



ORACLE
AUTONOMOUS DATABASE **LEARNING LOUNGE**

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

Autonomous Database Learning Lounge

Hosted by Marcos Arancibia

Autonomous Database Product Management

Agenda



Simon Griffiths



Paul Brankin

Topics

- Quickly identifying **the best Oracle databases to migrate** to Autonomous Database when you have a large estate can be a **great opportunity for large savings in TCO**.
- Get an introduction about **Oracle Estate Explorer**, which is a lightweight tool that **can analyze thousands of databases in just a few hours** and enables you to identify those databases that will offer the **greatest return on investment** in the shortest time if you move them to **Autonomous Database**.
- Understand why **Autonomous Database is the ideal target for database consolidation** and how it can accelerate your journey to the Cloud..

Q&A

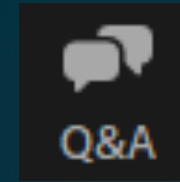
- **Product Managers will answer any questions**



Before we begin...

This session is for you !!!

Ask your questions using **Q&A**



Product Managers are monitoring your questions

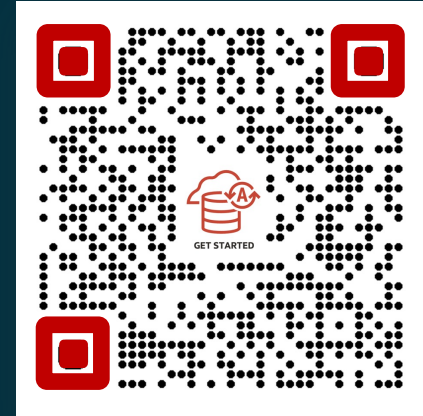
We will share links in **Chat**



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**

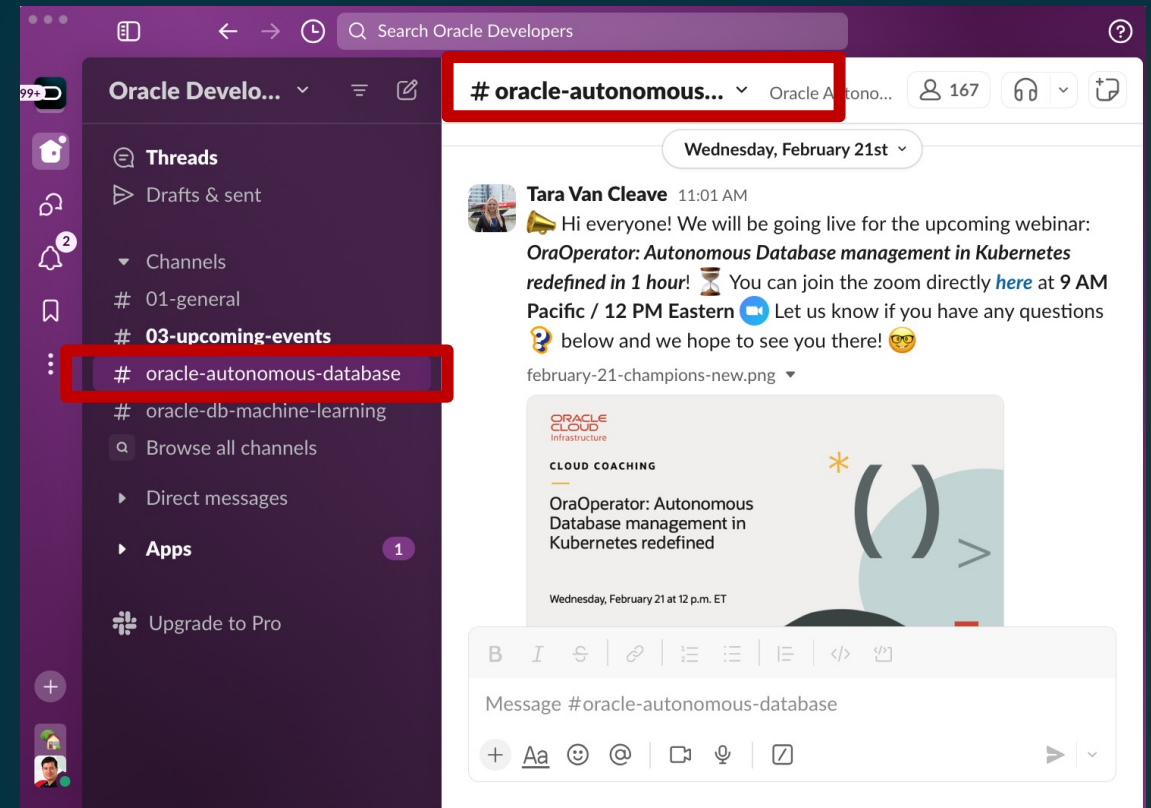
3 Got a question?
We are on stackoverflow
bit.ly/adb-stackoverflow

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



Upcoming Sessions

AUTONOMOUS DATABASE LEARNING LOUNGE en Español presenta

**Migración para ADB Parte I: Visualice y
evalúe todo su patrimonio de bases de
datos con Oracle Estate Explorer**

14 Noviembre 2024 @ 11AM MEX/12PM COL/2PM ARG/6PM CET

oracle.com/goto/adb-learning-lounge



Juan Mikalef



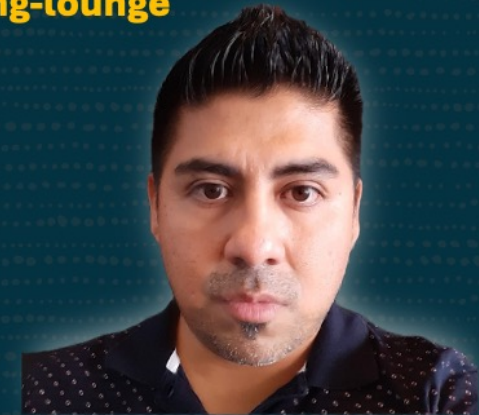
Upcoming Sessions

AUTONOMOUS DATABASE LEARNING LOUNGE Presents

**Migration to ADB Part II: Easily
migrate from previous
database releases with DMS**

November 19, 2024 @ 9AM US PT, 6PM CET

oracle.com/goto/adb-learning-lounge



Jorge Martinez



Upcoming Sessions

AUTONOMOUS DATABASE LEARNING LOUNGE Presents

Graph RAG: Bring the Power of Graphs to Generative AI

November 21, 2024 @ 9AM US PT, 6PM CET

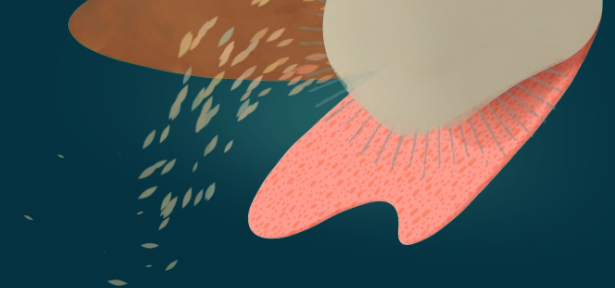
oracle.com/goto/adb-learning-lounge



Melli Annamalai



Speakers



**Simon
Griffiths**



**Paul
Brankin**

Oracle Estate Explorer

How to discover your database estate and plan for the cloud

Simon Griffiths

Paul Brankin

November 12th, 2024

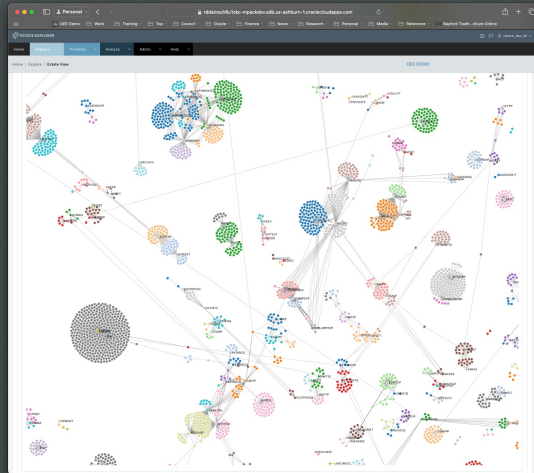


Oracle Estate Explorer

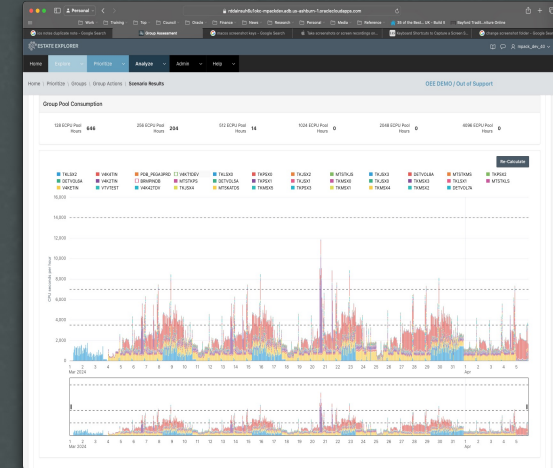
A Short Overview

Oracle Estate Explorer enables a customer to ...

