

Databases (DBaaS)

Questions	AWS	Azure		Google Cloud Platform	IBM Cloud	OTC	OVH
Which DB engines are offered?	<p>Relational DB</p> <ul style="list-style-type: none"> - MySQL - PostgreSQL - MariaDB - Oracle - Microsoft SQL Server - Amazon Aurora <p>Non-Relational DB</p> <ul style="list-style-type: none"> - Amazon DynamoDB - Amazon ElastiCache - Amazon Neptune - Redis - MemCached <p>Data Warehouse / Big Data</p> <ul style="list-style-type: none"> - Amazon Redshift - Amazon Athena - Amazon EMR (Hadoop, Spark, HBase, Presto, etc.) - Amazon Kinesis - Amazon Elasticsearch Service - Amazon Quicksight 	<p>Relational DB</p> <ul style="list-style-type: none"> - Azure SQL Database - Azure Database for MySQL - Azure Database for PostgreSQL - Azure Database for Maria DB - Microsoft SQL Server <p>Non-Relational DB</p> <ul style="list-style-type: none"> - Azure Cosmos DB - Azure Table Storage - Redis <p>Data Warehouse / Big Data</p> <ul style="list-style-type: none"> - SQL Data Warehouse - HDInsight (Hadoop, Spark, Hive, LLAP, Kafka, Storm, R.) - Azure Databricks (Spark) - Azure Data Factory - Azure Stream Analytics 		<p>Relational DB</p> <ul style="list-style-type: none"> - PostgreSQL - MySQL - Google Cloud Spanner <p>Non-Relational DB</p> <ul style="list-style-type: none"> - Google Cloud BigTable - Cloud Firestore - Firebase Realtime Database - Cloud Memorystore <p>Data Warehouse / Big Data</p> <ul style="list-style-type: none"> - Google Cloud BigQuery - Google Cloud Dataflow - Google Cloud Dataproc (Hadoop / Spark) - Google Cloud Datalab - Google Cloud Dataprep 	<p>Relational DB</p> <ul style="list-style-type: none"> - Db2 on Cloud - PostgreSQL - MySQL <p>Non-Relational DB</p> <ul style="list-style-type: none"> - Cloudant - MongoDB - ScyllaDB - Redis - JanusGraph - etcd - Elasticsearch <p>Data Warehouse / Big Data</p> <ul style="list-style-type: none"> - Db2 Warehouse on Cloud 	<p>Relational DB</p> <ul style="list-style-type: none"> - PostgreSQL - MySQL - Microsoft SQL Server <p>Non-Relational DB</p> <ul style="list-style-type: none"> - MongoDB - Redis 	<p>Relational DB</p> <ul style="list-style-type: none"> - MariaDB - MySQL - PostgreSQL <p>Non-Relational DB</p> <ul style="list-style-type: none"> - Redis
Performance of MySQL (MySQL Sysbench, table-size (row data): 1000000, Threads: 16) - Read - Write - Read / Write	<p>Transactions: 33449 (557.20 per sec.)</p> <p>Transactions: 31917 (531.69 per sec.)</p> <p>Transactions: 1669 (27.58 per sec.)</p>	<p>Transactions: 85095 (1417.90 per sec.)</p> <p>Transactions: 4736 (78.82 per sec.)</p> <p>Transactions: 2213 (36.65 per sec.)</p>		<p>Transactions: 27311 (454.92 per sec.)</p> <p>Transactions: 24392 (406.26 per sec.)</p> <p>Transactions: 1331 (21.92 per sec.)</p>	<p>Transactions: 30307 (504.81 per sec.)</p> <p>Transactions: 17910 (298.27 per sec.)</p> <p>Transactions: 1537 (25.37 per sec.)</p>	<p>Transactions: 9934 (165.32 per sec.)</p> <p>Transactions: 9402 (156.46 per sec.)</p> <p>Transactions: 500 (8.08 per sec.)</p>	<p>Transactions: 93690 (1561.18 per sec.)</p> <p>Transactions: 85107 (1418.08 per sec.)</p> <p>Transactions: 4736 (78.69 per sec.)</p>
Provisioning time for a MySQL instance	236 sec	132 sec		318 sec	151 sec	482 sec	414 sec
