



ORACLE

Autonomous Database ECPU FAQ

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What is an ECPU?

ECPU's are a new billing metric for Autonomous Data Warehouse and Autonomous Transaction Processing. An ECPU is based on the number of cores per hour elastically allocated from a pool of compute and storage servers.

What is the difference between ECPU's and OCPU's?

An OCPU is defined as the equivalent of one physical core with hyper-threading enabled. In contrast, an ECPU is not explicitly defined in terms of an amount of physical hardware. By introducing ECPU's, Oracle is providing a durable pricing metric which is not tied to the exact make, model, or clock speed of the underlying processor.

What is the price of an ECPU?

The prices for ECPU's are (in US dollars; For additional currencies, please refer to the pricing list at <https://www.oracle.com/cloud/price-list/>):

- Autonomous Data Warehouse: \$0.336 per ECPU per hour
- Autonomous Transaction Processing: \$0.336 per ECPU per hour

Note that ECPU databases need to be provisioned with a minimum of 2 ECPUs.

Though ECPU pricing for Autonomous Data Warehouse and Autonomous Transaction Processing is the same, the storage is as follows:

- Autonomous Data Warehouse: 1 GB at \$0.0244, with 1 TB increment
- Autonomous Transaction Processing: 1 GB at \$0.1156 with 1 GB increment (minimum of 20 GB)

Additionally, Bring-You-Own-License pricing is available with ECPU's:

- Autonomous Data Warehouse: \$0.0807 per ECPU per hour
- Autonomous Transaction Processing: \$0.0807 per ECPU per hour

(Up to 8 ECPU's may be activated for each supported Processor license of Oracle Database Enterprise Edition and up to 16 ECPU's for each supported Processor license of Oracle Database Standard Edition)

Why is Oracle introducing ECPU's?

With ECPU's Oracle is introducing its pricing model for the long-term future. ECPU's provide a consistent price metric independent of the underlying hardware. This avoids the possibility of complex pricing models in the future.

Note that ECPU's have also already been introduced for MySQL Heatwave on AWS, and other services may also offer ECPU's in the future.

What are the benefits of ECPU's?

At their introduction, ECPU's will provide similar or better price-performance than OCPU's for a given Autonomous Database workload. Over time, ECPU's will deliver continuous improvements in price-performance.

ECPU's provide the benefit of a lower entry price. The smallest Autonomous Database configuration is 2 ECPU's or \$0.672 per hour. ECPU's also provide finer-granularity pricing for Autonomous Database since the increment for resizing or autoscaling the database is 1 ECPU or \$0.336.

Additionally, new features for Autonomous Database may only be available with ECPU's. For example, concurrent with the introduction of ECPU's, Oracle has lowered the price of storage for Autonomous Data Warehouses Serverless from \$118.40 to \$25.00 per TB-month – but this feature is only available for ECPU data warehouses.

Should I use ECPU's as the billing metric for my new Autonomous Database?

Yes, ECPU's are recommended for new Autonomous Databases. For Autonomous Database Serverless, ECPU's are the default pricing metric during database provisioning. On Autonomous Database on Dedicated Infrastructure, ECPU's will be the default pricing metric when creating a VM.

OCPU's continue to be fully supported and customers can choose to use OCPU's during provisioning of new database or VM.

Are OCPU's still available?

Yes, OCPU's are still available. Existing Autonomous Databases are not modified and will continue to use OCPU's.

ECPU's will be the default pricing metric for new Autonomous Databases, but customers can still choose to create their new databases using the OCPU pricing metric.

Over time, Oracle plans to deprecate the OCPU pricing model for Autonomous Databases. However, Oracle anticipates that OCPU's will be available for at least one year from the introduction of ECPU's.

How do I convert an existing OCPU-based database to an ECPU-based database?

You may convert a database from OCPU's to ECPU's without any downtime via the database console UI or APIs.

You may also clone an OCPU-based database to an ECPU-based database.

How should I size my database using ECPU's?

For the conversion of an existing Autonomous Database using OCPU's to ECPU's, a customer can ensure the same or better performance by sizing their database based on costs. For example, a 4 OCPU Autonomous Database has a list price of \$5.36 per hour. An Autonomous Database with similar costs would use 16 ECPU's (\$5.376 per hour).

This is a conservative sizing approach to provide similar or better performance.

For a new database or for the migration of an existing Oracle Database to Autonomous Database, customers can work with their Oracle sales teams. If customers have previous experience with sizing an Autonomous Database

based on OCPU's, then they can fully leverage their previous OCPU sizing estimate and convert to ECPU's on a cost basis as illustrated above.

Do ECPU-based databases have different features or performance characteristics from OCPU-based databases?

The introduction of ECPU's is simply an additional pricing metric. Using an ECPU Autonomous Database is essentially identical to an OCPU Autonomous Database. Customers choose the number of ECPU's or OCPU's at provisioning time, and they can re-size their database at any time. Both ECPU's and OCPU's fully support auto-scaling (up to 3x of the base compute capacity), autonomous data guard, cloning, and all other core features. The billing policies for auto-scaling and Autonomous Data Guard are unchanged across ECPU's and OCPU's.

In the future, some new Autonomous Database features may be available only on ECPU's.

With ECPU's backup storage will be billed additionally, and the backup retention period may be selected between 1 and 60 days. With OCPU's, 60-days of backup storage is included in the storage price. For more information, please refer to the [About Backup and Recovery on Autonomous Database](#) section in the Autonomous Database documentation.

So, seriously, what's the big picture here?

Oracle is introducing its long-term price metric with ECPU's to avoid pricing complexity as hardware systems change (please see price lists for other cloud vendors as examples of this complexity).

ECPU-based databases provide the same user-experience as OCPU-based databases, and you may convert OCPU databases to ECPU databases.

Customers should plan to adopt ECPU's with confidence that they will get the same or better price-performance with no significant changes to their Autonomous Database experience.

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