



Lotar Schin – Head of Big Data at OTP Bank

Email: lotar.csaba.schin@otpbank.hu

Mobile: +36205204001

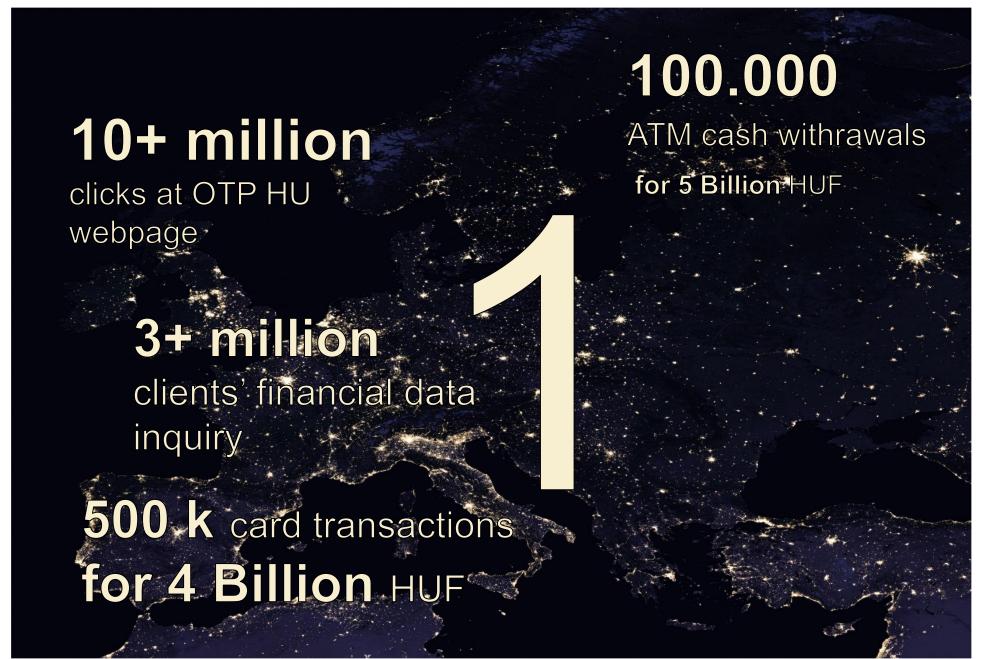
Three-quarter of OTP Group's branches are located out of Hungary and two-thirds of employees are working at subsidiaries



OTP Group # Branches # Employees Balance sheet total	1.467 28.472 54,9 B USD	OTP Bank Slovakia # Branches # Employees B. sheet total	62 683 1,6 B USD	# Employees	85 2.243 666 1,3 B USD	OTP Bank Russia # Branches # Employees # Agents B. sheet total	134 5.088 5.124 2,6 B USD
		OTP Bank (2002)	a Slovensko	JSC OTP Bank (2006) Ukrajna	P Bank Russia	3	
OTP Core (Hungary)				(20)		OTP Bank Romania	
# Branches	361		OTP Bank Roi			# Branches	95
# Employees	9.588	OTD I	(2004)			# Employees	1.248
B. sheet total	29,8 B USD	OTP ba Serbia	nka Srbija (2007)			B. sheet total	2,6 B USE
		OTP banka	~				
		Hrvatska	DSK Ban	k (2003)			
3		(2005) CKB (2 Monto	enegró Bulgária		of acquisition)		
				-			
OTP Bank Croatia		OTP Bank Serbia		CKB (Montenegro)		DSK Group (Bulgaria)	
# Branches	189	# Branches	156	# Branches	28	# Branches	35
# Employees	2.417	# Employees	2.009	# Employees	416	# Employees	4.78
B. sheet total	6,7 B USD	B. sheet total	1,9 B USD	B. sheet total	0,8 B USD	B. sheet total	7,6 B US
							,

How much time does OTP Bank HU need to get the below numbers? 1 hour/day/week/month/year ???





