

Databases (DBaaS)

Questions	AWS	Azure		Google Cloud Platform	IBM Cloud	OTC Cloud	
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 Datastore - Google Cloud BigTable <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 	
Performance of MySQL (MySQL Sysbench, table-size (row data): 1000000, Threads: 16)	<p>Transactions: 63923 (1065.00 / sec)</p> <p>Transactions: 87049 (1450.54 / sec)</p> <p>Transactions: 42841 (713.69 / sec)</p>	<p>Transactions: 21100 (351.40 / sec)</p> <p>Transactions: 10642 (177.26 / sec)</p> <p>Transactions: 8287 (137.47 / sec)</p>		<p>Transactions: 6906 (114.80 / sec)</p> <p>Transactions: 17290 (287.88 / sec)</p> <p>Transactions: 5773 (95.97 / sec)</p>	<p>Transactions: 36562 (609.04 / sec)</p> <p>Transactions: 79668 (1327.34 / sec)</p> <p>Transactions: 29407 (489.85 / sec)</p>	<p>Transactions: 46222 (770.14 / sec)</p> <p>Transactions: 64707 (1078.25 / sec)</p> <p>Transactions: 29942 (498.75 / sec)</p>	
Provisioning time for a MySQL instance	325 sec	205 sec		250 sec	300 sec	463 sec	
Performance of PostgreSQL	<p>Transactions: 1010644 (16841.26 / sec)</p> <p>Transactions: 372072 (6200.38 / sec)</p> <p>Transactions: 32639 (542.73 / sec)</p>	<p>Transactions: 103860 (1729.28 / sec)</p> <p>Transactions: 34736 (575.76 / sec)</p> <p>Transactions: 5040 (83.73 / sec)</p>		<p>Transactions: 112062 (1867.34 / sec)</p> <p>Transactions: 88086 (1467.89 / sec)</p> <p>Transactions: 5676 (94.26 / sec)</p>	<p>Transactions: 794015 (13231.69 / sec)</p> <p>Transactions: 597588 (9958.29 / sec)</p> <p>Transactions: 33545 (557.93 / sec)</p>	<p>Transactions: 1331506 (22187.65 / sec)</p> <p>Transactions: 165409 (2756.07 / sec)</p> <p>Transactions: 22886 (381.04 / sec)</p>	
Provisioning time for a PostgreSQL instance	460 sec	250 sec		195 sec	480 sec	315 sec	
Supported DB Versions	<ul style="list-style-type: none"> - MySQL 8.0, 5.7, 5.6, 5.5 - MariaDB 10.3, 10.2, 10.1, 10.0 - Microsoft SQL Server 2017 RTM, 2016 SP1, 2014 SP2, 2012 SP4, 2008 R2 SP3 - Oracle 12c (12.1.0.2, 12.1.0.1), Oracle 11g (11.2.0.4, 11.2.0.3, 11.2.0.2) - PostgreSQL 11.2, 11.1, 10.6, 10.5, 10.4, 10.3, 10.1, 9.6.x, 9.5.x, 9.4.x, 9.3.x, 9.2.x - Amazon Aurora - compatible with MySQL 5.6.10a 	<ul style="list-style-type: none"> - MySQL 5.7, 5.6 - MariaDB 10.2 - Azure SQL Database: Microsoft SQL Server 2017 - Microsoft SQL Server 2017, 2016 SP1, 2014 SP2, 2012 SP4, 2008 R2 SP3 - PostgreSQL 10.3, 9.6.x, 9.5.x - Azure Cosmos DB 		<ul style="list-style-type: none"> - MySQL 5.7, 5.6 - PostgreSQL 9.6.x 	<ul style="list-style-type: none"> Db2-ge PostgreSQL 9.6.12, 9.6.10, 9.6.9, 9.5.14, 9.5.13, 9.4.19, 9.4.18 MySQL 5.7.22, 5.7.20 Cloudant-h7 MongoDB 3.4.10, 3.2.18, 3.2.11, 3.2.10 ScyllaDB 2.0.3 Redis 4.0.10, 3.2.12 JanusGraph 0.1.1 beta etcd 3.3.3, 3.2.18 Elasticsearch 6.2.2, 5.6.9 Db2 Warehouse-ef 	<ul style="list-style-type: none"> PostgreSQL 10.0, 9.6.5, 9.6.3, 9.5.5 MySQL 5.7.20, 5.7.17, 5.6.35, 5.6.34, 5.6.33, 5.6.30 Microsoft SQL Server 2016 EE, 2016 SE2014 SE 	
Troubleshooting as a Service	<ul style="list-style-type: none"> - Rollback - Support 	<ul style="list-style-type: none"> yes yes 		<ul style="list-style-type: none"> yes yes 	<ul style="list-style-type: none"> yes yes 	<ul style="list-style-type: none"> yes yes 	
Total price for the database per month	€ 114.13 / \$ 128.13	€ 142.29 / \$ 159.50		€ 121.43 / \$ 138.75	N/A	€ 298.40 / \$ 335.04	
<ul style="list-style-type: none"> - MySQL - 2 vCores - 100 GB Storage - Frankfurt / Western Europe - 100% active per month - No dedicated backup 							
Total price for the database per month	€ 121.64 / \$ 136.34	€ 142.29 / \$ 159.50		€ 124.21 / \$ 141.81	€ 103.04 / \$ 136.00	€ 312.80 / \$ 350.85	
<ul style="list-style-type: none"> - PostgreSQL - 2 vCores - 100 GB Storage - Frankfurt / Western Europe - 100% active per month - No dedicated backup 							

Limitations: How many simultaneous requests to the DB? How much RAM? How many users?	MySQL: - max Connections: 2540 PostgreSQL: - max Connections: 5696	MySQL: - max Connections: 10000 PostgreSQL: - max Connections: 1900		MySQL: - max Connections: 4000 PostgreSQL: - max Connections: 1000	MySQL: - max Connections: 151 PostgreSQL: - max Connections: 1000	MySQL: - max Connections: 151 PostgreSQL: - max Connections: unlimited	
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	