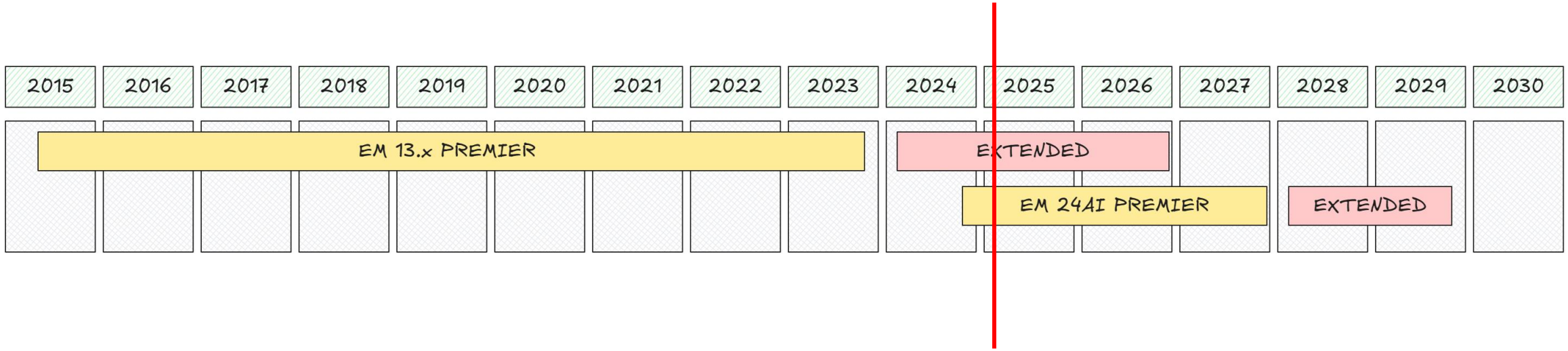
Lifetime Support Policy



Release Schedule of Enterprise Manager Releases and Patchsets (Doc ID 793512.1)
13.5: Long term waived extended support till Dec 2026
24: Premier support till end of Dec 2027 and extended support till end of Dec 2029

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Setup

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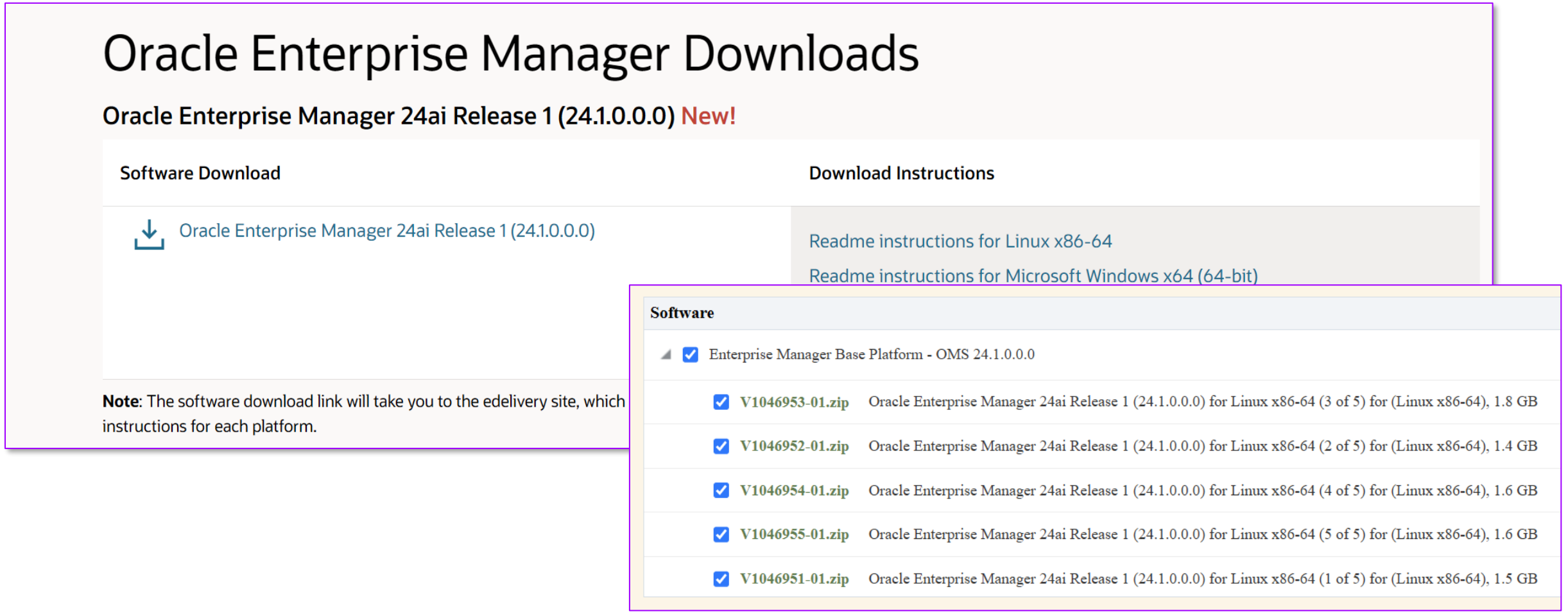
Where to get

- oracle.com (Oracle Software Delivery Cloud)



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Infrastructure Requirements

-	Evaluation or Simple Installation	Advanced Installation (SMALL)	Advanced Installation (MEDIUM)
Configuration	1 OMS <100 Targets <10 Agents <3 Concurrent User Sessions	1 OMS <1000 Targets <100 Agents <10 Concurrent User Sessions	2 OMSes >=1000 but <10,000 Targets >=100 but <1000 Agents >=10 but <25 Concurrent User Sessions
CPU Cores/Host	2	4	6
RAM	10 GB	10 GB	12 GB
Hard Disk Space	28 GB	28 GB	28 GB
Temporary Directory Hard Disk Space	14 GB	14 GB	14 GB
Oracle WebLogic Server JVM Heap Size	1 GB	1.7 GB	4 GB

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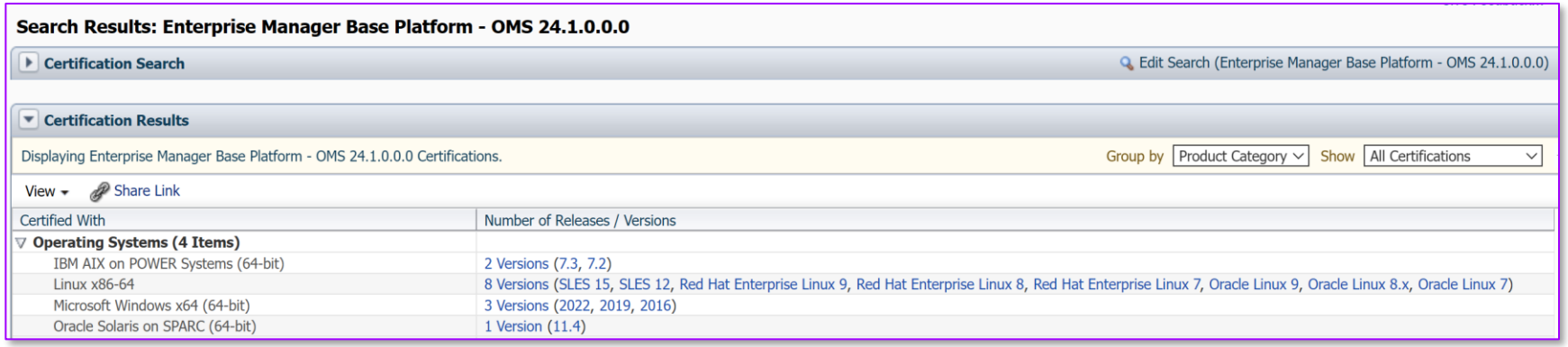
Supported Operating Systems