How much time does OTP Bank HU need to get the below numbers? 1 hour/day/week/month/year ???



100.000 10+ million ATM cash withrawals for 5 Billion HUF clicks at OTP HU webpage. 3+ million clients' financial data inquiry 500 k card transactions for 4 Billion HUF

2018 Q3 OTP Bank Hungary is establishing the Big Data and Analytics Center





Tibor Johancsik

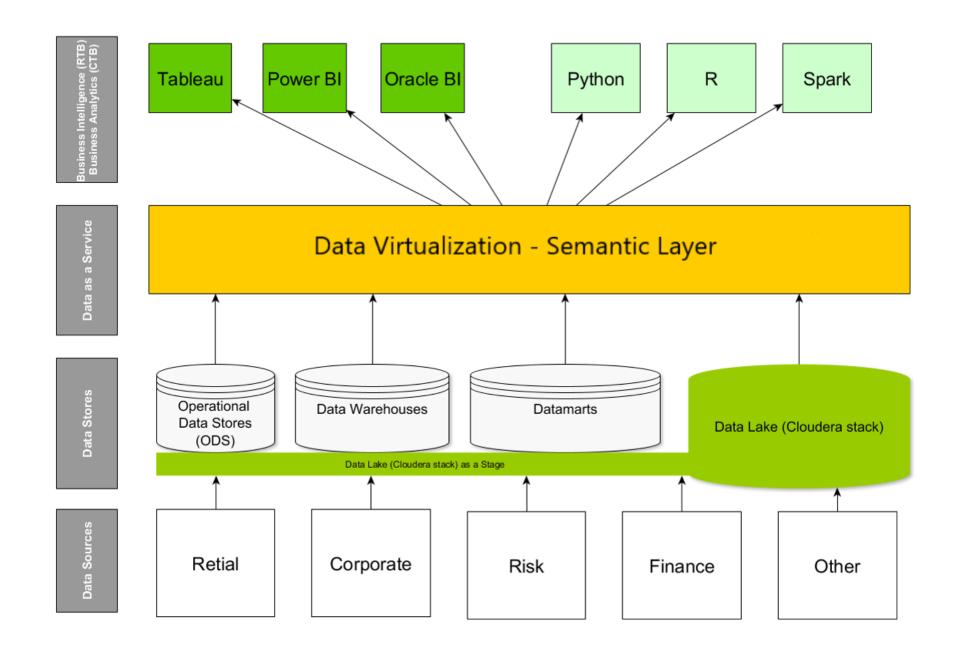
Big Data and Analytics Center

Lotar Schin

and a team of 10 fantastic talents

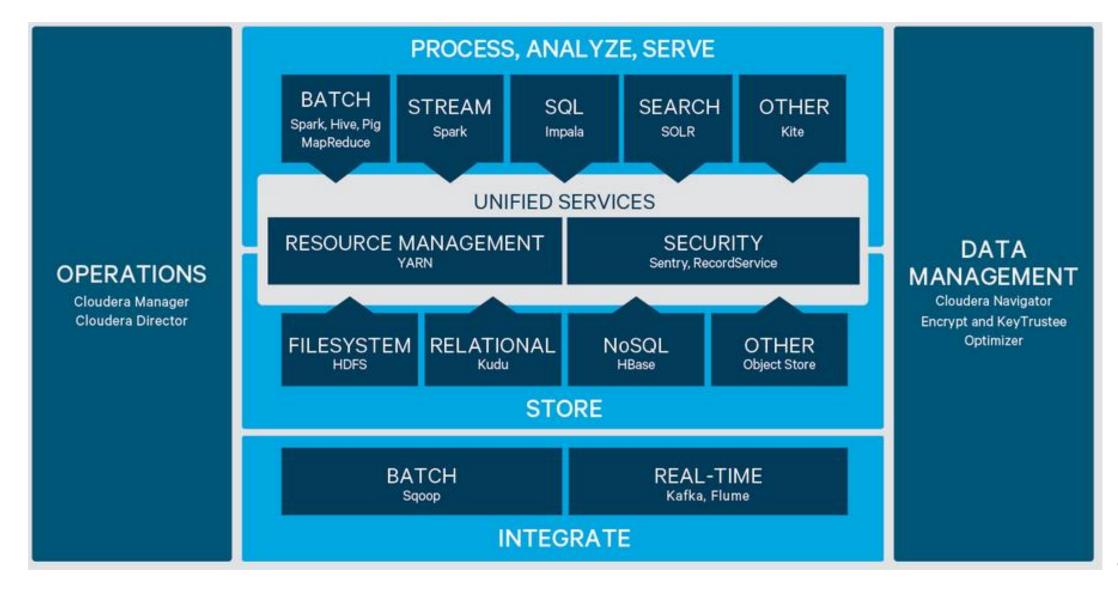
