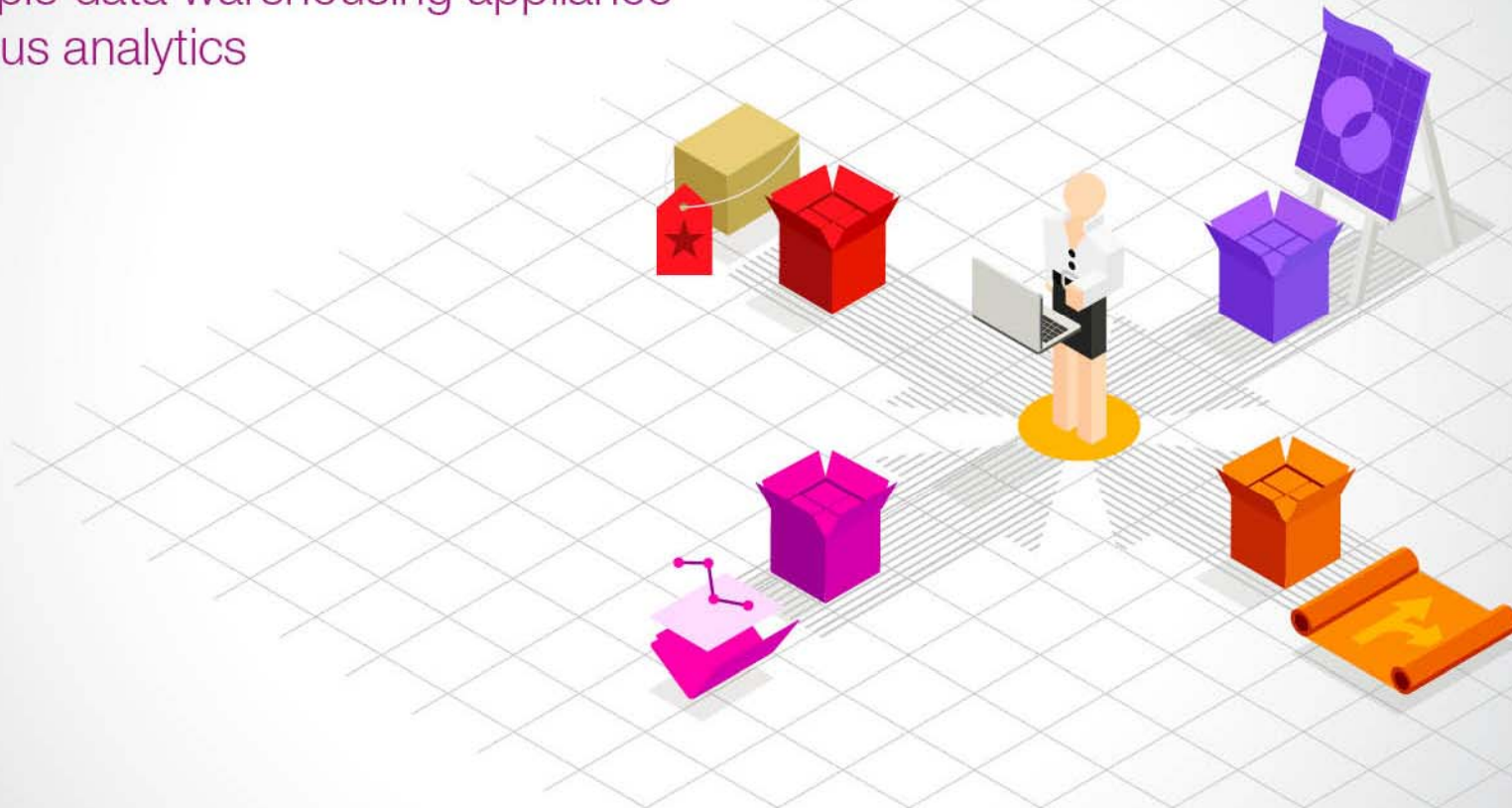


# IBM Netezza

The simple data warehousing appliance  
for serious analytics



## IBM® Netezza 101

Russell Nash

Tuesday 22 November, 2011

# The Good Old Days!



Server



Database



