



Pázmány Péter Catholic University
Faculty of Information Technology and Bionics

Introduction

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Database Systems I. Lab

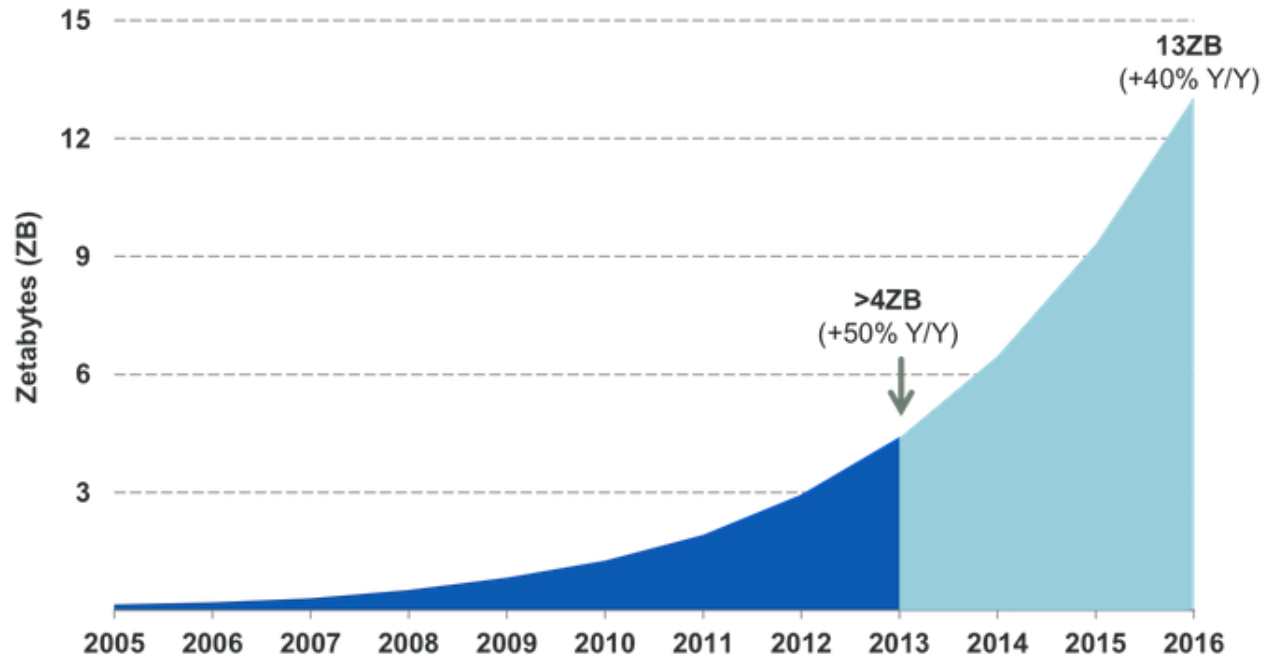
2018 Spring semester



'Digital Universe' Information Growth = Robust... +50%, 2013

2/3rd's of Digital Universe Content = Consumed / Created by Consumers
...Video Watching, Social Media Usage, Image Sharing...

Amount of
data doubles
every **two**
years



Courtesy of Richard Blundell, <http://richardblundell.net/2014/06/supply-demand-of-personal-data/>

@KPCB

Note: 1 petabyte = 1MM gigabytes, 1 zetabyte = 1MM petabytes.
Source: IDC Digital Universe, data as of 5/14.

65

Courtesy of VMware

WHAT IS A ZETTABYTE?	
1,000,000,000,000gigabyte
1,000,000,000,000terabyte
1,000,000,000,000petabyte
1,000,000,000,000exabyte
1,000,000,000,000zettabyte

Amount of processed data
doubles every **three** years

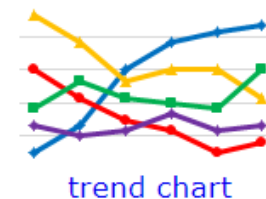
Courtesy of Gergely Lukacs, Advanced DBS



DB-Engines Ranking

The DB-Engines Ranking ranks database management systems according to their popularity. The ranking is updated monthly.