Performance of PostgreSQL	<p>Transactions: 32930 (548.59 per sec.)</p> <p>Transactions: 32518 (541.72 per sec.)</p> <p>Transactions: 1720 (28.40 per sec.)</p>	<p>Transactions: 85433 (1423.24 per sec.)</p> <p>Transactions: 38642 (643.80 per sec.)</p> <p>Transactions: 3724 (61.79 per sec.)</p>		<p>Transactions: 25467 (424.14 per sec.)</p> <p>Transactions: 24836 (413.68 per sec.)</p> <p>Transactions: 1286 (21.17 per sec.)</p>	<p>Transactions: 127374 (2122.19 per sec.)</p> <p>Transactions: 35911 (598.18 per sec.)</p> <p>Transactions: 6615 (109.90 per sec.)</p>	<p>Transactions: 24668 (410.89 per sec.)</p> <p>Transactions: 19437 (323.72 per sec.)</p> <p>Transactions: 1204 (19.80 per sec.)</p>	<p>Transactions: 93387 (1556.04 per sec.)</p> <p>Transactions: 90685 (1511.01 per sec.)</p> <p>Transactions: 4669 (77.55 per sec.)</p>
Provisioning time for a PostgreSQL instance	184 sec	71 sec		413 sec	701 sec	460 sec	516 sec
Supported DB Versions	<ul style="list-style-type: none"> - MySQL 5.5, 5.6, 5.7, 8.0 - MariaDB 10.0, 10.1, 10.2, 10.3 - Microsoft SQL Server 2008 R2 SP3, 2012 SP4, 2014 SP2, 2016 SP1, 2017 RTM, 2019 - Oracle 11g (11.2.0.4), Oracle 12c (12.1.0.2), Oracle 18c (18.0.0.0), Oracle 19c (19.0.0.0) - PostgreSQL 9.4, 9.5, 9.6, 10, 11, 12 - Amazon Aurora - compatible with MySQL 5.6.10a" 	<ul style="list-style-type: none"> - MySQL 5.6, 5.7, 8.0 - MariaDB 10.2, 10.3 - Azure SQL Database: Microsoft SQL Server 2017 - Microsoft SQL Server 2017, 2016 SP1, 2014 SP2, 2012 SP4, 2008 R2 SP3, 2012 SP4, 2014 SP2, 2016 SP1, 2017, 2019 - PostgreSQL 9.5, 9.6, 10, 11 - Azure Cosmos DB 		<ul style="list-style-type: none"> - MySQL 5.6, 5.7 - PostgreSQL 9.6, 10, 11, 12 	<ul style="list-style-type: none"> - Db2-ge - PostgreSQL 9.5, 9.6, 10, 11, 12 - MySQL 5.7.26, 5.7.29 - Cloudant-h7 - MongoDB 4.0.14, 4.2.6 - ScyllaDB 3.0.10, 3.1.4 - Redis 4, 5 - JanusGraph 0.3.1 - etcd 3.3, 3.4 - Elasticsearch 6.8 - Db2 Warehouse-ef 	<ul style="list-style-type: none"> - PostgreSQL 9.5, 9.6, 10, 11 - MySQL 5.6, 5.7, 8.0 - Microsoft SQL Server 2016 EE/SE 	<ul style="list-style-type: none"> - PostgreSQL 9.6, 10, 11, 12 - MySQL 5.7 - MariaDB 10.1, 10.2, 10.3, 10.4, 10.5 - Redis 4.0
Troubleshooting as a Service - Rollback - Support	<p>yes</p> <p>yes</p>	<p>yes</p> <p>yes</p>		<p>yes</p> <p>yes</p>	<p>yes</p> <p>yes</p>	<p>yes</p> <p>yes</p>	<p>yes</p> <p>yes</p>
Total price for the database per month - MySQL - 2 vCores - 100 GB Storage - Frankfurt / Western Europe - 100% active per month - No dedicated backup	\$ 14.64 / db.t2.micro	\$ 70.01 / Gen 5, 2 vCore		\$ 29.60 / db-f1-micro	\$ 911.00 (this is a package price, more information at: https://cloud.ibm.com/catalog/services/compose-for-mysql)	\$ 110,49	\$ 8.77
Total price for the database per month - PostgreSQL - 2 vCores - 100 GB Storage - Frankfurt / Western Europe - 100% active per month - No dedicated backup	\$ 18.30 / db.t2.micro	\$ 70.01 / Gen 5, 2 vCore		\$ 29.60 / db-f1-micro	\$ 103.81	\$ 115,46	\$ 8.77

Limitations: How many simultaneous requests to the DB?	MySQL: - max Connections: 7000 PostgreSQL: - max Connections: 5000	MySQL: - max Connections: 10000 PostgreSQL: - max Connections: 1987		MySQL: - max Connections: 4000 PostgreSQL: - max Connections: 1000	MySQL: - max Connections: 151 PostgreSQL: - max Connections: 100	MySQL: - max Connections: 151 PostgreSQL: - max Connections: unlimited	MySQL: - max Connections: 200 PostgreSQL: - max Connections: 200
How does backup/restore work?	Backups: - Automatic Backups. Restore: - Point-in-time restore	Backups: - Automatic Backups. Restore: - Point-in-time restore - Geo-restore		Backups: - Automatic Backups. Restore: - On-demand	Backups: - Automatic Backups. Restore: - On-demand	Backups: - Automatic Backups. Restore: - Point-in-time restore	Backups: - Automatic Backups. Restore: - Point-in-time restore