OTP BANK HU DATA AND BI/ANALYTICS ARCHITECTURE





Data Lake - Cloudera Stack





Current Cloudera Prod Cluster



36 nodes in a stretch cluster

- 18 nodes at Baber street
- 18 nodes at Lajos street

1728 CPU cores and 5 TB RAM

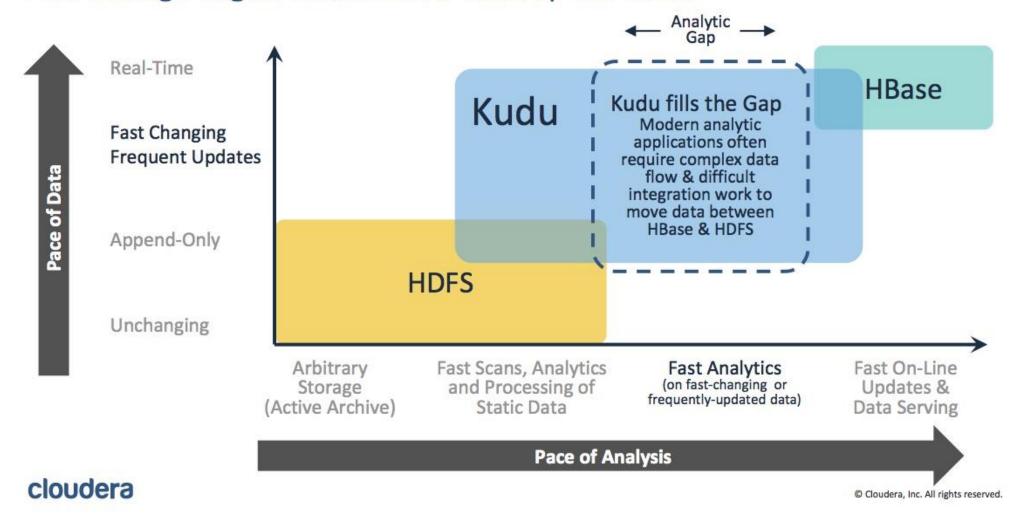
for computing

2 Peta Bytes storage capacity



Kudu: Fast Analytics on Fast-Changing Data

New storage engine enables new Hadoop use cases



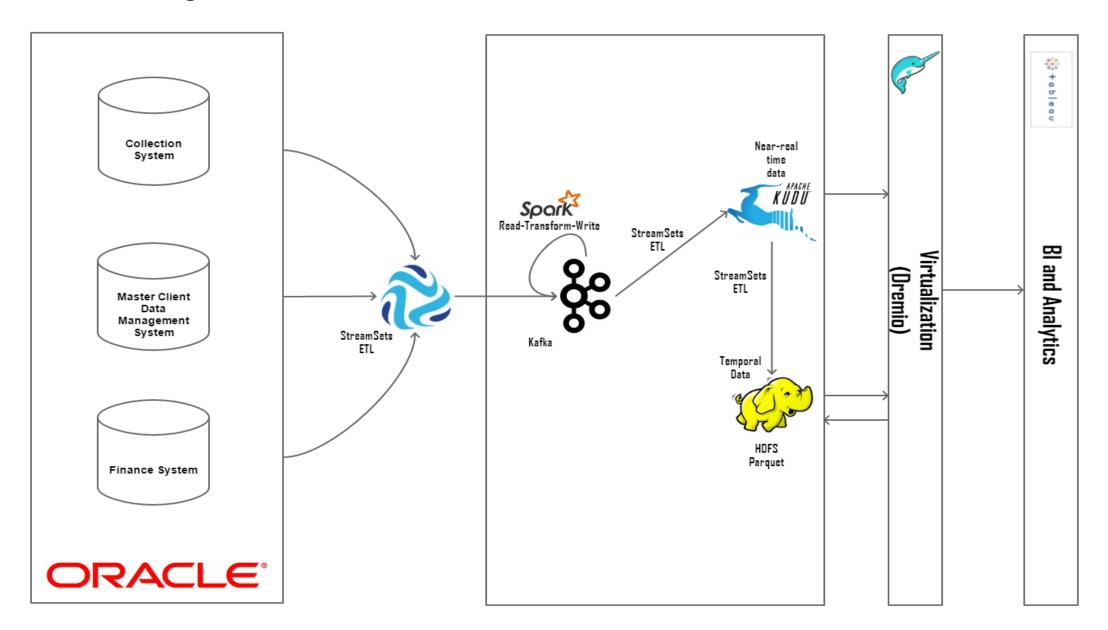
Big Data Current Use Cases at Otp Bank