Understand
a Database
Estate



Plan a hybrid,
multi-cloud
migration
strategy



- Build a complete database inventory
- Visualize any size database estate
- Analyze in technical & business context
- Prioritize database migrations to any cloud database
- Build a Business Case with on-prem and cloud TCO
- Optimize the migration deployment

A unique insight into a database estate

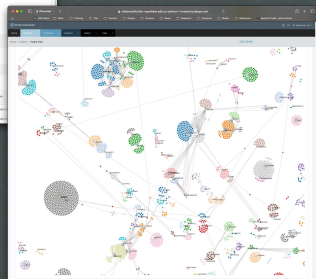
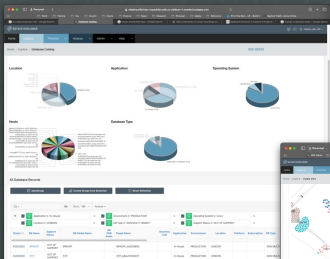
Oracle Estate Explorer – Key Steps

Explore an Estate Catalog

Plan Database Migrations

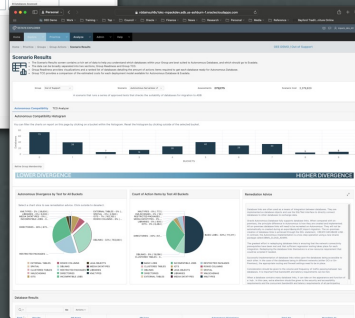
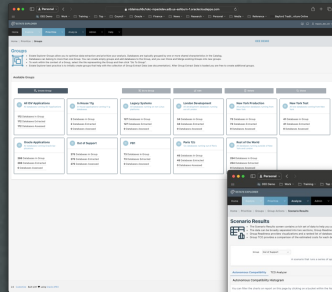
Build Technical Business Case

Database Details



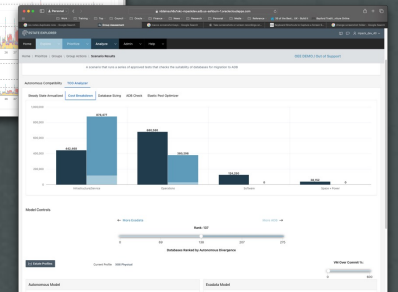
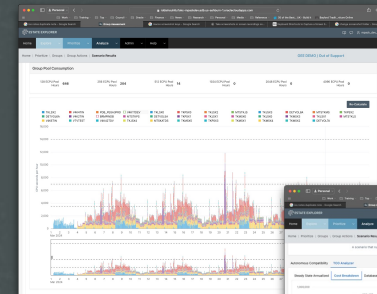
Database Links

Build Groups



Assess DBs

Build Elastic Pools



Build TCO



Estate Summary View

View your databases by your technical and business criteria

- Define criteria based on your naming standards
- By geography, business unit, platform, etc
- By database version, host OS, #cores etc
- Define new subsets of databases for analysis

The screenshot displays the ESTATE EXPLORER interface, which provides a comprehensive view of database estates. The interface is divided into several sections:

- Database Catalog:** This section provides an overview of the databases loaded from data sources. It includes buttons for 'Change Catalog', 'Create Catalog', and 'Catalog Report'. A note states: "This screen contains information about the databases you have loaded from data sources into your catalog. The charts show a range of shared characteristics and their distribution across the catalog. Additional charts are available. Clicking on a pie slice will filter the database records and multiple selections are supported. You can then create an OEE Group from your selection. In the database records section you can drill into detailed database information for databases with a status of EXTRACTED or ASSESSED. To do this, click on the database name."
- Explorer Charts (expand for customization):** This section contains several pie charts that allow users to filter and analyze databases based on various criteria:
 - Database Version:** A pie chart showing the distribution of database versions.
 - Support Status:** A pie chart showing the distribution of support statuses, with 'OUT OF SUPPORT' being a significant category.
 - Location:** A pie chart showing the distribution of databases across different geographical locations.
 - Application:** A pie chart showing the distribution of databases across different applications.
 - Operating System:** A pie chart showing the distribution of databases across different operating systems.
 - Hosts:** A pie chart showing the distribution of databases across different hosts.
 - Database Type:** A pie chart showing the distribution of databases across different database types.
- All Database Records:** This section displays a table of database records. It includes filters for 'Application in 'In-House'', 'Environment in 'PRODUCTION'', 'Location in 'LONDON'', 'Operating System in 'Linux'', and 'DB Type in 'NON MULTI-TENANT''. The table columns include Status, DB Name, Support Status, DB Global Name, DB PDB Name, Target Name, Business Unit, Application, Environment, Location, Platform, Subscription, DB Type, DB Version, and Inst Name. Two records are visible:

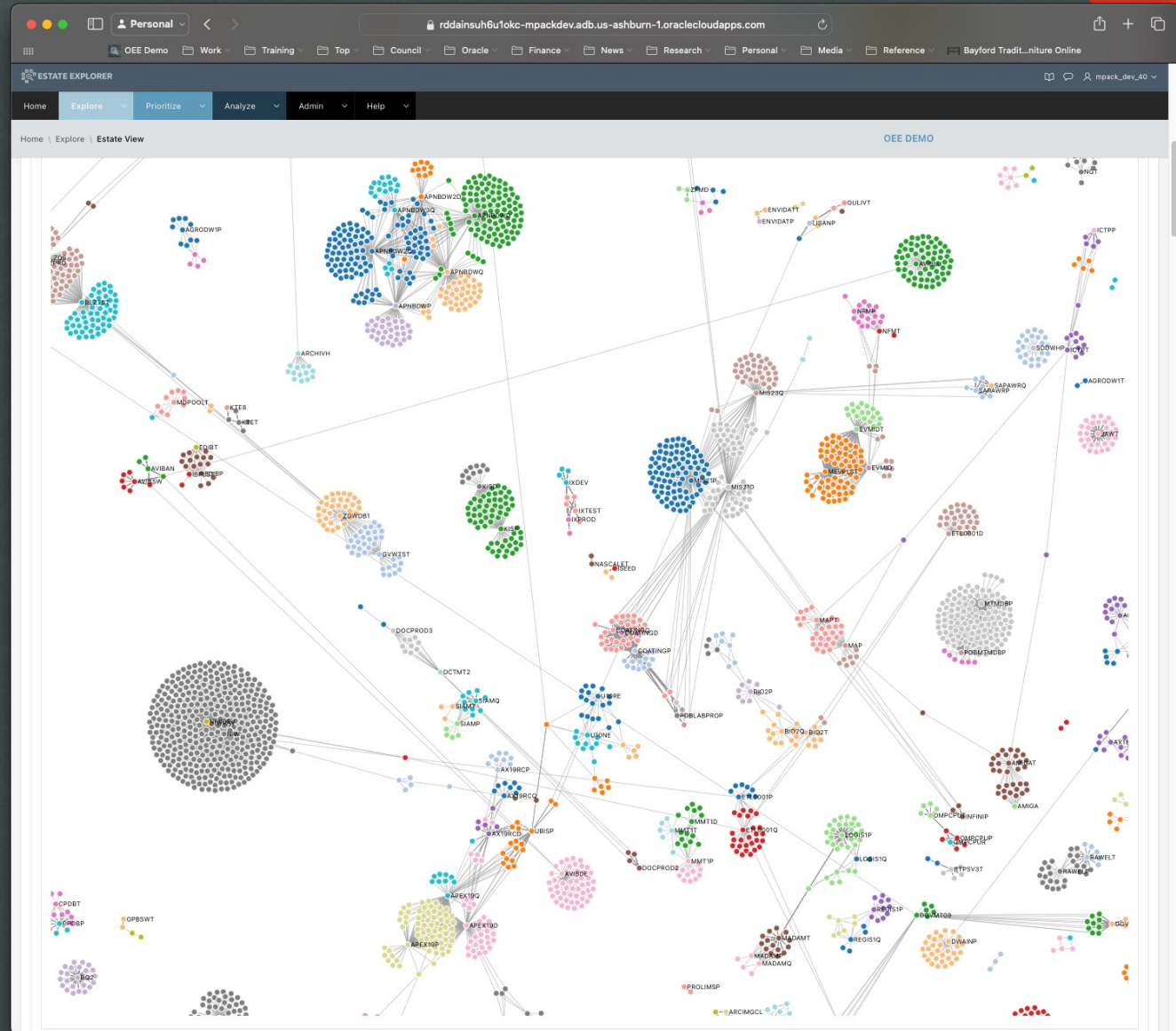
Status	DB Name	Support Status	DB Global Name	DB PDB Name	Target Name	Business Unit	Application	Environment	Location	Platform	Subscription	DB Type	DB Version	Inst Name
ASSESSED	BPACKP	OUT OF SUPPORT	BPACKP		BPACKP_849258992	In-House	PRODUCTION	LONDON				NON MULTI-TENANT	12c	BP
ASSESSED	SYP	OUT OF SUPPORT	SYP		SYP_pdeuh1000457	In-House	PRODUCTION	LONDON				NON MULTI-TENANT	12c	SY



Estate Cluster View

View a group of databases by their connections

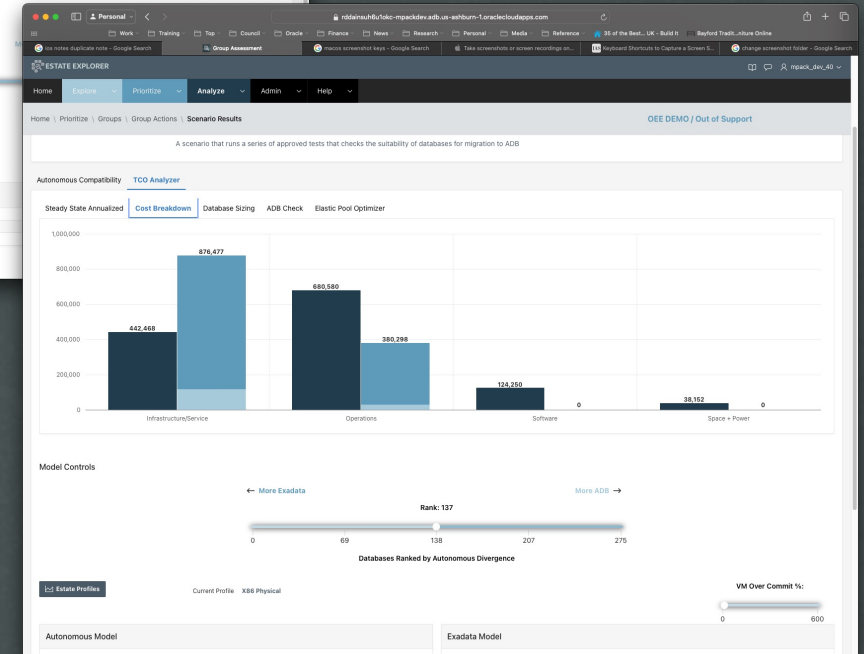
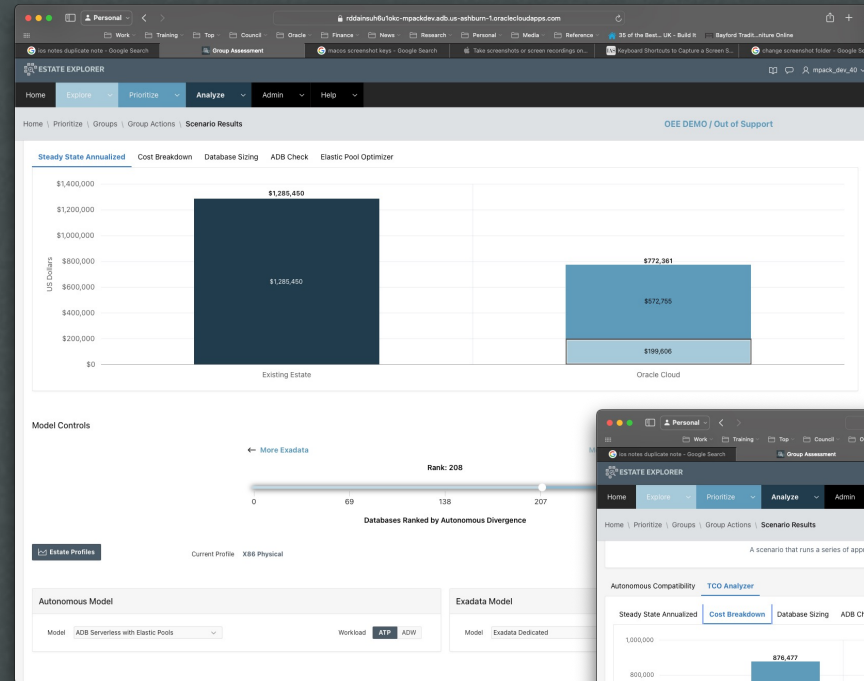
- Based on database links between databases
- Identify groups of linked databases
- Generate lists of clusters of databases
- Create linked groups for further analysis