Storage



Administrators

## Appliance

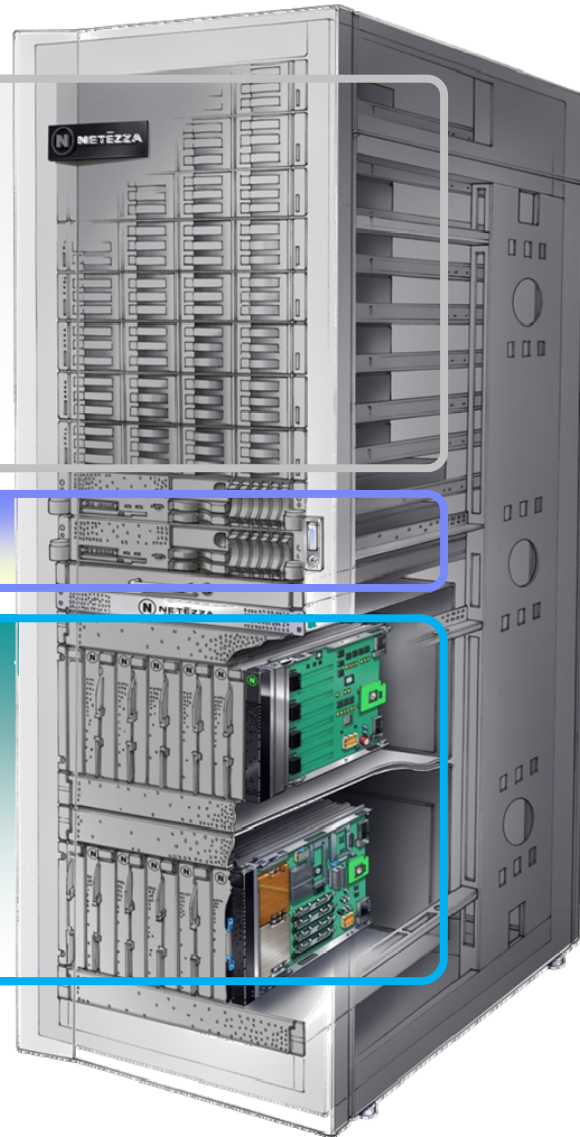
- Dedicated device
- Optimized for purpose
- High performance
- Complete solution
- Standard interfaces
- Simple installation
- Simple operation
- Low cost

