

Smart computing



Do you know how fast it's possible to compute **the square** of a number having **5** as the last digit?

Take the last digit 5 away

Multiply this number (3) by a number that's larger by ONE (4 in this case)

Write 25 to the end of the result

$$35^2 \Rightarrow 3 \mid 5 \Rightarrow 3 * 4 \mid 25 \Rightarrow$$

1225

$$65^2 \Rightarrow 6 \mid 5 \Rightarrow 6 * 7 \mid 25 \Rightarrow$$

4225

$$75^2 \Rightarrow 7 \mid 5 \Rightarrow 7 * 8 \mid 25 \Rightarrow$$

5625

105²

$$105^2 \Rightarrow 10 \mid 5 \Rightarrow 10 * 11 \mid 25 \Rightarrow$$

11025

Smart computing – what is it about?

New generation of computing



Let's build a smarter planet.

Focused on BUSINESS users and their NEEDS

More RESPONSIBILITIES moved from IT to BUSINESS

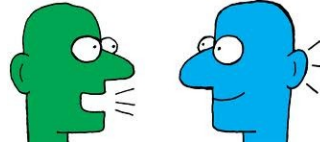
IT is still needed !

Business user



IT employee

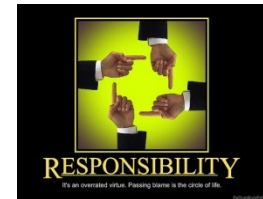
- Communication issue
 - Has to be solved at first



- Business users don't want to depend on IT



- Business users are not ready for responsibility



- IT employees don't want to give the responsibility
 - Fear of unimportance



- Solution:
 - Do would you are good at



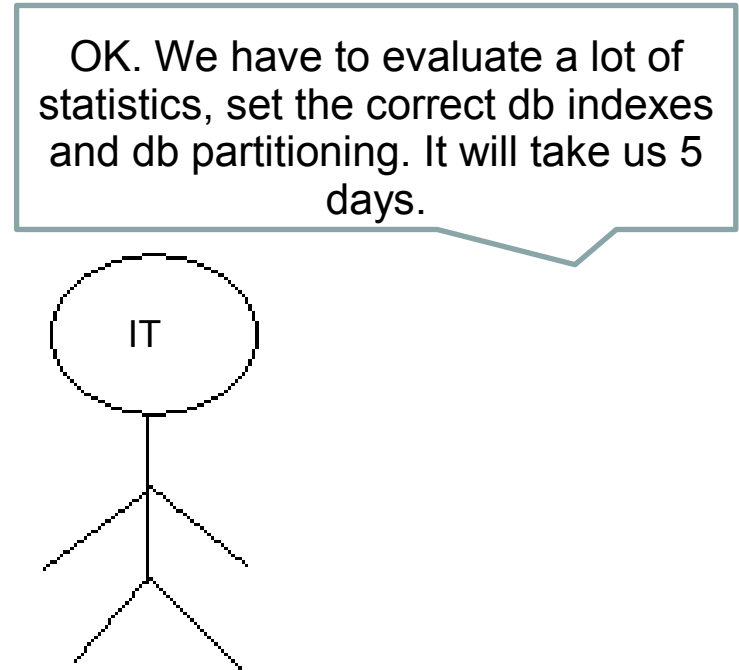
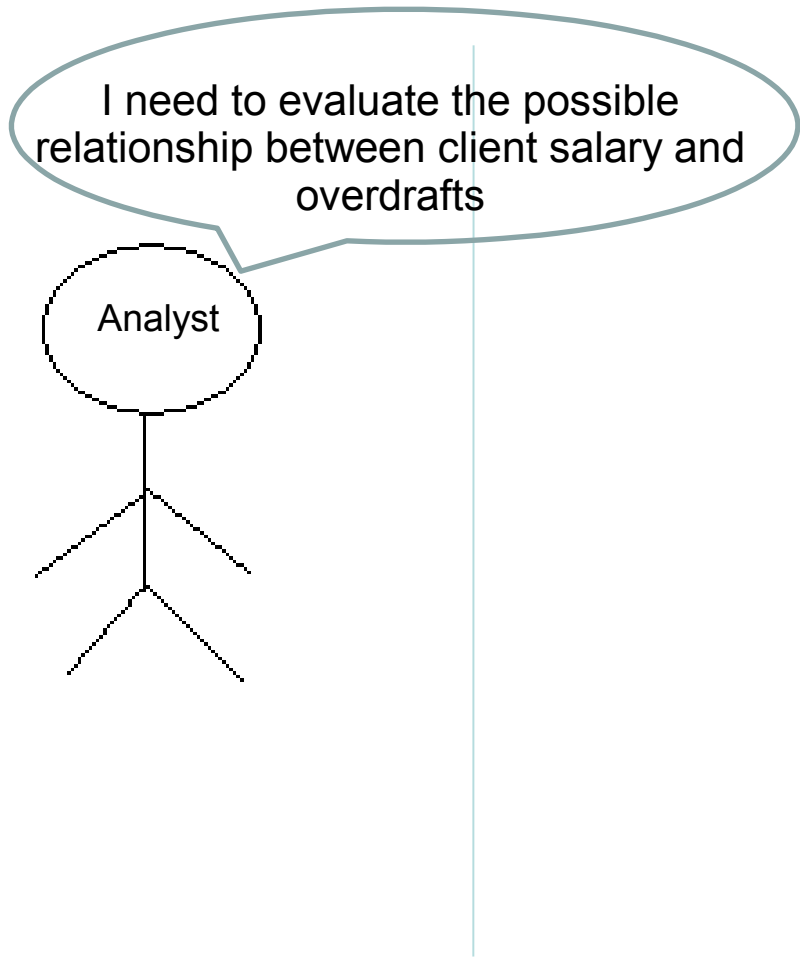
- Business users
 - Would like to work with
 - Terms and Relations they understand
 - Don't want to work with IT artifacts