TCO Analyzer – Compare current with future

Run-time TCO

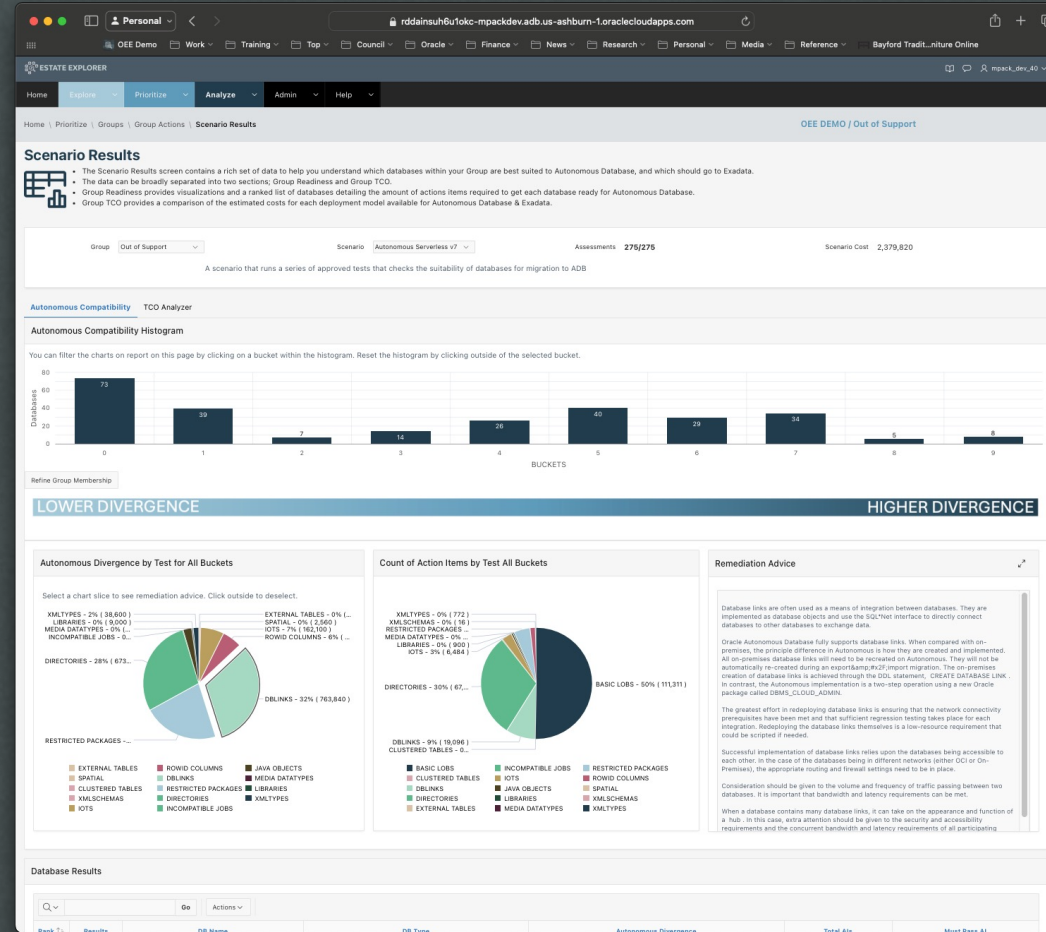
- Built from actual database information
- TCO model aligned with Business Value Team
- Compare on-prem, or other cloud with OCI
- Supports C@C and OCI as targets
- Flexibly split workloads between Exa and ADB



Estate Assessment for ADB

Migration preparation & effort

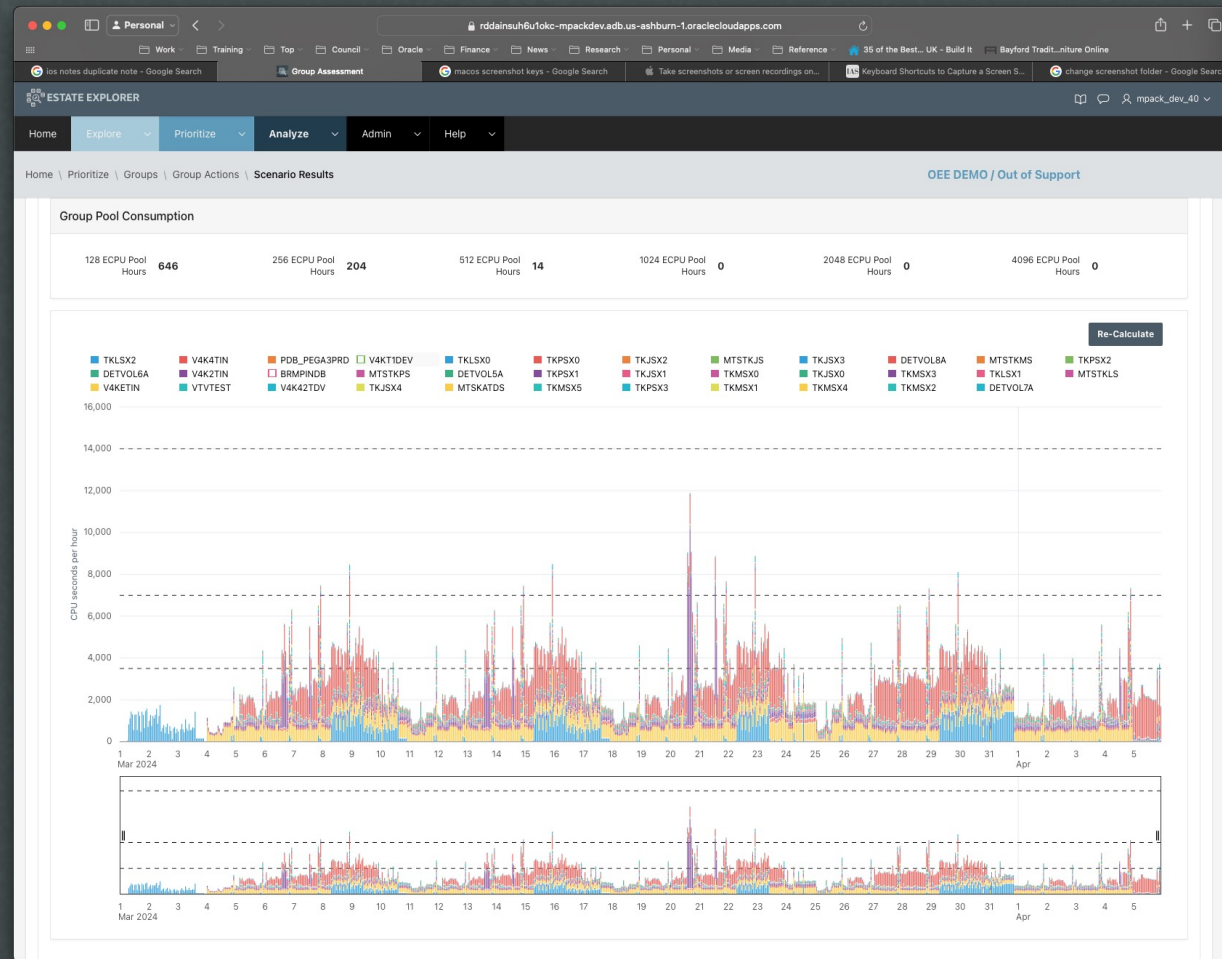
- Aggregate view
- Drill down to individual databases
- Detailed actions at an object level
- Customizable effort values
- View by count of objects or estimated effort



Elastic Pools Simulator

Simulate a set of workloads in ADB

- Based on actual CPU usage from AWR for one month
- Missing days and time intelligently interpolated
- Maps against Elastic Pool size and auto pool size
- Manual selection of databases to include/exclude
- Zoom into any time period for fine tuning



PDF Reports

A complete view of your database estate

- key estate facts and findings
- a league table with ranking of every database
- recommendations on categorization & prioritization
- remediation steps for each database at object level

Share as PDF

- generated in seconds without human intervention
- share easily across your organization in PDF

ORACLE Estate Explorer - Group Summary Report On-Premises Pilot

Group Extract Results: On-Premises Pilot

Scenario: Autonomous Shared v7

This document provides Kl. Auto Insurance exercise which has the following objective:

- Explore the Oracle Database Estate can feed into strategic decision-making
- Reveal architectural and development based applications from being future
- Prioritize databases and application benefits of this include cloud-centric

Executive Summary

Subject to further non-functional and open Database - with varying degrees of preparation

Oracle Estate Explorer ranked each database Autonomous Database Cloud.