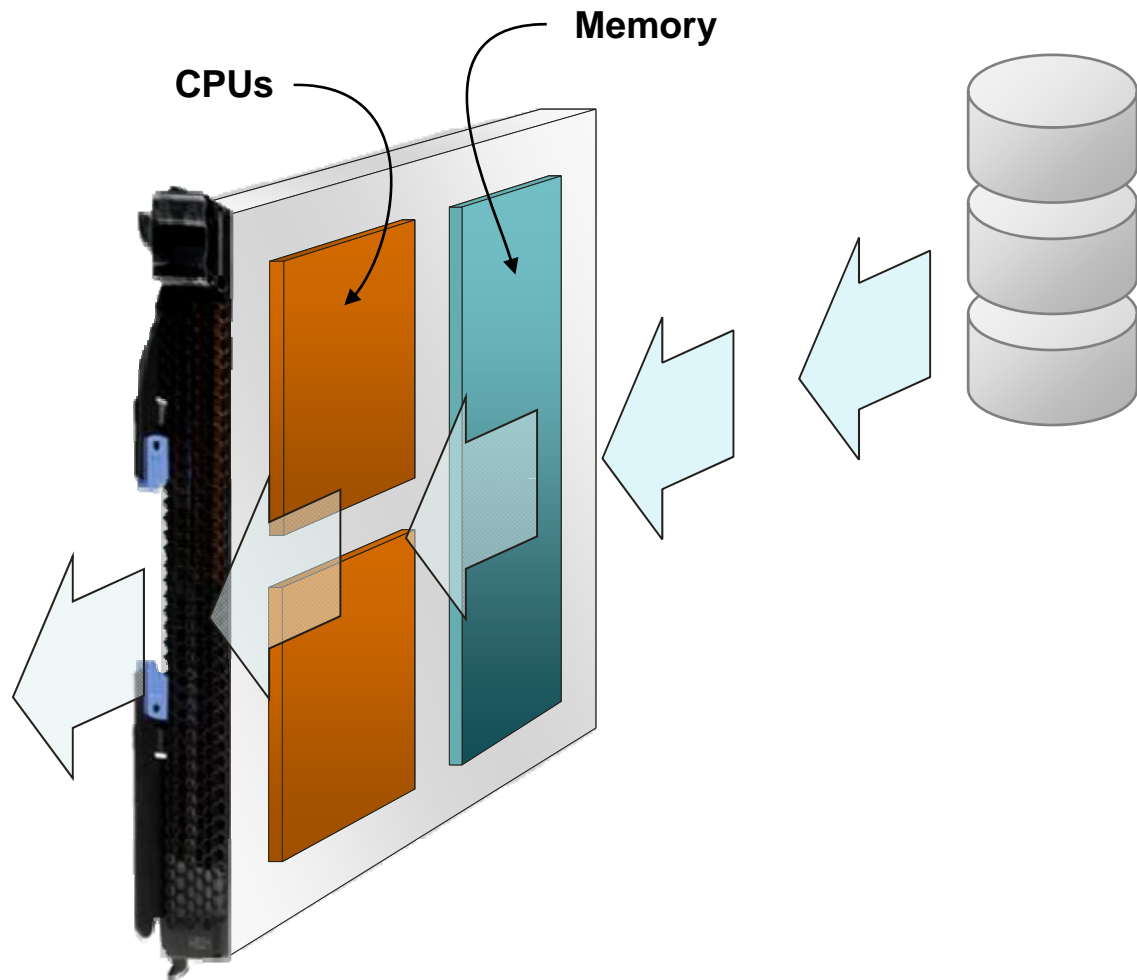


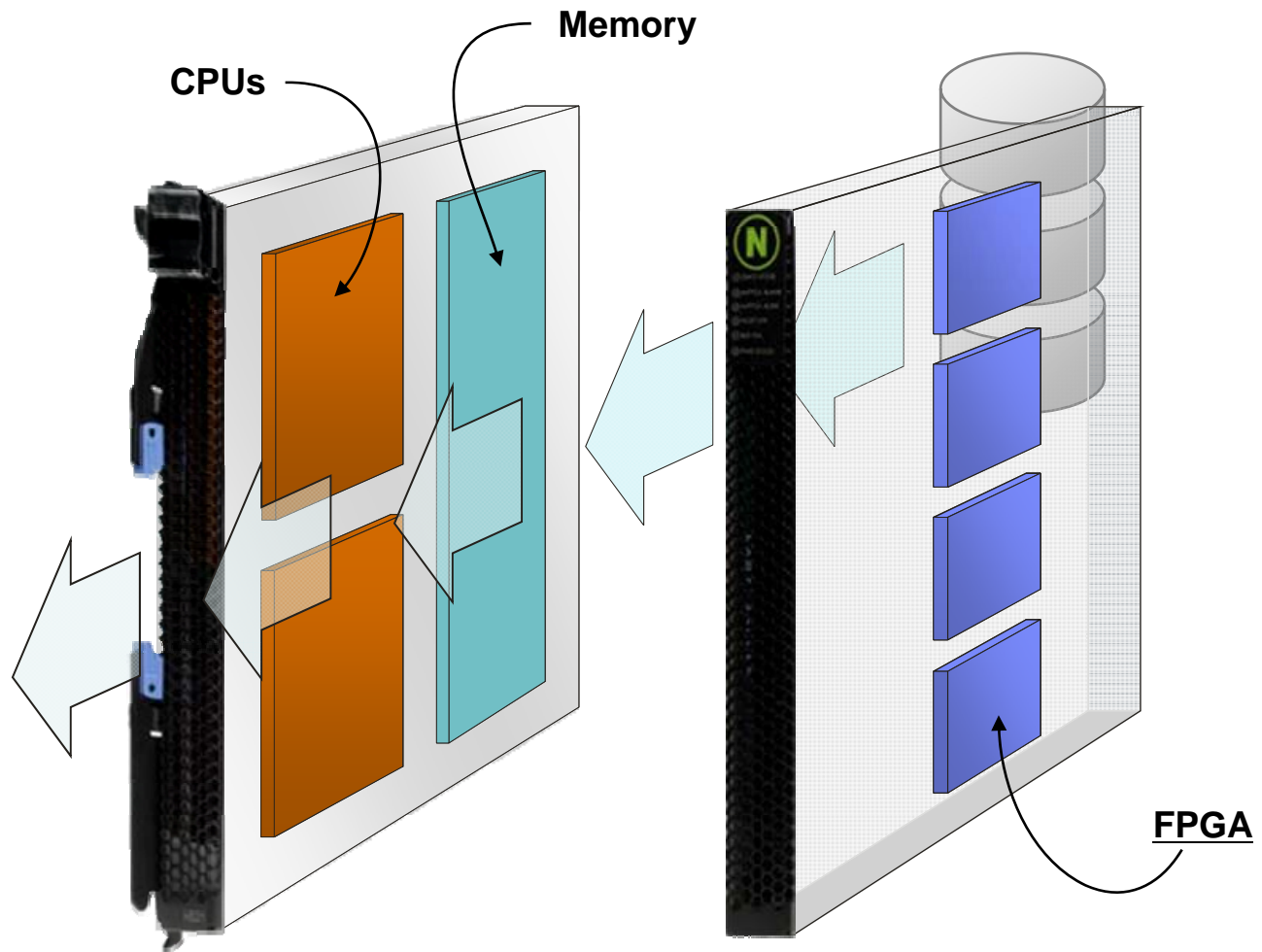