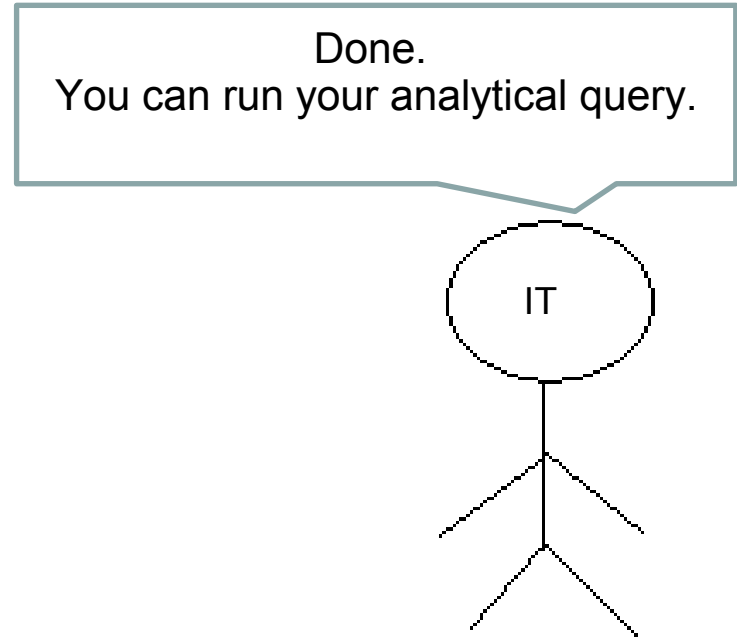
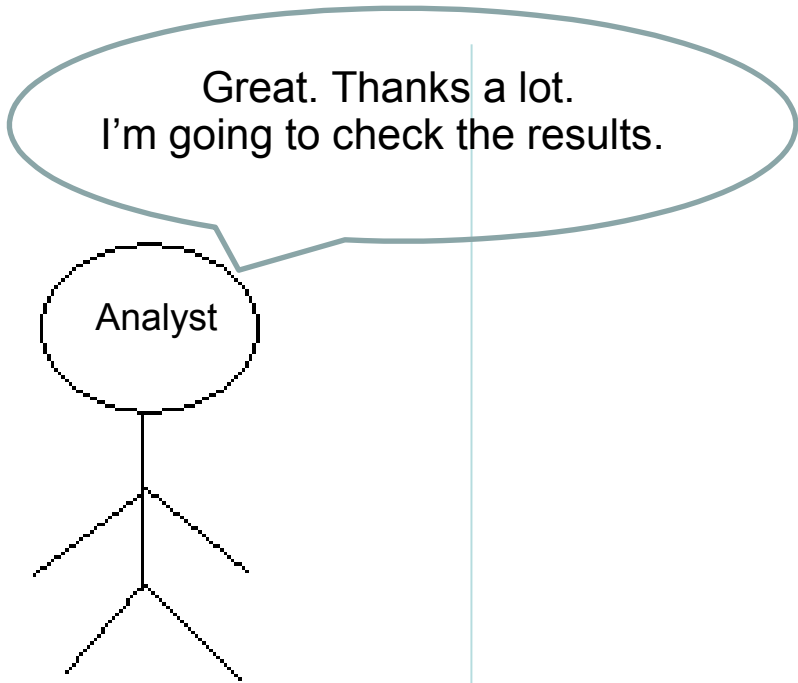
A56X7T8					
COL001	COL002	COL003	COL004	COL005	COL006
1000000	mpavlik	10000	Martin	Pavlik	LOPATA
1000001	fdratek	13000	František	Drátek	LOPATA
1000002	jvomacka	15000	Josef	Vomáčka	GEN_MNG