Rank by DBs

Rank by DBs: lower, medium, higher

Rank by DBs: lower, medium, higher

Rank by DBs

Rank by DBs: lower, medium, higher

DBLINKS - 34% (4,960)

Group Finding

DBLINKS represent 34% of the overall effort for the group with 14 databases affected, and a calculated remediation effort of 4960.

DBLINKS Advice

Database links are often used as a means of integration use the SQL*Net interface to directly connect database

Oracle Autonomous Database fully supports database links Autonomous. They will not be automatically re-created database links is achieved through the DDL statement, implementation is a two-step operation using a new Oracle

The greatest effort in redeploying database links is ensuring that sufficient regression testing takes place for each in resource requirement that could be scripted if needed.

Successful implementation of database links relies upon databases being in different networks (either OCI or On place.

Consideration should be given to the volume and frequency bandwidth and latency requirements can be met.

When a database contains many database links, it can attention should be given to the security and accessibility requirements of all participating databases. It may be better Group.

ROWID COLUMNS - 31% (4,480)

Group Finding

ROWID COLUMNS represent 31% of the overall effort: effort of 4480.

ROWID COLUMNS Advice

A ROWID Column has a datatype that represents the address Tables (OTs), ROWID Columns store the physical address

Physical rowids provide the fastest possible access to a access. Oracle guarantees that, for as long as the rowid qualities make rowids useful for applications that select some of the selected rows again, perhaps to update the

In dedicated deployments of Oracle Autonomous Database enabled; however, they are incompatible with rolling up row. At a minimum, database activities involving ROWID columns should introduce correctness validation to mitigate

In shared deployments, scale-down operations in Auto-pointing to different rows than originally intended. Auto-

If the requirements of ROWID on an Autonomous Database affected tables, which, in turn, may result in applying primary key values in place of ROWIDs.

Test Results by Action Item

DBLINKS - 34% (4,960)

Databases with medium Preparation Effort

For databases with a medium preparation effort, Oracle recommends that migration to Autonomous Database occurs once further consideration has been given to the impact of moving databases with a more significant number of modifications or dependencies.

The databases in this category:

P455

Databases with higher Preparation Effort

Databases with a higher preparation effort require a set of modifications that can impact the application or the database's functional operations. These modifications are usually a redeployment or refactoring of existing capabilities that will require regression testing.

The databases in this category:

T014, U014C, T014L, U014, U014A, U014R, P014

Databases by ascending effort (easiest First)

Database Name	Group Ranking	Preparation Effort	Action Items	Database Environment	Database Cores	Database Memory (Gb)	Database Size (Gb)
T439A	1	40	4	TEST	8	1	955
P439	2	40	4	PRODUCTION	12	8	955
T411A	3	40	5	TEST	8	7	640
T450J	4	75	149	TEST	8	5	1,540
P411	5	80	6	PRODUCTION	18	6	488
U450E	6	115	145	DEVELOPMENT	12	5	1,541
P450	7	355	156	PRODUCTION	18	54	1,541
P455	8	1,280	45	PRODUCTION	6	3	294
U014R	9	1,780	241	DEVELOPMENT	8	6	984
T014L	10	1,780	241	TEST	8	3	963
P014	11	1,780	242	PRODUCTION	24	40	970
T014	12	1,780	242	TEST	8	24	959
U014C	13	1,780	242	DEVELOPMENT	4	8	831
U014A	14	1,820	243	DEVELOPMENT	8	1	851
U014	15	1,820	243	DEVELOPMENT	8	13	917
Totals		14,565	2,208		158	184	14,410

Assessment Method

Oracle Estate Explorer conducts an assessment of a Group based on a series of tests. The tests are applied to data extracted from the target databases. The tests are designed around known features, characteristics, and requirements of the Oracle Autonomous Database. The tests focus on identifying existing target database features that might result in architectural or functional change. The tests are intended to facilitate the decision-making process for migration grouping and prioritization.

Additional actions may be taken while performing a migration, but these should not be architectural or functional. Oracle Estate Explorer calculates the effort by applying weighted tests against each database. The calculation considers the resource requirements, scale, technical complexity, and associated risks of preparing each database for migration.

You can find details of the tests and weighted modification effort in the appendix of this document. The total preparation effort for a database is a function of the weighted modification effort and the count of exceptions (Action Items) encountered by the test.

A lower total preparation effort represents a closer alignment between the existing database configuration and the capabilities of Oracle Autonomous Database. Equinor should prioritize these databases for migration to Oracle Autonomous Database.

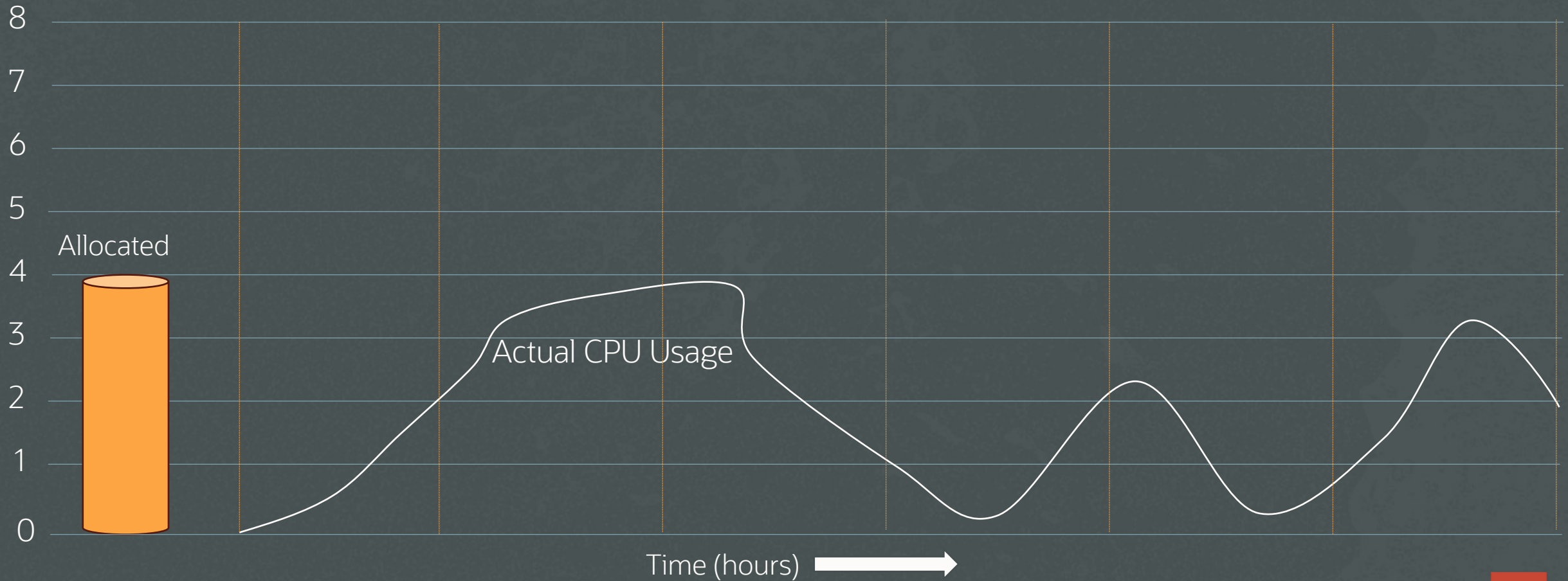
Each database is given a ranking within a Group and is subject to placement within a ten-bucket histogram (a lower-numbered bucket is desirable).





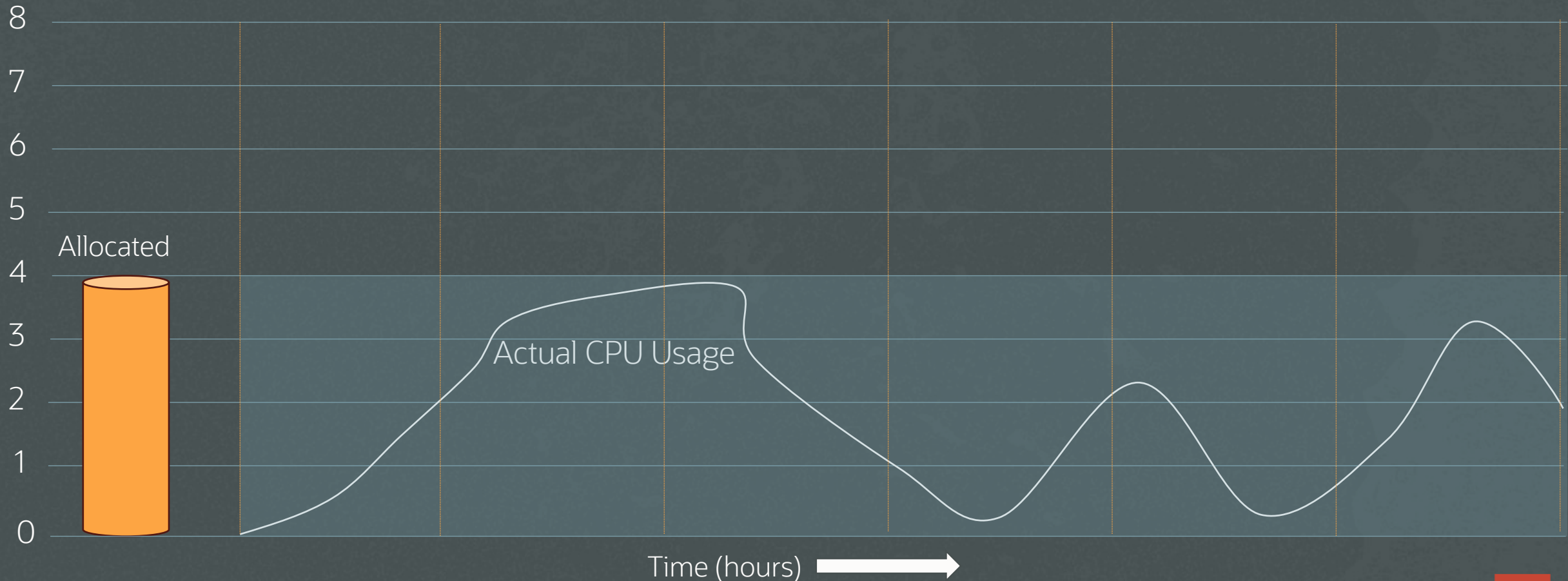
A reminder on ADB Sizing and Elastic Pools

How is Autonomous Database charged ?