**Disk Enclosures**

**SMP Hosts**

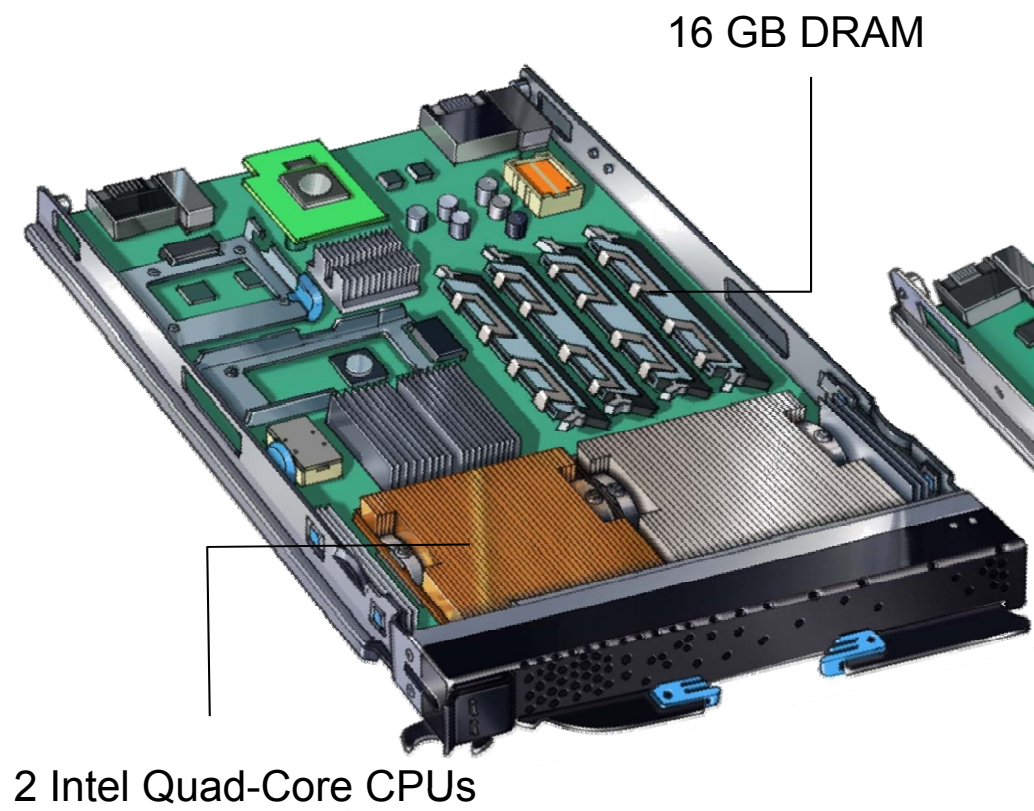
**Snippet  
Blades™  