DUY745AS				
COL001	COL002	COL003	COL004	COL005
1000000	Antonin	Pavlik	Tonda	10.3.2008
1000000	Jan	Pavlik	Honza	10.3.2009
1000000	Filoména	Zelená	Fila	10.3.2003
1000000	Petra	Pavliková	Petrášek	10.3.2011
1000002	Jana	Vomáčková	Janička	11.5.2008
1000002	Adéla	Vomáčková	Karel	3.9.2011

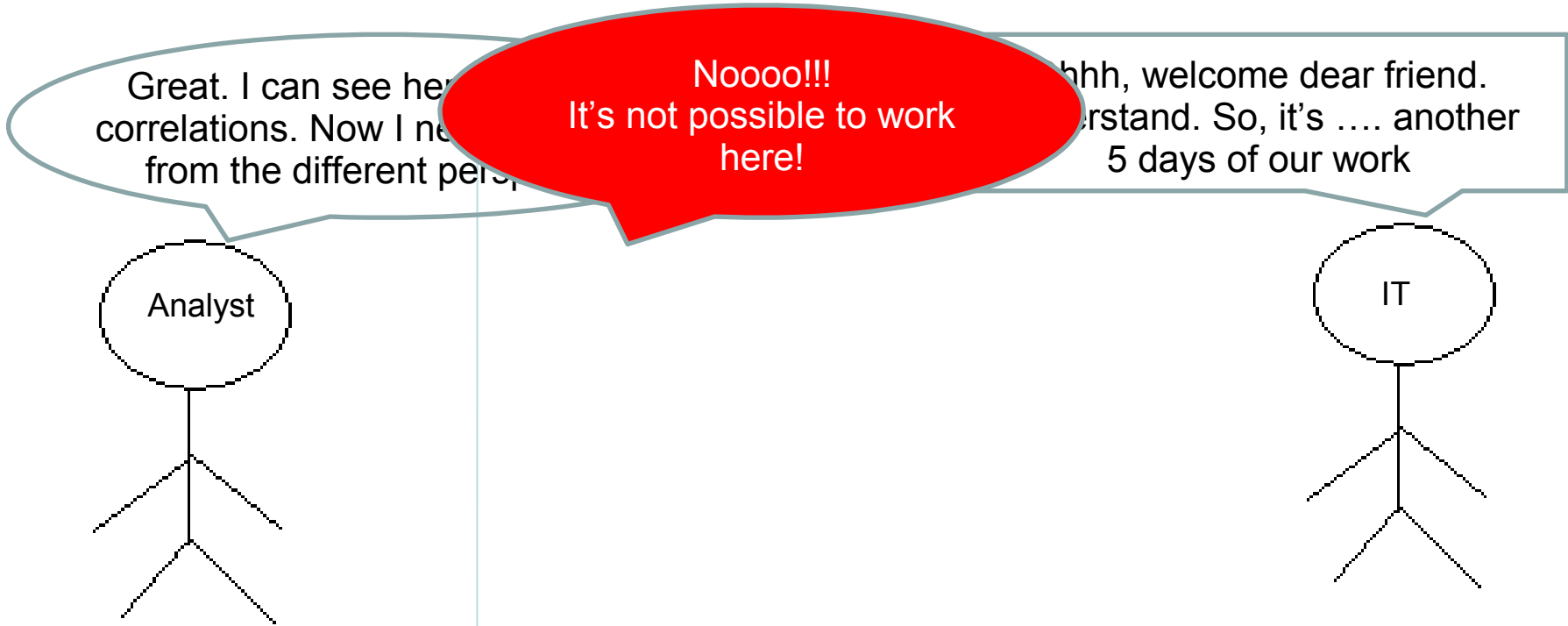


- Business users
 - Need flexibility
 - Add / Remove / Modify:
 - Parameters
 - Business rules
 - Run Ad-hoc queries / analysis





After 5 days ...