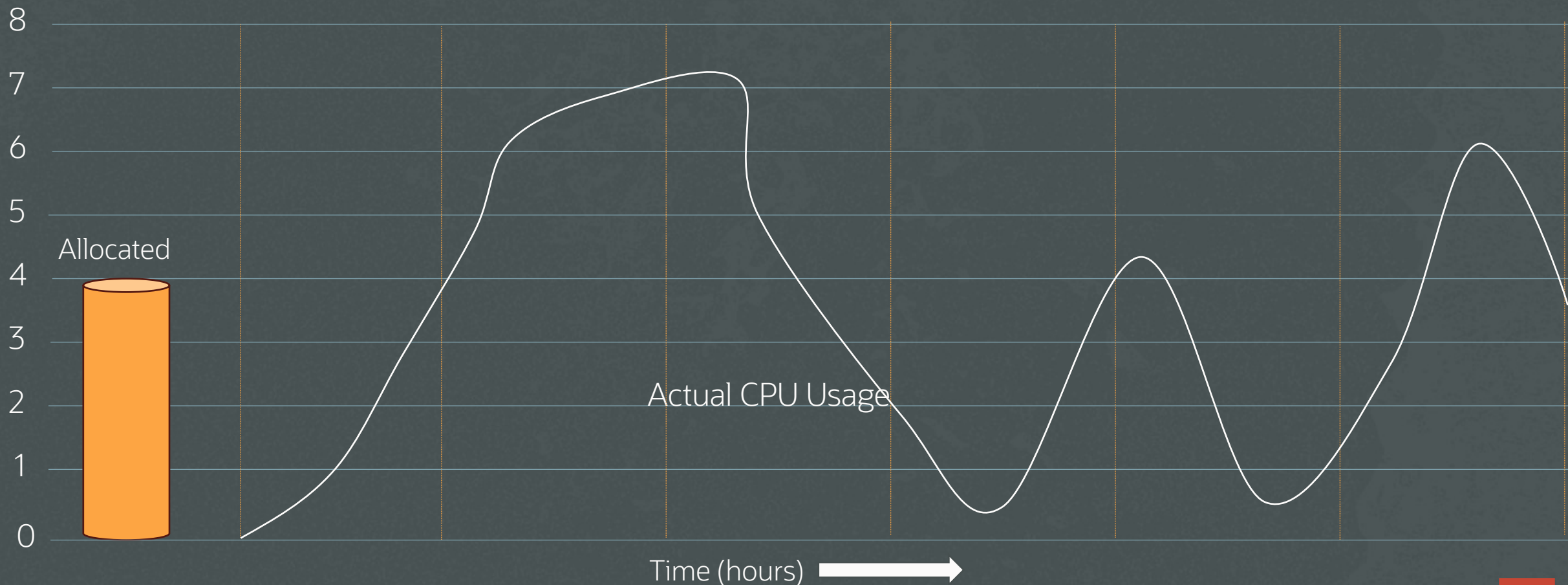


How is Autonomous Database charged ?

ADB is charged by the allocated ECPUs in each hour

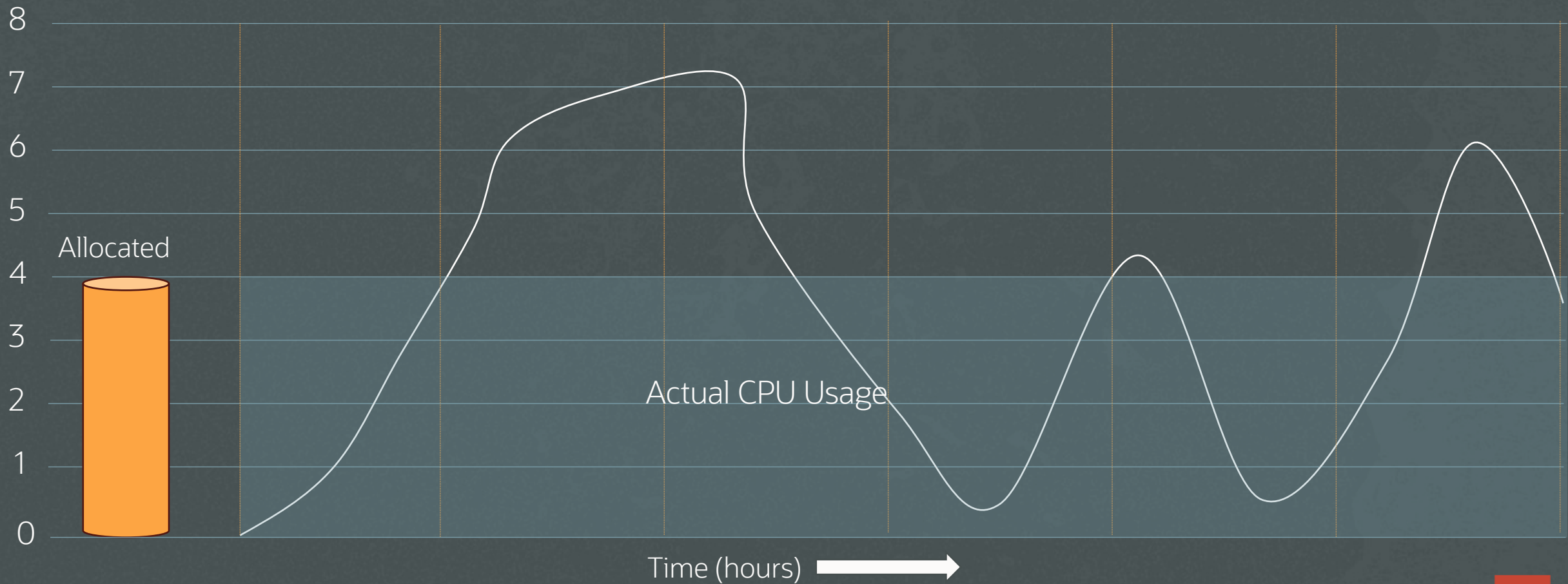


... and with auto-scaling ?



... and with auto-scaling ?

ADB is charged by the allocated ECPUs in each hour

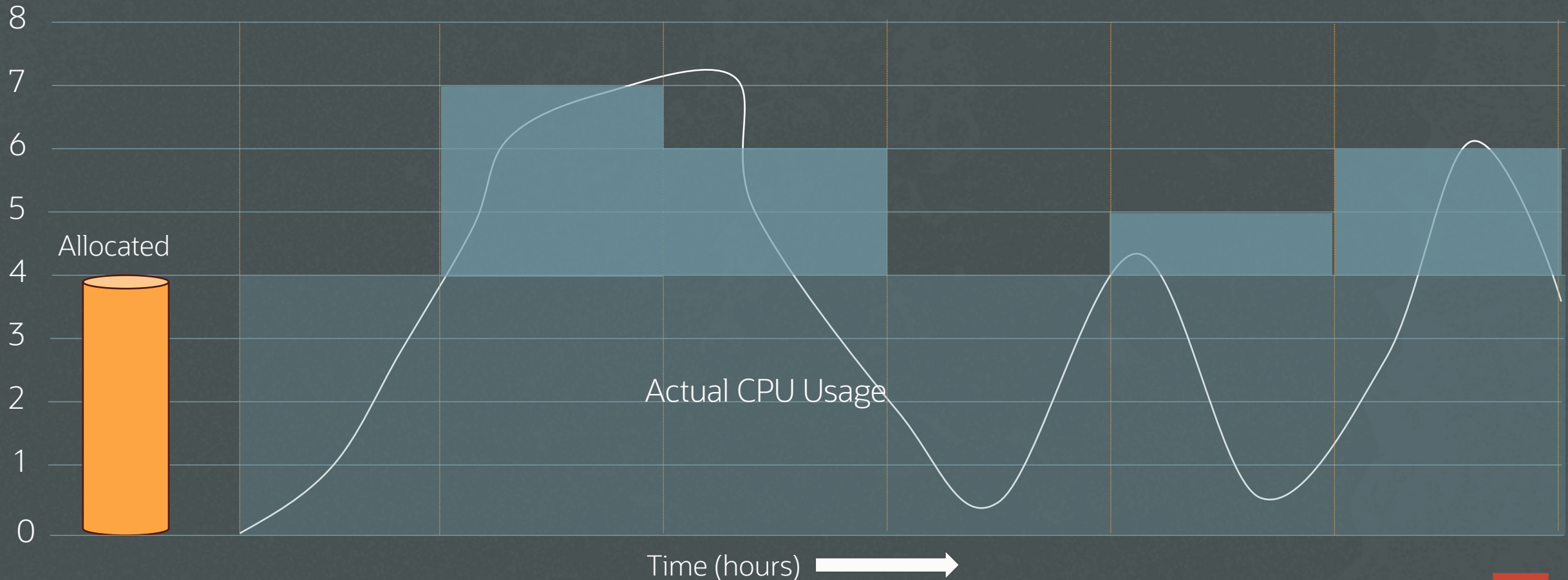


... and with ECPU auto-scaling ?