- For one of the subsidiaries (OTP Faktoring) a DWH implementation on Cloudera with Tableau BI – Will go into the details
- Recommendation engine Will go into the details
- Log search and analysis
- CRM
- For any type of Data Science activity which requires the distributed storage and computing capacity (offload the RDBMS based Data Warehouses)

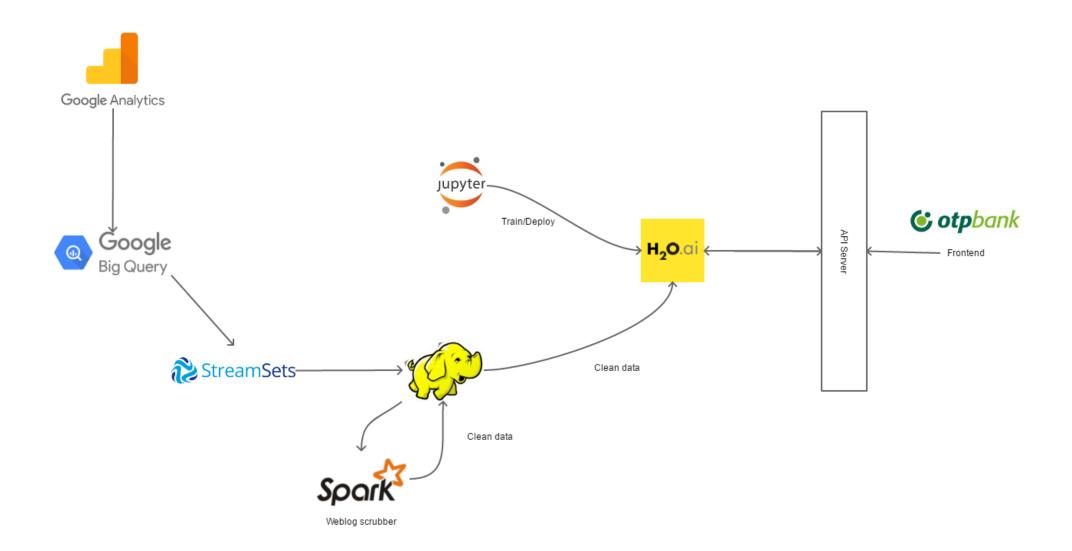
OTP Faktoring DWH





Recommendation Engine







Q&A

Many thanks for your attention!

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