- Oracle Linux 9
- Red Hat Linux 9
- Oracle Linux 8
- Red Hat Linux 8
- Oracle Linux 7 (ULO+)
- Red Hat Linux 7 (ULO+)
- SUSE Linux Enterprise 15
- SUSE Linux Enterprise 12 (SP3)
- Solaris SPARC 11.4+
- IBM AIX 7.3
- IBM AIX 7.2
- Microsoft Windows



Search Results: Enterprise Manager Base Platform - OMS 24.1.0.0.0

Certification Search — Edit Search (Enterprise Manager Base Platform - OMS 24.1.0.0.0)

Certification Results

Displaying Enterprise Manager Base Platform - OMS 24.1.0.0.0 Certifications. Group by Product Category Show All Certifications

View Share Link

Certified With	Number of Releases / Versions
Operating Systems (4 Items)	
IBM AIX on POWER Systems (64-bit)	2 Versions (7.3, 7.2)
Linux x86-64	8 Versions (SLES 15, SLES 12, Red Hat Enterprise Linux 9, Red Hat Enterprise Linux 8, Red Hat Enterprise Linux 7, Oracle Linux 9, Oracle Linux 8.x, Oracle Linux 7)
Microsoft Windows x64 (64-bit)	3 Versions (2022, 2019, 2016)
Oracle Solaris on SPARC (64-bit)	1 Version (11.4)

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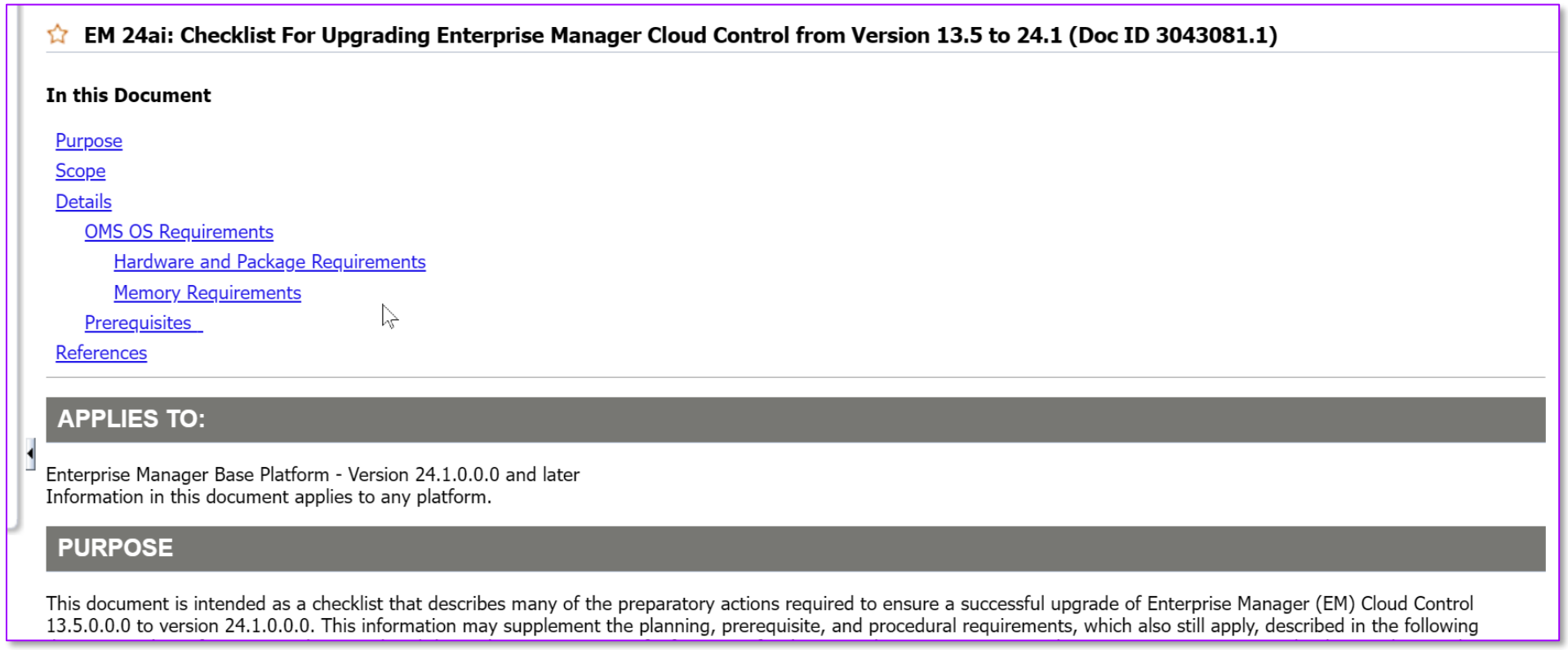
EM 24ai: Checklist For Upgrading Enterprise Manager Cloud Control from Version 13.5 to 24.1 (Doc ID 3043081.1)

- Database Release Upgrade 19.22 or higher
- Undeploy unused plugins like Big Data Appliance
- Verify Jobs



EM 24ai: Checklist For Upgrading Enterprise Manager Cloud Control from Version 13.5 to 24.1 (Doc ID 3043081.1)

In this Document

Purpose
Scope
Details
OMS OS Requirements
Hardware and Package Requirements
Memory Requirements
Prerequisites
References

APPLIES TO:

Enterprise Manager Base Platform - Version 24.1.0.0.0 and later
Information in this document applies to any platform.