(S-Blades™)**







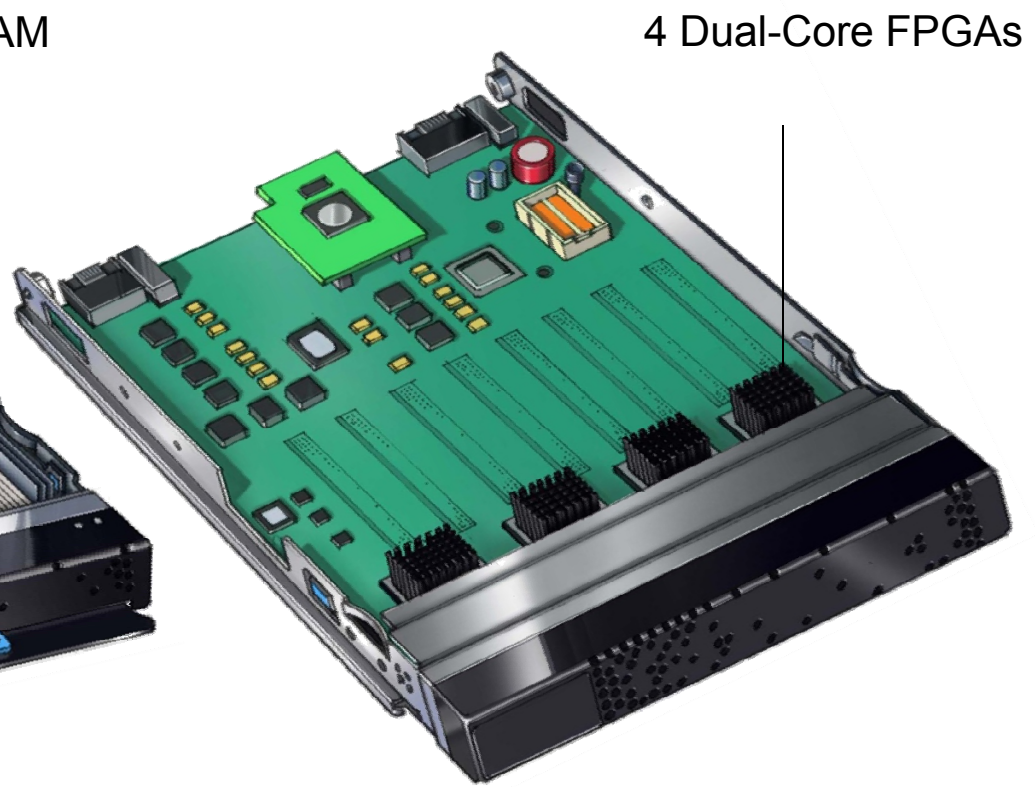




16 GB DRAM

