

# postgresql mysql oracle differences

Asked 16 years, 2 months ago   Modified 6 years, 5 months ago

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I'm having to start building the architecture for a database project but i really don't know the differences between the engines.



Anyone can explain whats the pros and bads of each of these three engines? We'll have to choose one of them and the only thing I actually know about them is this:



- Mysql & Postgres:
  - Are free but not so good as oracle
  - Mysql as security problems (is this true?)
- Oracle:
  - Best data base engine in the world
  - Expensive

Can someone clear out other differences between them?  
This is a medium/large (we're thinking of around some 100 to 200 tables) project with low budget, what would you choose? And with a higher budget?

mysql

oracle-database

postgresql

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edited Jul 18, 2018 at 2:00



Cœur

38.6k ● 26 ● 202 ● 276

asked Oct 19, 2008 at 16:16



fmsf

37.1k ● 49 ● 152 ● 196

## 4 Answers

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12



A few years ago I had to write a translation engine; you feed it one set of sql and it translates to the dialect of the currently connected engine. My engine works on Postgres (AKA PostgreSQL), Ingres, DB2, Informix, Sybase, and Oracle - oh, and ANTS. Frankly, Oracle is my least favorite (more on that below)... Unfortunately for you, mySql and SQL Server are not on the list (at the time neither was considered a serious RDBMS - but times do change).

Without regard to the quality or performance of the engine - and ease of making and restoring backups - here are the primary areas of difference:

- datatypes
- limits
- invalids
- reserved words
- null semantics (see below)

- quotation semantics (single quote ', double quote ", or either)
- statement completion semantics
- function semantics
- date handling (including constant keywords like 'now' and input / output function formats)
- whether inline comments are permitted
- maximum attribute lengths
- maximum number of attributes
- connection semantics / security paradigm.

Without boring you on all the conversion data, here's a sample for one datatype, `lvvarchar`:

```
oracle=varchar(%x) sybase=text db2="long varchar"  
informix=lvvarchar postgres=varchar(%x)  
ants=varchar(%x) ingres=varchar(%x,%y)
```

The biggest deal of all, in my view, is null handling; Oracle SILENTLY converts blank input strings to null values. ...Somewhere, a LONG time ago, I read a writeup someone had done about "The Seventeen Meanings of Null" or some such and the real point is that nulls are very valuable and the distinction between a null string and an empty string is useful and non-trivial! I think Oracle made a huge mistake on this one; none of the others have this behavior (that I've ever seen).

My second least favorite was ANTS because unlike all the others, they ENFORCED the silly rules for perfect syntax that absolutely no one else does and while they may be the only DB company to provide perfect adherence to the standard, they are also a royal pain in the butt to write code for.

Far and away my favorite is Postgres; it's very fast in `_real_world_` situations, has great support, and is open source / free.

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answered Oct 20, 2008 at 0:46

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Richard T

4,659 ● 5 ● 40 ● 52

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Oracle recommends using `varchar2` not `varchar`.

– Mark Brady Oct 20, 2008 at 15:49

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Thanks for the update, Mark. I'll make sure that gets propagated back into the engine - and take a moment to look for other updates, too. RT – Richard T Oct 22, 2008 at 18:49

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The differences between different SQL Implementations are big, at least under the hood. This boards wont suffice to count them all.



If you have to ask, you also have to ask yourself whether you are in the position to reach a valid and founded decision on the matter.



[A comparison von MYSQL and Postgres can be found here](#)

Note that Oracle offers also an [Express \(XE\) edition](#), reduced in features, but free to use. Also, if you have little knowledge to start with, you will have to learn yourself, I would just choose any one, and start learning by using it.

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answered Oct 19, 2008 at 16:28

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tabdamage

260 ● 1 ● 3

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Same comment i've left for warren, i'm a student, and it's for a project in a class, we've been trying to research but we can't figure out what would be better for using. The univ gives us keys for oracle. Tks for the link and the reference – [fmsf](#)

Oct 19, 2008 at 16:30

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You only need XE if you want to use it in Prod. If you're just trying it out... download the enterprise edition and learn all the features. – Mark Brady Oct 20, 2008 at 15:52

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See the comparison tables on wikipedia:

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[http://en.wikipedia.org/wiki/Comparison\\_of\\_object-relational\\_database\\_management\\_systems](http://en.wikipedia.org/wiki/Comparison_of_object-relational_database_management_systems) &&



[http://en.wikipedia.org/wiki/Comparison\\_of\\_relational\\_database\\_management\\_systems](http://en.wikipedia.org/wiki/Comparison_of_relational_database_management_systems)



Oracle may or may not be the best. It's expensive, but that doesn't mean best.



Have you looked at DB2? Sybase? Teradata? MS SQL?

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answered Oct 19, 2008 at 16:25

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warren

33.4k ● 23 ● 89 ● 128

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ty, i'm a student and it's for an university project, the db teacher as only been talking about those, i knew about ms sql but had no idea about the others. Tks for the link :)

– fmsf Oct 19, 2008 at 16:27

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HTH :) .. I'd stick with whatever rdbms the school has access to: be it MS SQL, ORacle, MySQL, or PostgreSQL (it's unlikely they'd have DB2, but possible) – warren Oct 19, 2008 at 16:29

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we can choose from any free or oracle – fmsf Oct 19, 2008 at 16:31

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Good databases let you download for free and work with all you want until you go production. MS Sql Server doesn't do that. Sybase and DB2 don't either from what I know.

– Mark Brady Oct 20, 2008 at 15:51

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@Mark Brady: MS SQL Express is free and works for data sets up to 4GB. If it's just a school project that may be all you need. – Kibbee Mar 3, 2009 at 21:02

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2



I think that for low budget scenarios Oracle is out of the question. 100-200 tables is not big and generally the amount of tables in a schema is not a scale measure. Dataset and throughput is.



You can have a look at

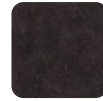
<http://www.mysqlperformanceblog.com/> (and their superb book) to see how MySQL can handle huge deployments.

Generally nowadays most RDBMSes can do almost anything that you'd need in a very serious application.

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answered Mar 3, 2009 at 21:08

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[cherouvim](#)

**31.9k** ● 15 ● 105 ● 155

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