Read more about the [method](#) of calculating the scores.



341 systems in ranking, February 2018

Rank			DBMS	Database Model	Score		
Feb 2018	Jan 2018	Feb 2017			Feb 2018	Jan 2018	Feb 2017
1.	1.	1.	Oracle +	Relational DBMS	1303.28	-38.66	-100.55
2.	2.	2.	MySQL +	Relational DBMS	1252.47	-47.24	-127.83
3.	3.	3.	Microsoft SQL Server +	Relational DBMS	1122.04	-26.03	-81.42
4.	4.	4.	PostgreSQL +	Relational DBMS	388.38	+2.19	+34.70
5.	5.	5.	MongoDB +	Document store	336.42	+5.47	+0.92
6.	6.	6.	DB2 +	Relational DBMS	189.97	-0.30	+2.07
7.	7.	↑ 8.	Microsoft Access	Relational DBMS	130.07	+3.37	-3.32
8.	↑ 9.	↑ 10.	Redis +	Key-value store	127.02	+3.88	+12.98
9.	↑ 10.	↑ 11.	Elasticsearch +	Search engine	125.32	+2.76	+17.01
10.	↓ 8.	↓ 7.	Cassandra +	Wide column store	122.78	-1.10	-11.60
11.	11.	↓ 9.	SQLite +	Relational DBMS	117.27	+3.02	+1.96
12.	12.	12.	Teradata	Relational DBMS	72.99	+0.36	-2.60
13.	↑ 15.	↑ 16.	Splunk	Search engine	67.27	+3.27	+11.24
14.	14.	14.	Solr	Search engine	63.87	-0.50	-3.81
15.	↓ 13.	↓ 13.	SAP Adaptive Server +	Relational DBMS	63.49	-1.98	-8.25
16.	16.	↓ 15.	HBase	Wide column store	61.70	+0.07	+2.46
17.	17.	↑ 20.	MariaDB +	Relational DBMS	61.65	+3.35	+16.30
18.	18.	↑ 19.	Hive +	Relational DBMS	55.06	-0.43	+7.11

<https://db-engines.com/en/ranking>



Labor Market

10 hottest IT skills for 2016 (ComputerWorld)

4. Big data

5. Business intelligence/analytics

6. Help desk/technical support

7. Database administration

<https://www.computerworld.com/article/3012033/it-skills-training/10-hottest-tech-skills-for-2016.html>

2015-2016 Dice Tech Salary Survey

As has been the case for several years, big data and cloud represent the majority of this year's highest earners. Newcomers such as HANA, OpenStack, CloudStack and Puppet showed for the first time in the top 10 highest paid skills.

Top Paying Skills

1. HANA	Databases	\$154,749	6. CloudStack	Cloud	\$138,095
2. Cassandra	Databases	\$147,811	7. Chef	Programming	\$136,850
3. Cloudera	Cloud	\$142,835	8. Pig	Big Data	\$132,850
4. PAAS	Cloud	\$140,894	9. MapReduce	Big Data	\$131,563
5. OpenStack	Cloud	\$138,579	10. Puppet	Programming	\$131,121

<http://media.dice.com/report/2015-2016-dice-salary-survey/>

Test DB connection

New / Select Database Connection

Connection Name	Connection Details
dborade.itk.ppke.hu	zseta@//dborade.itk.ppke...

Connection Name: dborade.itk.ppke.hu

Username: zseta

Password:

☒ Save Password ☐ Connection Color

Oracle

Connection Type: Basic Role: default

Hostname: dborade.itk.ppke.hu

Port: 1521

☐ SID: xe

☒ Service name: lab.itk.ppke.hu

☐ OS Authentication ☐ Kerberos Authentication [Advanced...](#)

Status : Success

[Súgó](#) [Save](#) [Clear](#) [Test](#) [Connect](#) [Mégse](#)

Change password

```
ALTER USER dbusername IDENTIFIED BY "new_password";
```