PURPOSE

This document is intended as a checklist that describes many of the preparatory actions required to ensure a successful upgrade of Enterprise Manager (EM) Cloud Control 13.5.0.0.0 to version 24.1.0.0.0. This information may supplement the planning, prerequisite, and procedural requirements, which also still apply, described in the following

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EM Prereqkit Utility

- Consolidated repository database and system prerequisite related checks
- Reporting
- Graphical or Silent Mode
- Auto-Fix option to reduce the manual effort
- Simple execution of the prerequisite kit (OUI and Silent) before install or upgrade process
- SYS or non-SYS user

```
oracle@trinity:~/ [oms24c1] ./em24100_linux64.bin EMPREREQ_KIT=TRUE
```

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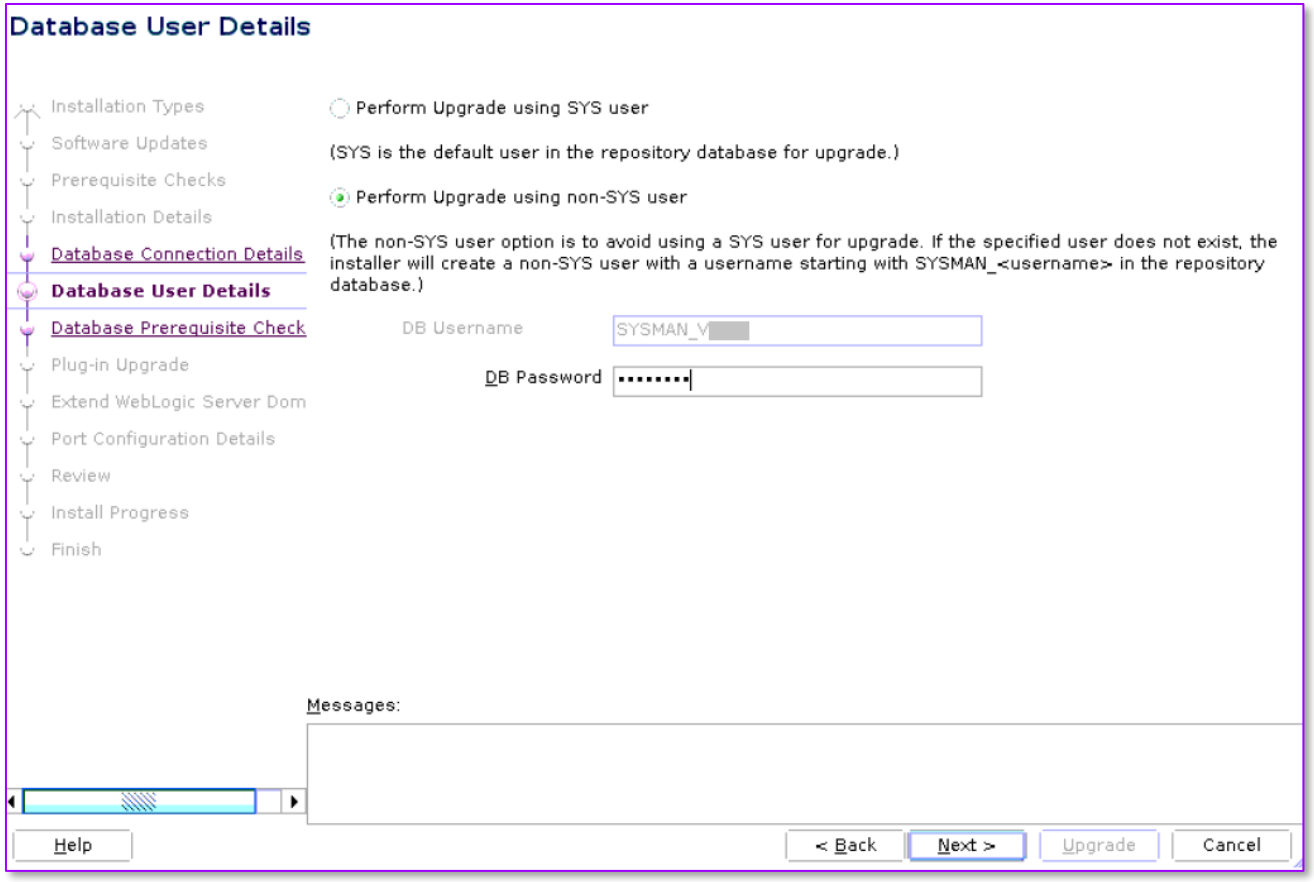
Install as NON-SYS

- To avoid using the SYS user for the upgrade, choose the 'non-SYS' user option and provide the necessary user details.
- Ensure the username begins with 'SYSMAN_' followed by your chosen username.
- The installer will set up this user in the repository database, utilizing it for preliminary execution tasks and subsequently for upgrading the OMS.



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Upgrade Strategies

Step-by-Step

- Upgrade and migration planning
- Migrating to new hardware, new data center
- Move 1:1
- Parallel agents

Least Critical

- By criticality
- DEV system upgrade
- NON-PROD system upgrade
- PROD system upgrade

Big Bang

- All in one maintenance window
- All component upgrade

Upgrade

- EM 24ai: How to Upgrade OEM from 13.5 to 24.1 Using Silent Method - (Doc ID 3048211.1)
- EM 24ai: How to Upgrade OEM from 13.5 to 24.1 (Doc ID 3046610.1)
- EM 24ai: Checklist For Upgrading Enterprise Manager Cloud Control from Version 13.5 to 24.1 (Doc ID 3043081.1)
- SRDC - Collecting Logs for Enterprise Manager 13c or 24ai OMS Migration and Cloning Issues (Doc ID 2718087.1)
- Fernando Simon blog post:
  - https://www.fernandosimon.com/blog/upgrade-em-from-13-5-to-24ai-24-1-0-0-0

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Supported Upgrade Paths

Source	Intermediate	Intermediate	Target
13.5			24.1
13.3 / 13.4	13.5		24.1
12.1.0.5	13.3	13.5	24.1

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Patching

No Release Update available.

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Architecture

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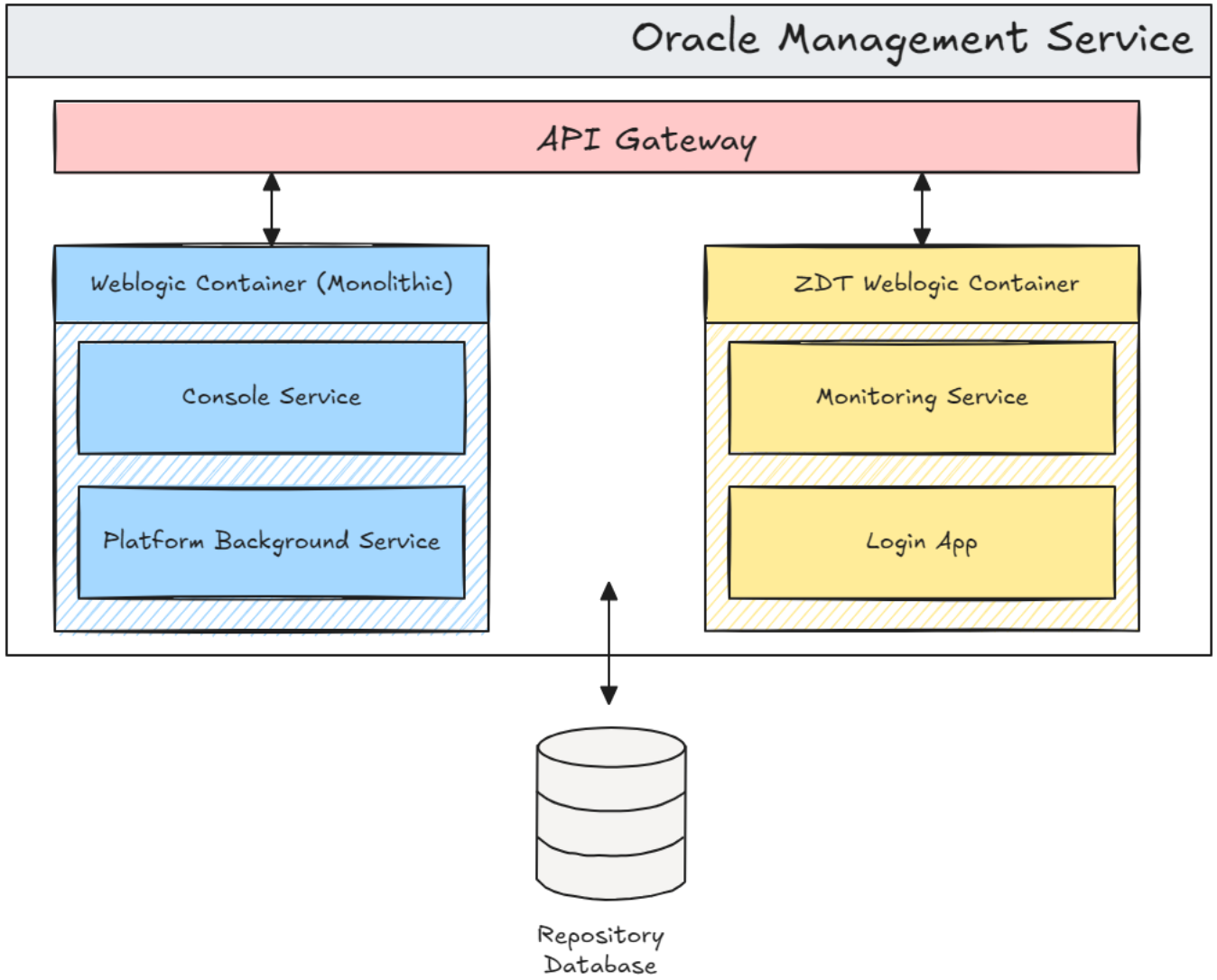
24AI Architecture