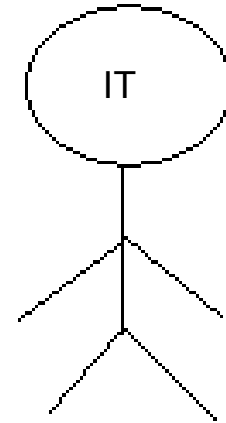
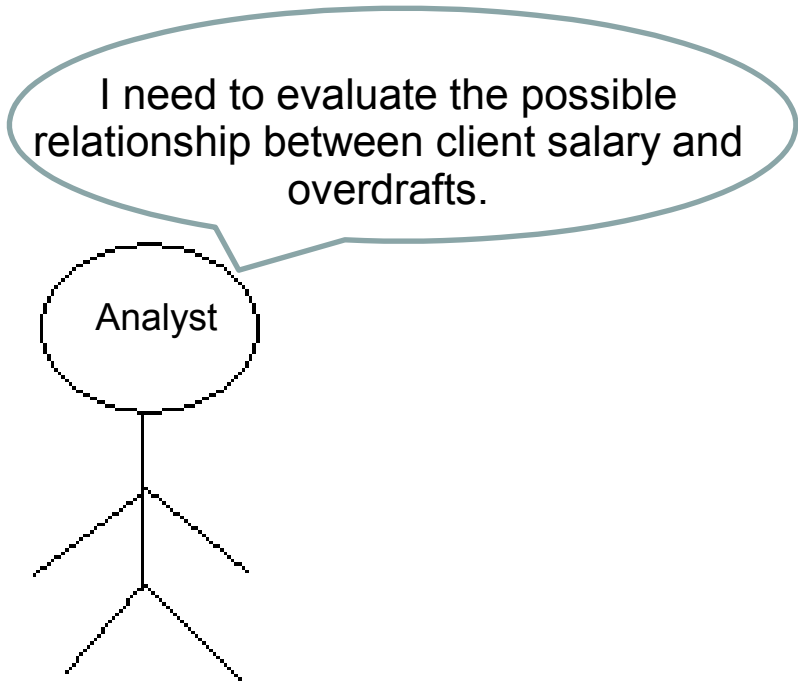
After 10 minutes ...