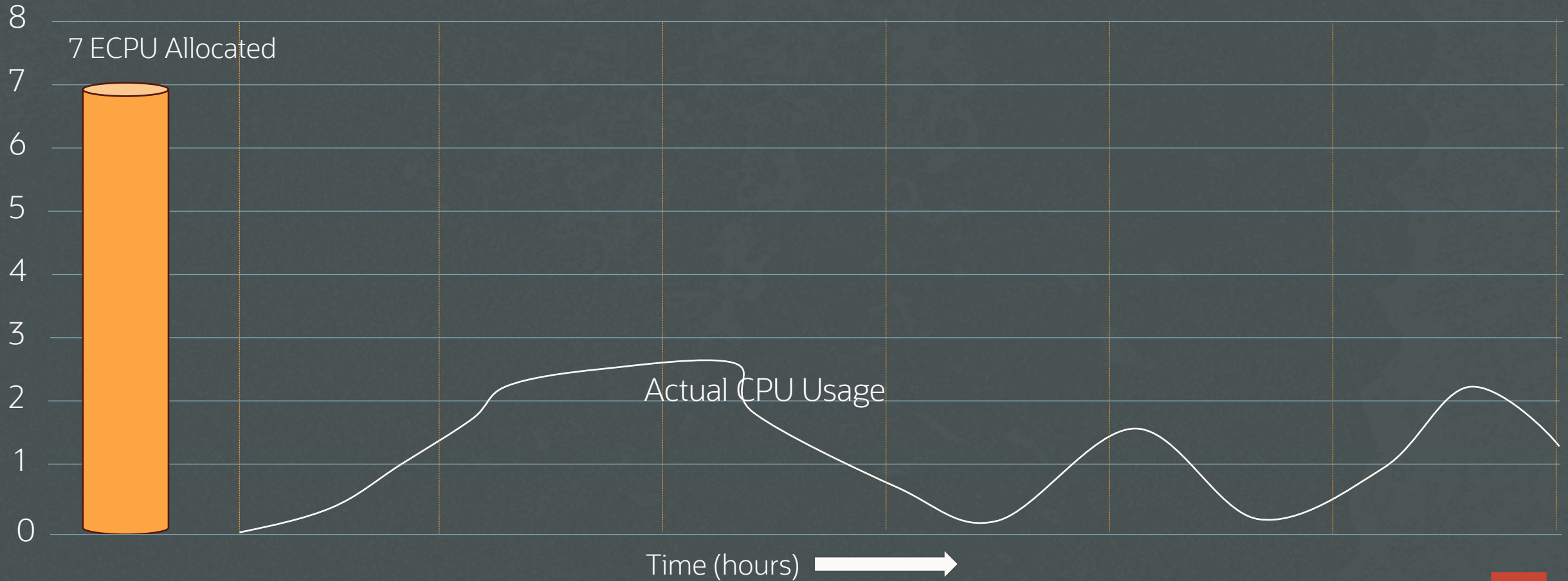
ADB is charged by the allocated ECPUs in each hour



Auto-scaled ECPU usage is measured each second, in units of whole ECPUs and averaged across an hour.

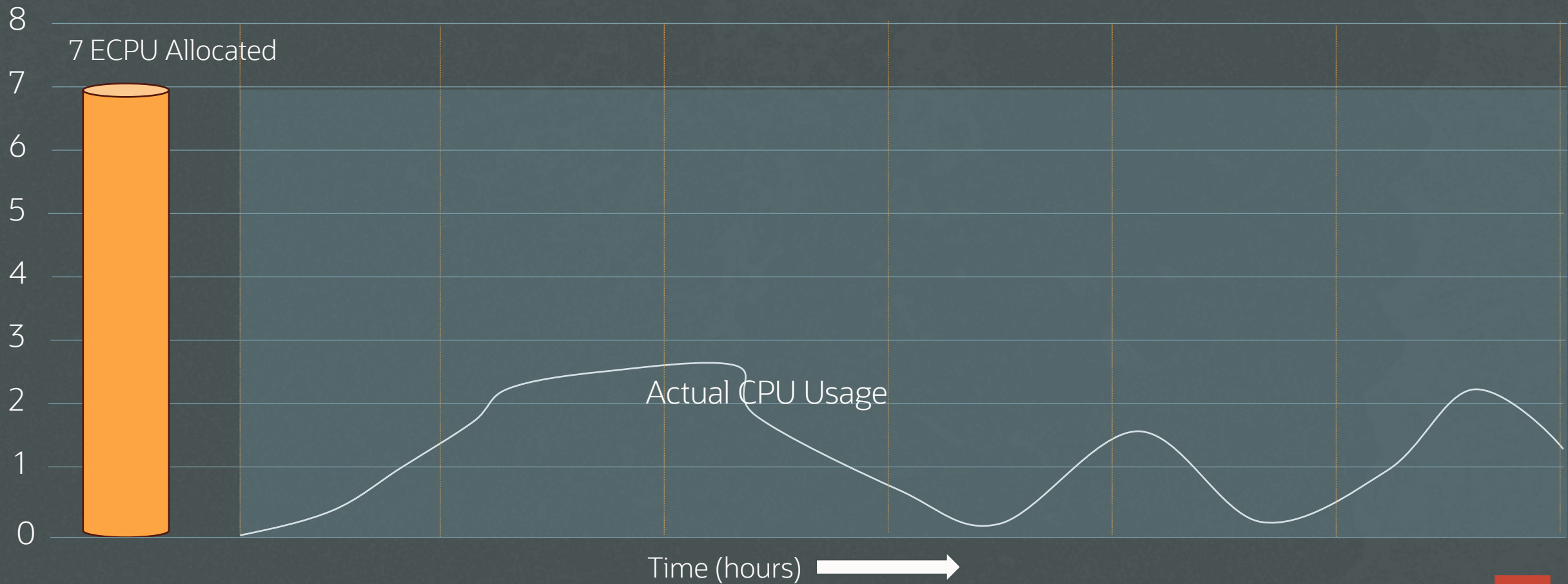


What if we need more memory/sessions ?



... we allocate ECPUs to get the extra memory/sessions

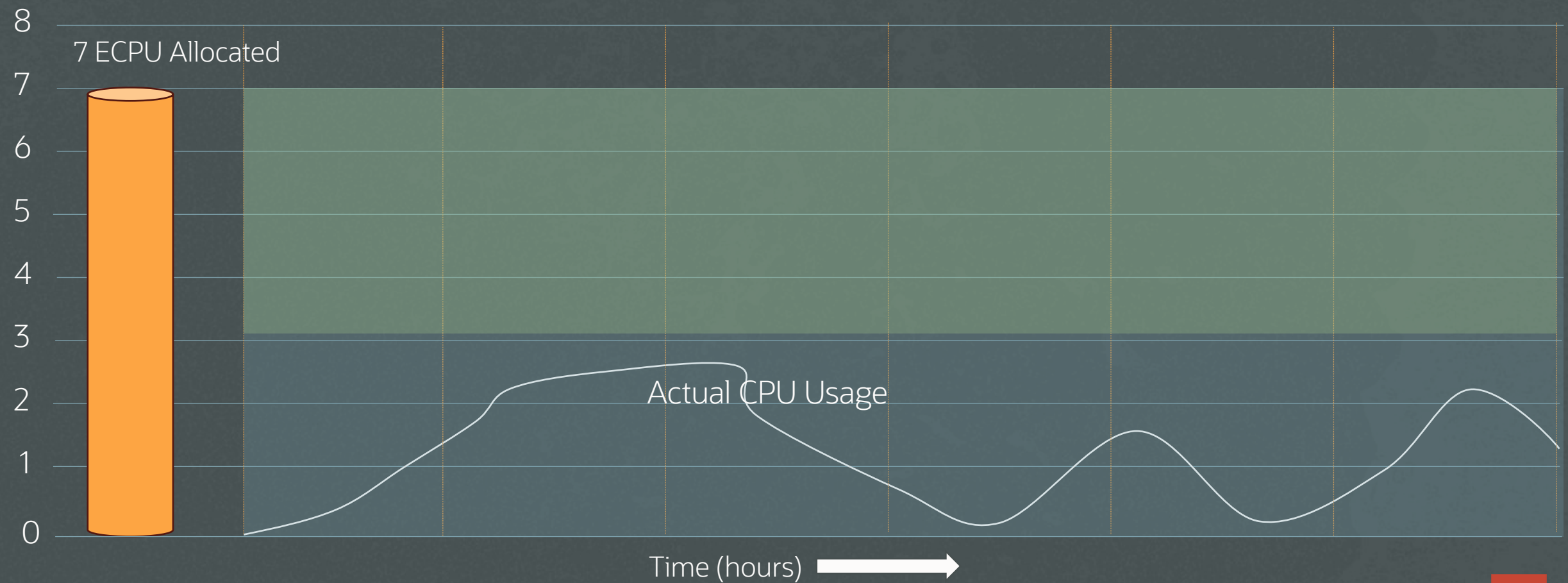
ADB is charged by the allocated ECPUs in each hour