- Simple Setup
  - 2 x WLS Admin Server
  - 2 x WLS Deployment
  - 1 x API Gateway Server
  - 1 x Repository Database

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24ai Components

```
TYPE (Cluster|DG)  : SID/PROCESS        STATUS      HOME      [2025-03-24 14:32:15]
-------------------------------------------------------------------------------
DB-instance (N|N)  : EMREPO             open        /u01/app/oracle/product/19.0.0/dbhome_1

Listener           : LISTENER           up          /u01/app/oracle/product/19.0.0/dbhome_1

Agent              : emagent24_2410     up          /u01/app/oracle/agent/agent_inst

WLS admin          : EMEXT_ADMINSERVER  up          /u01/app/oracle/middleware/ext_oms_home/wlserver
WLS admin          : EMGC_ADMINSERVER   up          /u01/app/oracle/middleware/oms_home/wlserver

WLS mgmt           : EMEXT_OMS1_ZDT     up          /u01/app/oracle/middleware/ext_oms_home/wlserver
WLS mgmt           : EMGC_OMS1          up          /u01/app/oracle/middleware/oms_home/wlserver

WLS node           : 1                  up          /u01/app/oracle/middleware/gc_inst/user_projects/domains/EMExtDomain1/nodemanager
WLS node           : 1                  up          /u01/app/oracle/middleware/gc_inst/user_projects/domains/GCDomain/nodemanager
```

API Gateway

```
oracle      6793       1  0 Mar18 ?        00:07:07
/u01/app/oracle/middleware/oms_home/oracle_common/jdk/bin/java -
Doracle.jdbc.autoCommitSpecCompliant=false -Djava.security.egd=file:///dev/urandom -Xmx512M -XX:+UseG1GC
-XX:ErrorFile=/u01/app/oracle/middleware/gc_inst/em/apigateway_inst/logs/HS_ERR_PID%p.log -
Xloggc:/u01/app/oracle/middleware/gc_inst/em/apigateway_inst/logs/gc.log -XX:-OmitStackTraceInFastThrow -
XX:+HeapDumpOnOutOfMemoryError -
XX:HeapDumpPath=/u01/app/oracle/middleware/gc_inst/em/apigateway_inst/logs/heap_dump -
XX:+PrintGCDateStamps -XX:+PrintFlagsFinal -jar
/u01/app/oracle/middleware/ext_oms_home/apigateway/lib/em-platform-apigway-api-24.1.0.0.0.jar server
/u01/app/oracle/middleware/ext_oms_home/apigateway/conf/server-config/em.conf
```

EM 24ai Zero Downtime (ZDT) Monitoring (1)

- New feature in Enterprise Manager 24ai – successor of Always-On Monitoring (AOM)
- Provides continuous monitoring and alerting during planned EM maintenance.
- Key features:
  - Event management and processing
  - Event compression
  - Incident creation
  - Notifications, including integration with event and ticketing systems
- Operates seamlessly during Release Updates (RU).
- Part of Oracle Management Service (OMS).

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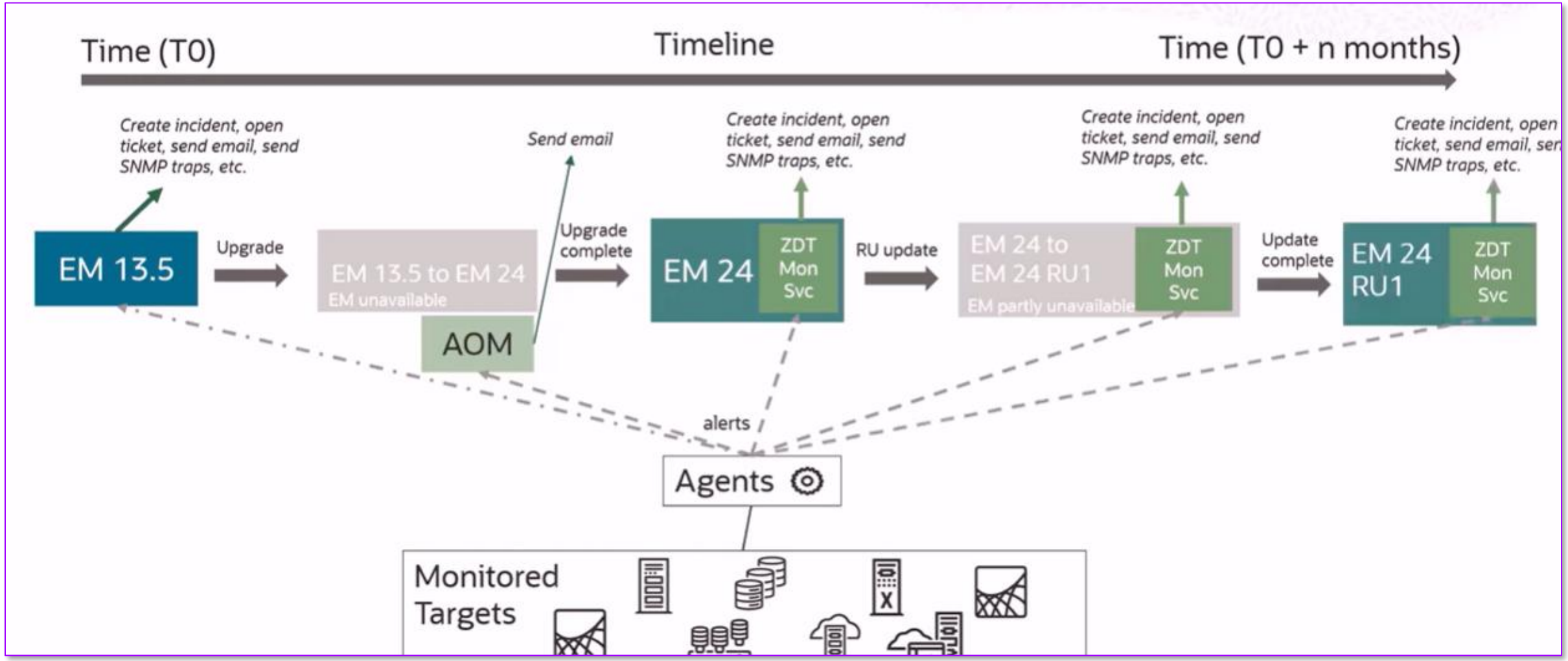
From AOM to ZDT



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Which monitoring fits best?