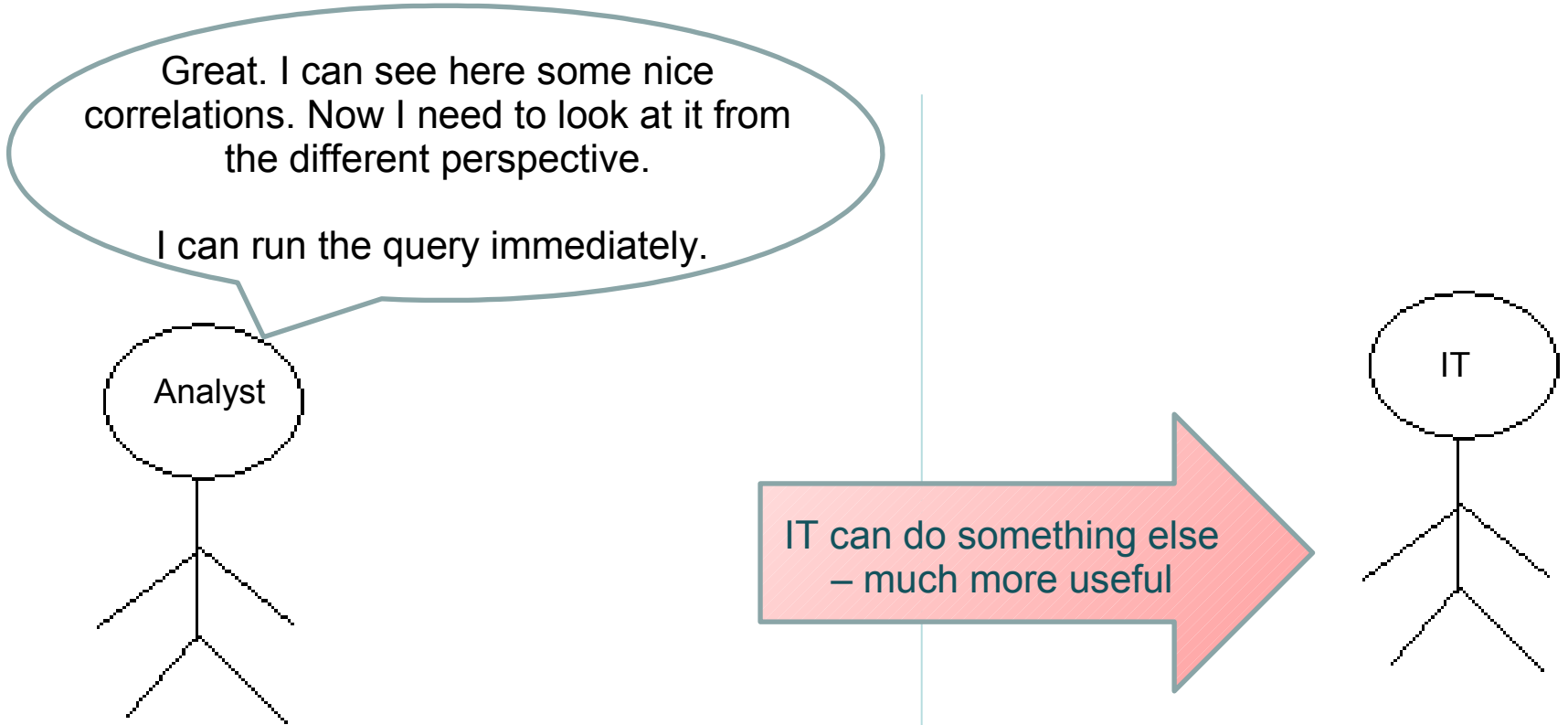
And now with a **smarter** solution

IBM PureData System for
Analytics

powered by Netezza





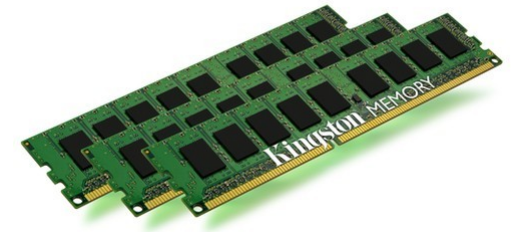


After 12 minutes ...

How to achieve this **smarter** behavior?

▪ In-memory technologies

- + unbeatable **speed**
 - unbeatable **price**
- ⇒ UP TO 5 TB of data



▪ Data temperaturing

- + - reasonable speed
- - unpredictable for ad-hoc ⇒ Constant analysis



▪ Massive parallelism and special HW

- Reasonable speed
- + **for every analytic query** (constant / ad-hoc)



PureData System for Analytics



Transforms the User Experience

- ✓ Purpose-built analytics engine
- ✓ Integrated database, server and storage
- ✓ Standard interfaces
- ✓ Low total cost of ownership

Speed: 10-100x faster than traditional system*

Simplicity: Minimal administration and tuning

Scalability: Peta-scale user data capacity

Smart: High-performance advanced analytics

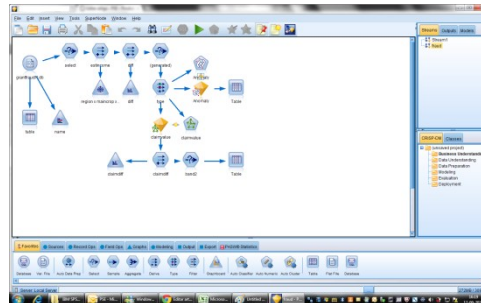
* Based on IBM customers' reported results. "Traditional custom systems" refers to systems that are not professionally pre-built, pre-tested, and optimized. Individual results may vary.

The power of analytics

- What to analyse and how
 - Subject matter experts



- Where to analyse and how
 - Powerful analytic tooling



- Where to run the computation



It doesn't matter how many resources you have.



If you don't know how to use them,
it will never be enough.