... we allocate ECPUs to get the extra memory/sessions

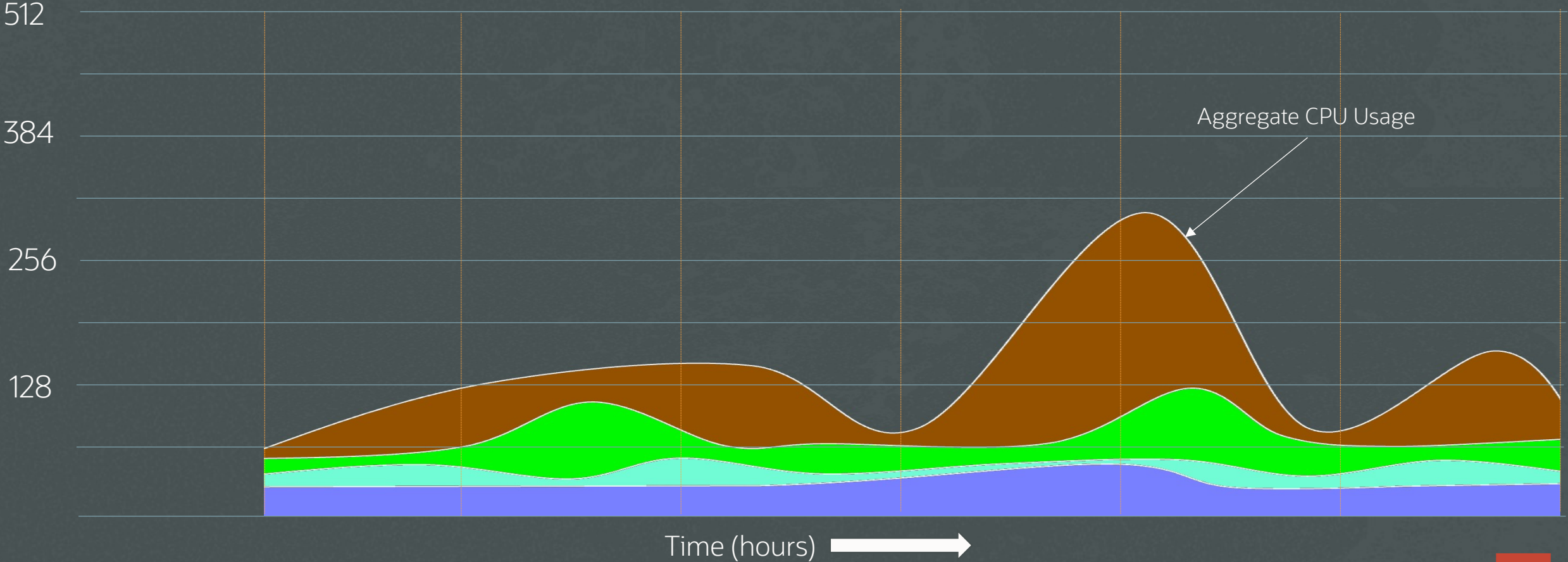
ADB is charged by the allocated ECPUs in each hour

Unused ECPU capacity



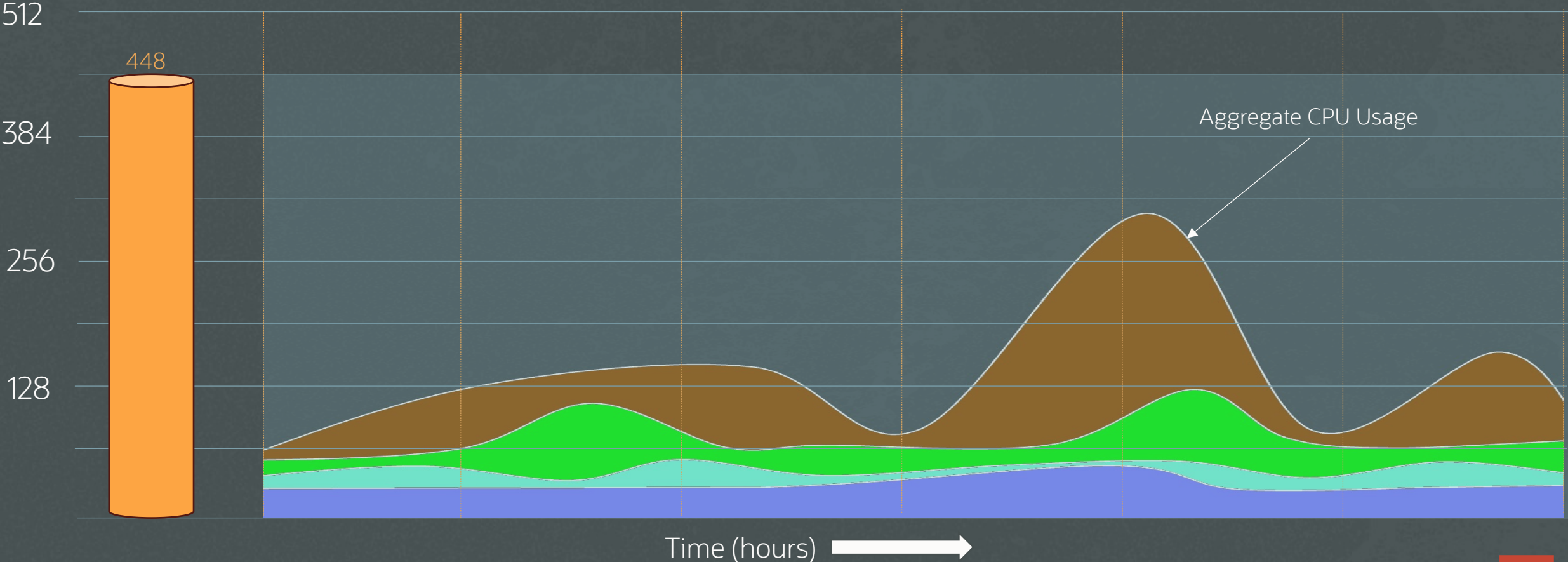
Let's now think about a group of databases

Here's a group of databases with high mem/sessions



Without Elastic Pools ...

ADB is charged by the allocated ECPUs in each hour



Reminder on Elastic Pools

Elastic Pools is only a billing construct – databases are not physically moved when joining a "pool"

Elastic pools can be created with a pool size (aka shape) of 128, 256, 512, 1024, 2048, or 4096 ECPUs

Specific ADBs can "join" the pool – they can also be removed (one hour min)

Databases can be added to the pool up to the Pool Capacity – i.e. the aggregate ECPU limit

If the ECPU usage exceeds the current pool shape, then the pool shape is automatically doubled in size (up to the pool capacity)

Charges are incurred for the pool shape in use for each hour.

Pool Leader

Is the Autonomous Database instance that creates an elastic pool.

Pool Member

Is an Autonomous Database instance that is added to an elastic pool.

Pool Size

Is a value that you set when you create an elastic pool. The pool size must be one of the available elastic pool shapes

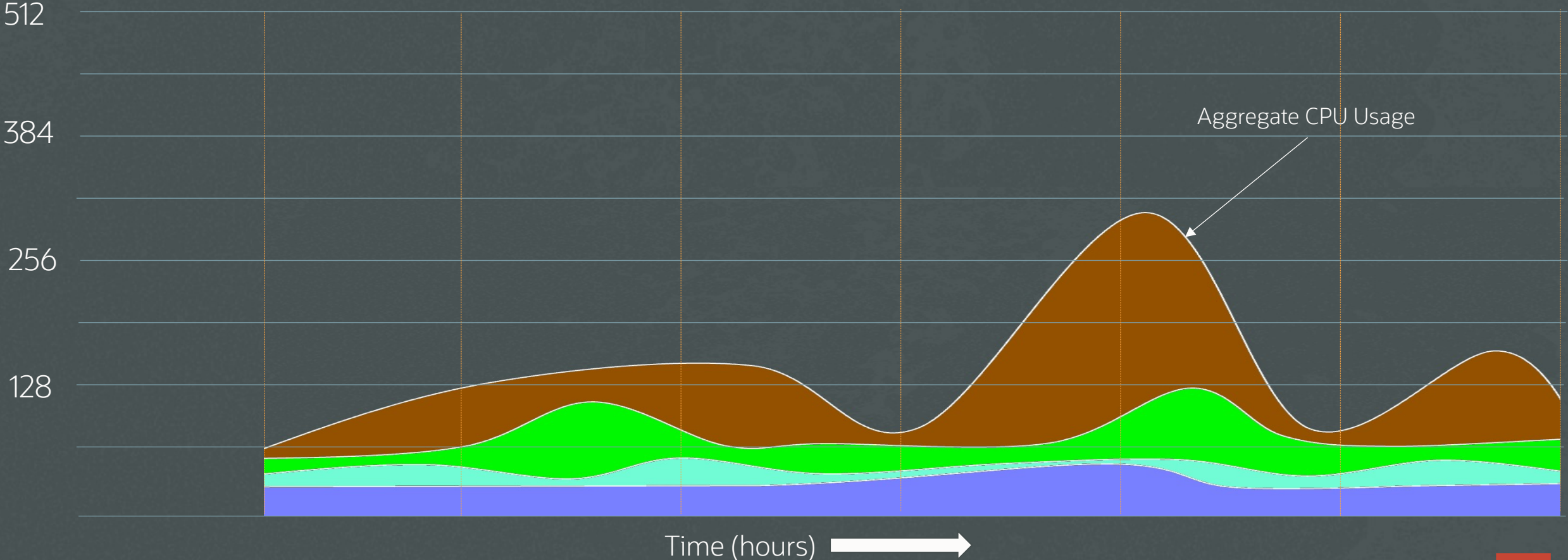
Pool Shape

A pool shape is one of the valid pool sizes that you select when you create an elastic pool

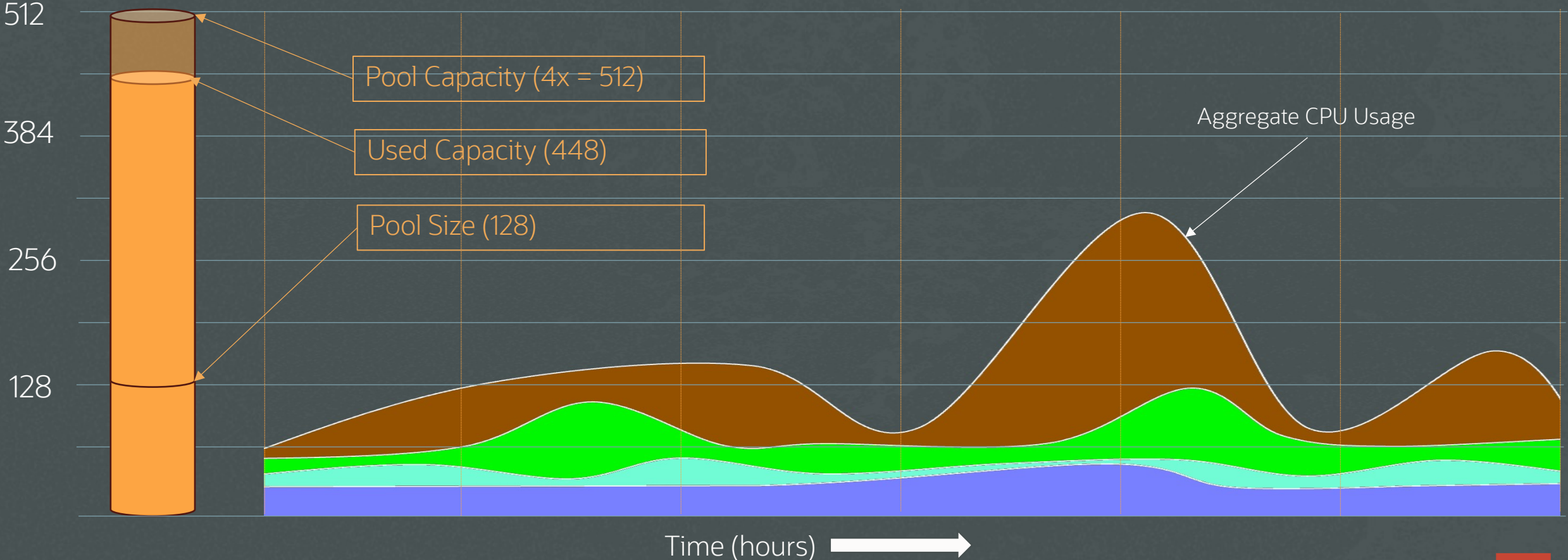
Pool Capacity

The pool capacity is the maximum number of ECPUs that an elastic pool can use, and is four times (x4) the pool size