Always-On Monitoring (AOM)

- Target availability
- Critical alerts
- Email only to «Downtime Contact»
- Separate repository
- Upgrade EM 13.5 > EM 24ai
- Manual notification enabling

Zero Downtime Monitoring (ZDT)

- Honors incident rule sets
- Event compression
- Multiple notification channels like mail, SNMP,webhook, slack
- Ticketing connectors
  - ServiceNow, Jira, Pager Duty
- Event connectors
  - Microsoft SCOM, Tivoli Netcol

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New Features

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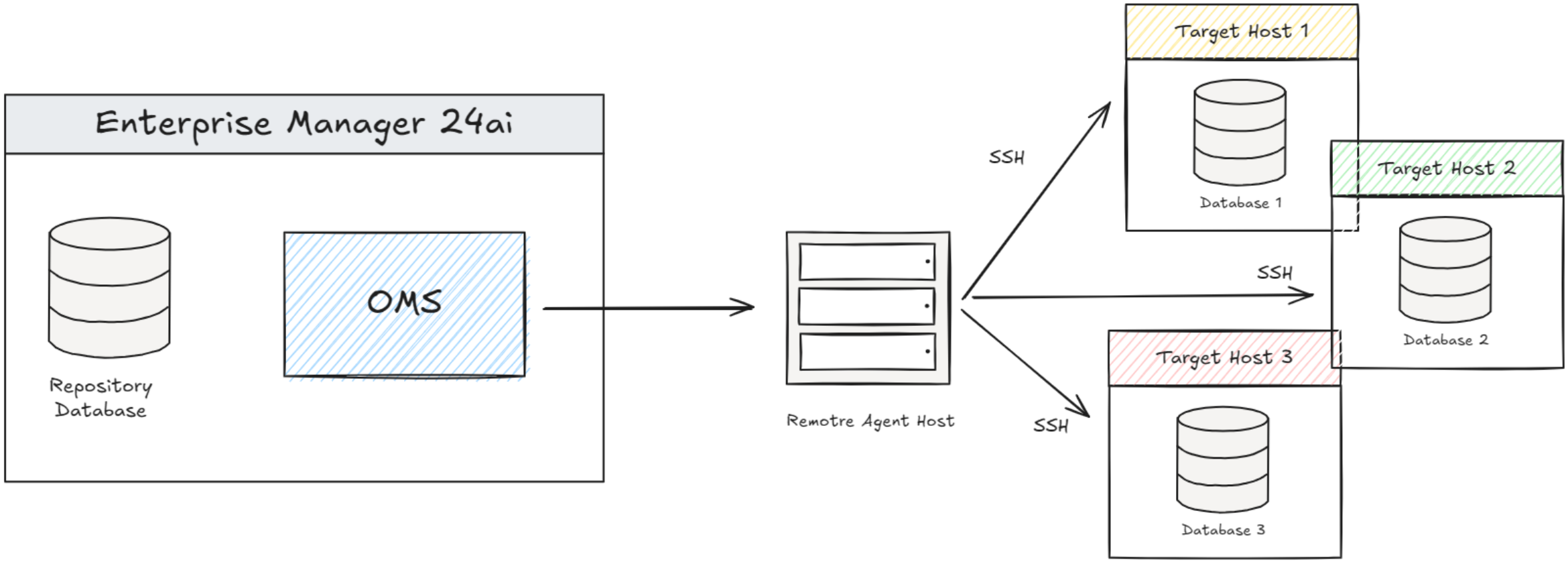
Remote Agent (1)

One Agent manages multiple hosts & targets



EM24ai: Remote Agent FAQ (Doc ID 3055953.1)

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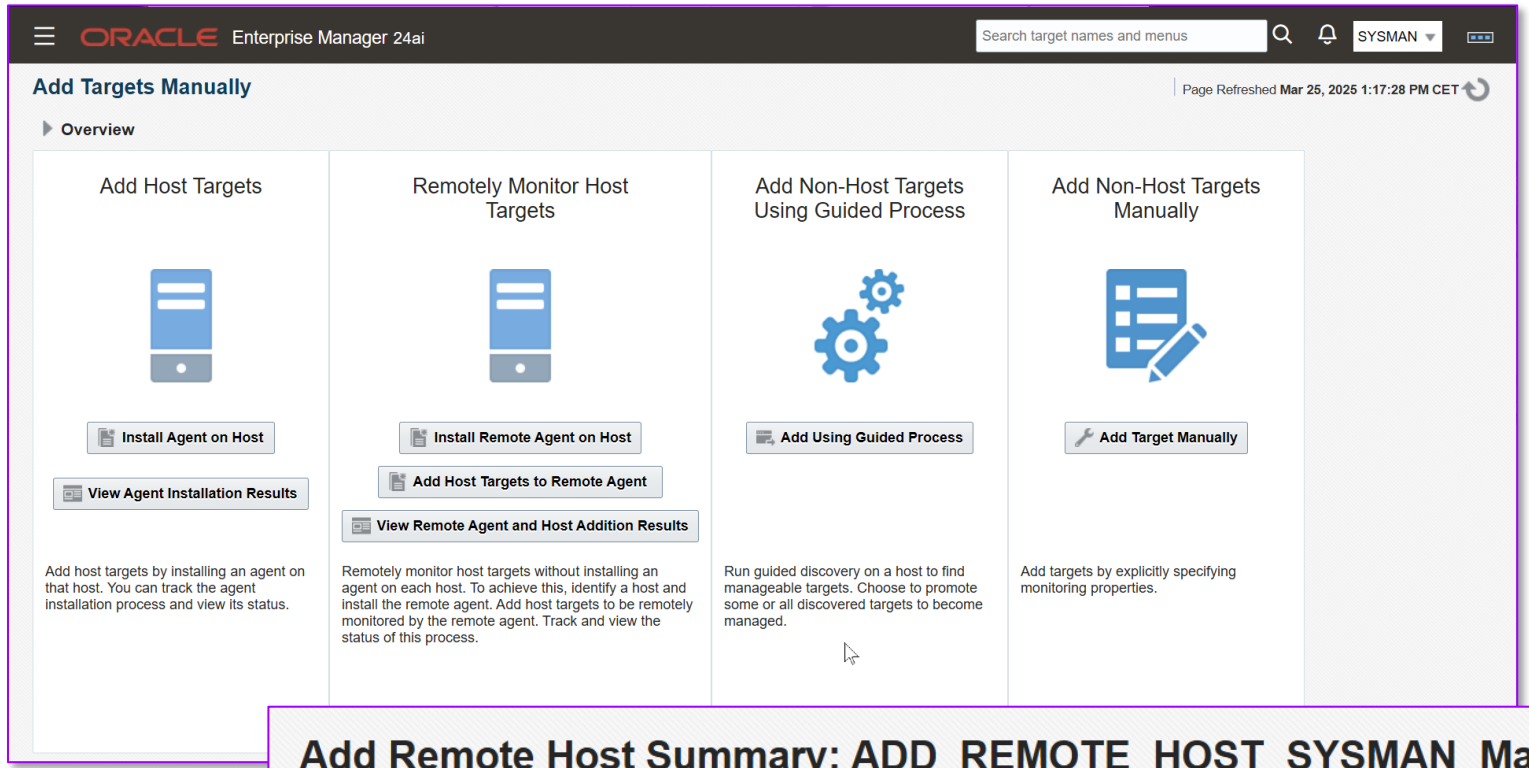
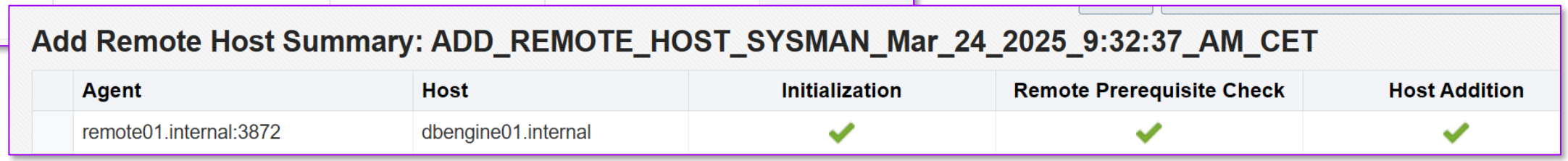
Remote Agent (2)

- Install Oracle Enterprise Manager Agent on remote host first, then add target. host(s)





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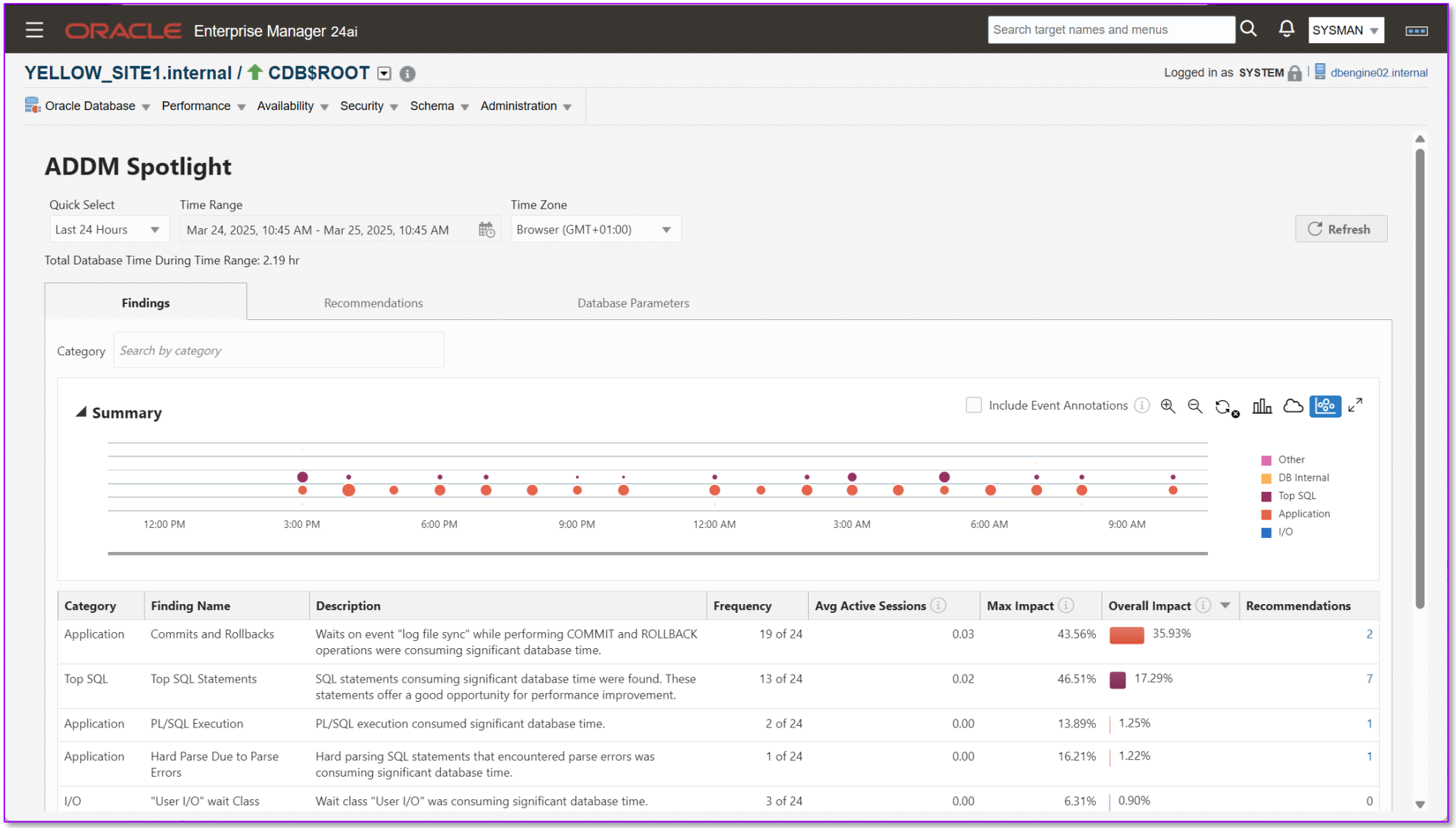
ADDM Spotlight - Bubbles