Here's our group of databases with high mem/sessions



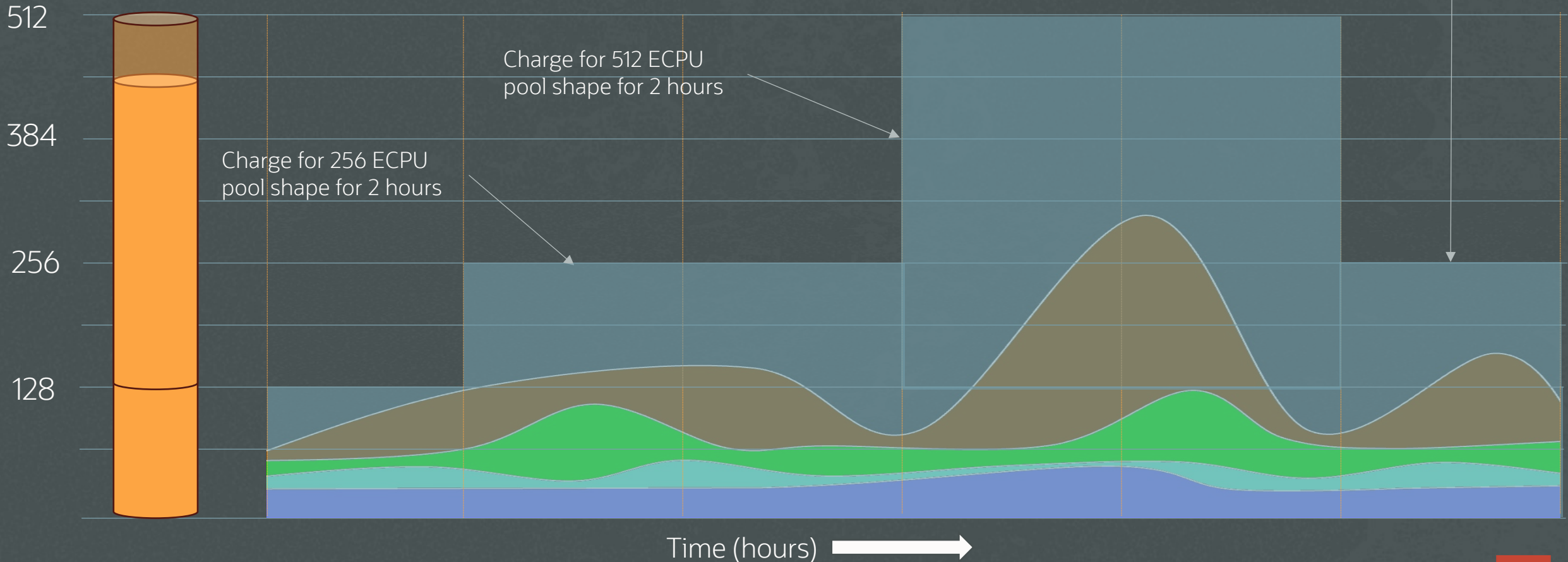
Let's put them into an elastic pool of size 128 ECPU



Here's our group of databases – with Elastic Pools

We charge for the pool shape in use for each hour – with the base pool shape as the minimum (even if no databases)

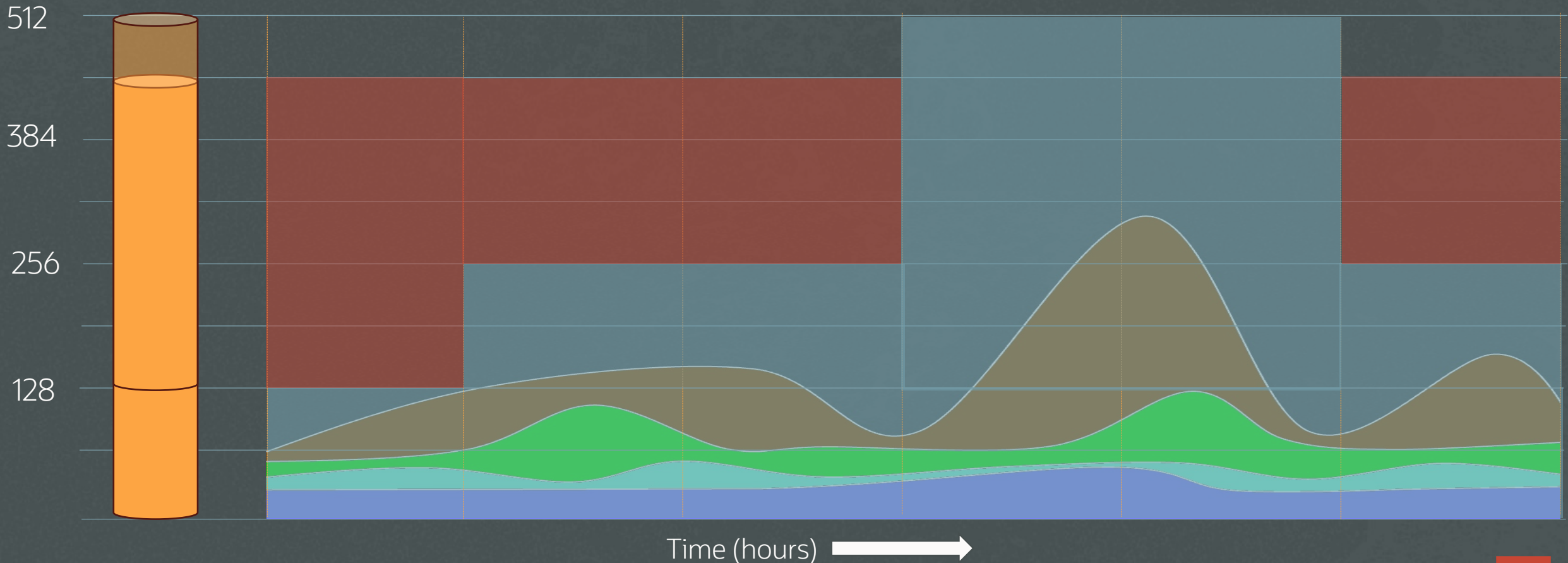
Charge for 256 ECPU pool shape for 1 hour



Here's our group of databases – with Elastic Pools

We charge for the pool shape in use for each hour – with the base pool shape as the minimum (even if no databases)

Elastic Pool Saving



Oracle Estate Explorer

Where to find out more



Oracle Estate Explorer <https://www.oracle.com/database/cloud-migration/estate-explorer/>

Modernization First Steps

Use Estate Explorer to:



Gain knowledge of your database estate



Identify quick-wins for migration to cloud



Build a business case financial model to prove value



Thanks

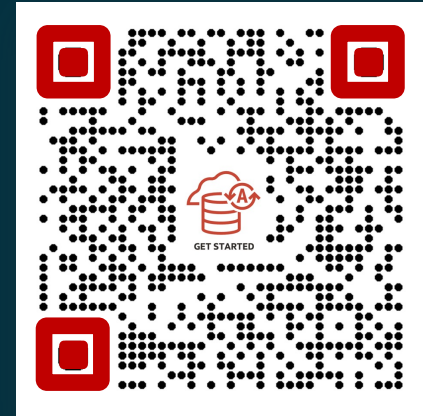


Q&A Open



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-linkedin-grp  
[@AutonomousDW](https://twitter.com/AutonomousDW)

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)

Final Thoughts

oracle.com/goto/adb-learning-lounge

The screenshot shows the Oracle Autonomous Database Learning Lounge page. At the top, there's a navigation bar with 'ASK TOM', a search bar, and links for 'Questions', 'Office Hours', 'Videos', 'Resources', and 'Classes'. The main heading is 'Autonomous Database Learning Lounge' with 'Share' and 'Register for Series' buttons. Below this is a paragraph explaining the lounge series and a link to 'Get Started with Autonomous Database'. A section titled 'Upcoming' lists three sessions: 'Migration to ADB Part I: Visualize and Evaluate your entire database estate with Oracle Estate Explorer', 'Migration to ADB Part II: Easily migrate from previous database releases with DMS', and 'Graph RAG: Bring the Power of Graphs to Generative AI'. Below the 'Upcoming' section is a 'Replays' section with a 'Sort By' dropdown set to 'Newest'. It lists four replay sessions: 'Unlock modern analytics and AI with Oracle's converged platform', 'What a week! Recapping Autonomous Database at Oracle CloudWorld'24', 'The new way to manage Oracle Databases on Microsoft Azure for Oracle DBAs', and 'Ten ways you can use your Azure services with Oracle Database@Azure'. Red arrows point from the text 'Links', 'Upcoming', and 'Replays' to the corresponding sections on the page.



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

**Thank you for joining
today's webinar !!!**