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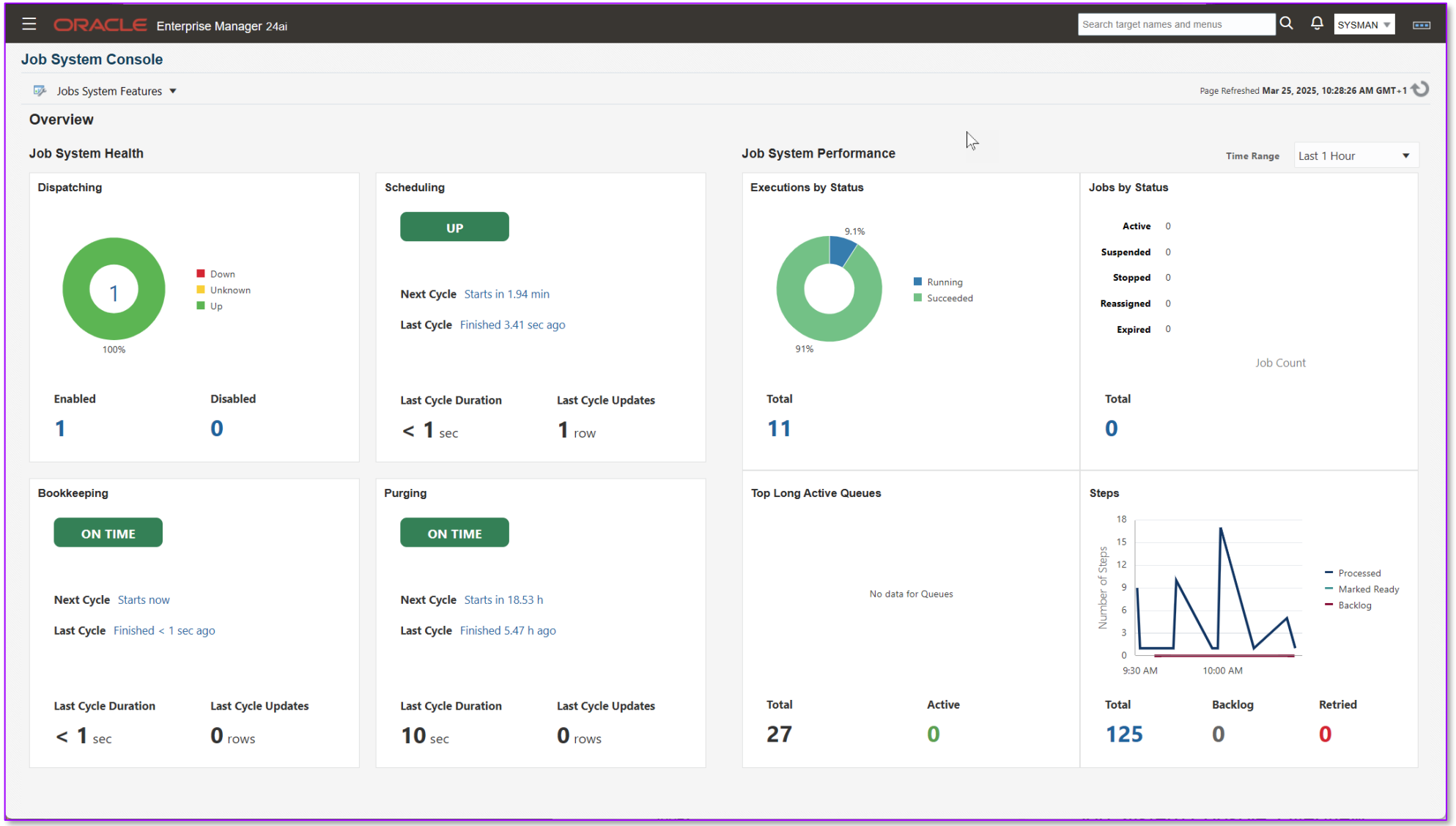
Job System Console



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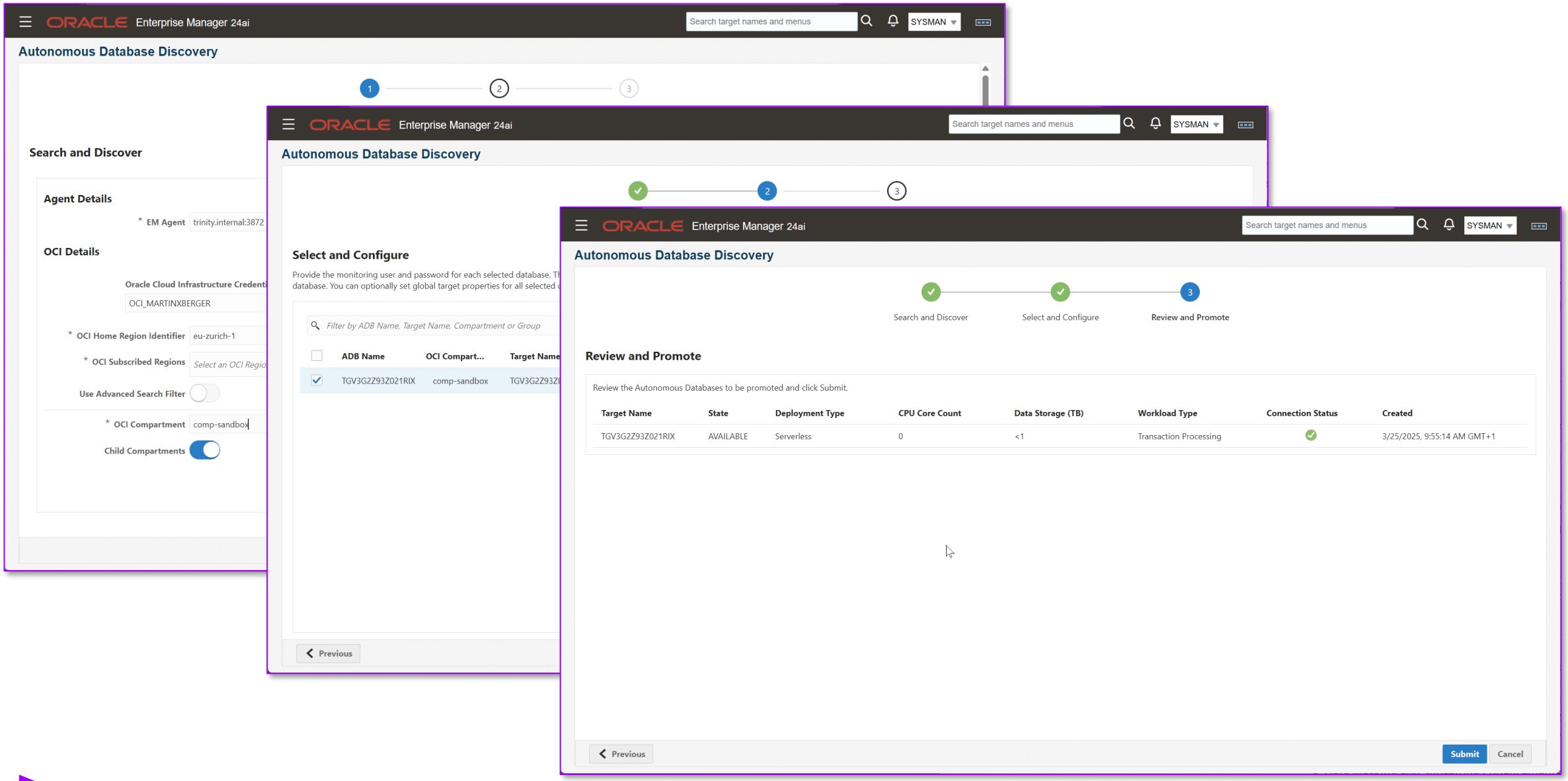
Autonomous Database Discovery



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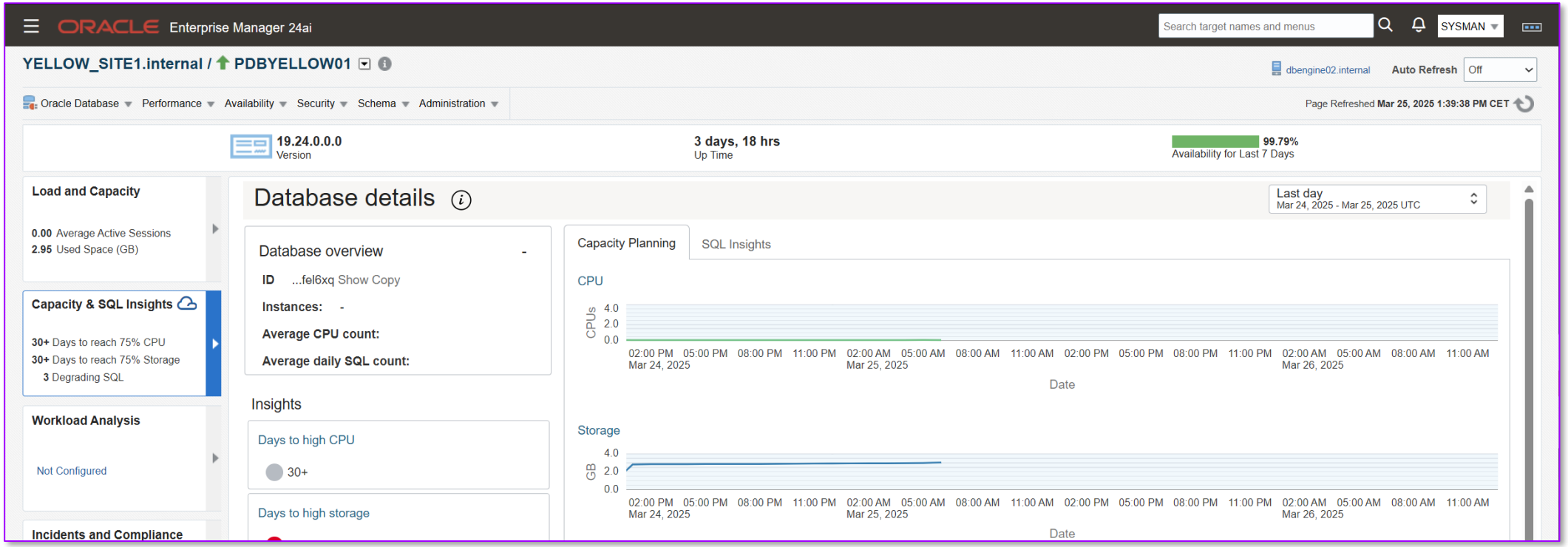
Oracle Cloud Infrastructure: Ops Insights

- Leverage of OCI functions like *Operations Insights* (Ops Insights)
- **EM-Bridge** – upload OEM data to OCI for processing
- Backward compatibility to 13.5



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Oracle Cloud Infrastructure: Marketplace

- Quick ramp-up of a complete Oracle Enterprise setup with multiple OMS (optional).
- Version is 24ai Release 1

Enterprise Manager, Platform

New: Oracle Enterprise Manager 24ai image on the Oracle Cloud Marketplace

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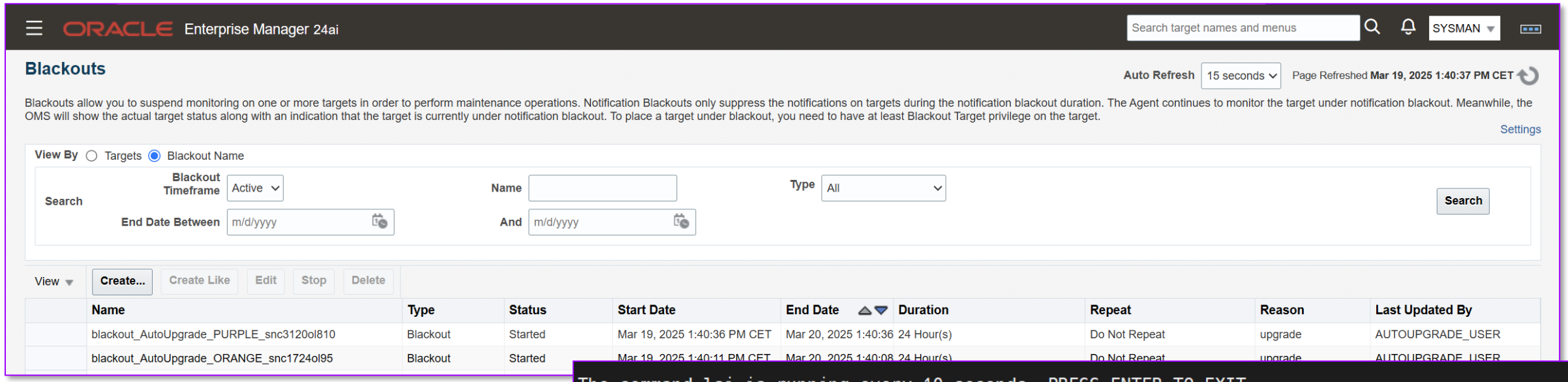
AutoUpgrade Tool (Doc ID 2485457.1) – Blackout

- New feature, *autoupgrade* sets OEM blackout during the upgrade process
- Requires emcli local setup (API call is an enhancement request)




```
The command lsj is running every 10 seconds. PRESS ENTER TO EXIT
+---+------+-----+---------+-------+----------+------+----------------------------------------+
|Job#|DB_NAME|STAGE|OPERATION| STATUS|START_TIME|UPDATED|                                MESSAGE|
+---+------+-----+---------+-------+----------+------+----------------------------------------+
| 101| ORANGE|DRAIN|EXECUTING|RUNNING|  13:34:25| 1s ago|Create a blackout for the EM monitored t|
+---+------+-----+---------+-------+----------+------+----------------------------------------+
Total jobs 1
```

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The Magic behind

```
oracle@dbengine02:/u01/app/oracle/emcli/ [rdbms19_2] ./emcli status
Oracle Enterprise Manager 24ai Release 1 EM CLI.
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Instance Home          : /home/oracle/.emcli
Verb Jars Home         : /u01/app/oracle/emcli/./bindings/24.1.0.0.0/.emcli
Status                 : Configured
EM CLI Home            : /u01/app/oracle/emcli/.
EM CLI Version         : 24.1.0.0.0
Java Home              : /opt/jdk-17
Java Version           : 17.0.2
Log file               : /home/oracle/.emcli/.emcli.log
Log level              : SEVERE
EM URL                 : https:
EM user                : autoup
Auto login             : true
Trust all certificates : true
```

```
upg1.log_dir=/u01/app/oracle/cfgtoollogs/autoupgrade
upg1.sid=ORANGE
upg1.source_home=/u01/app/oracle/product/19.0.0/dbhome_1
upg1.target_home=/u01/app/oracle/product/19.0.0/dbhome_2
upg1.start_time=NOW
upg1.upgrade_node=dbengine02.internal
upg1.emcli_path=/u01/app/oracle/emcli
upg1.em_target_name=ORANGE.internal
upg1.em_blackout_suffix=snc1724ol95
```

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Go for it!

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Thank You