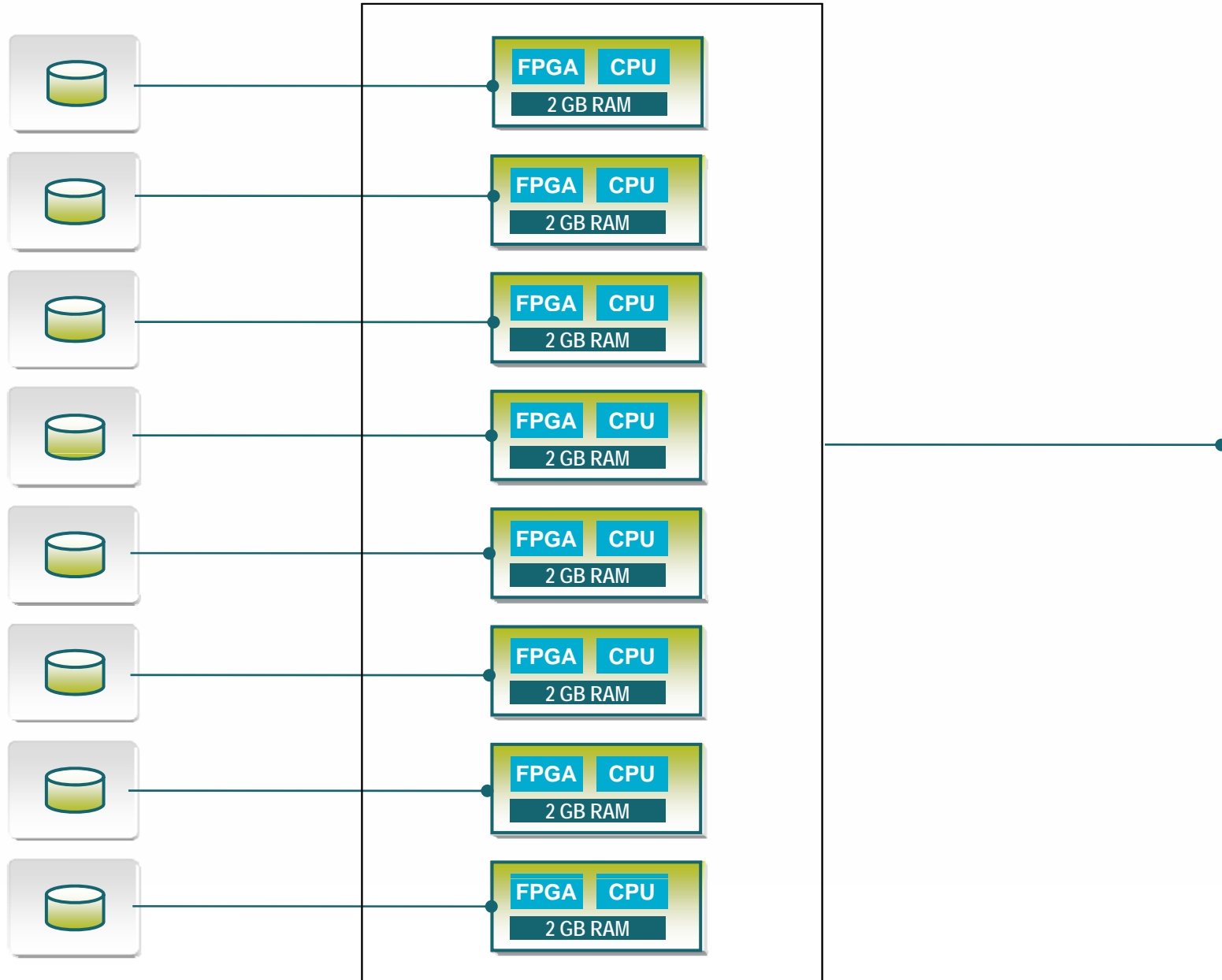
2 Intel Quad-Core CPUs

IBM BladeCenter Server

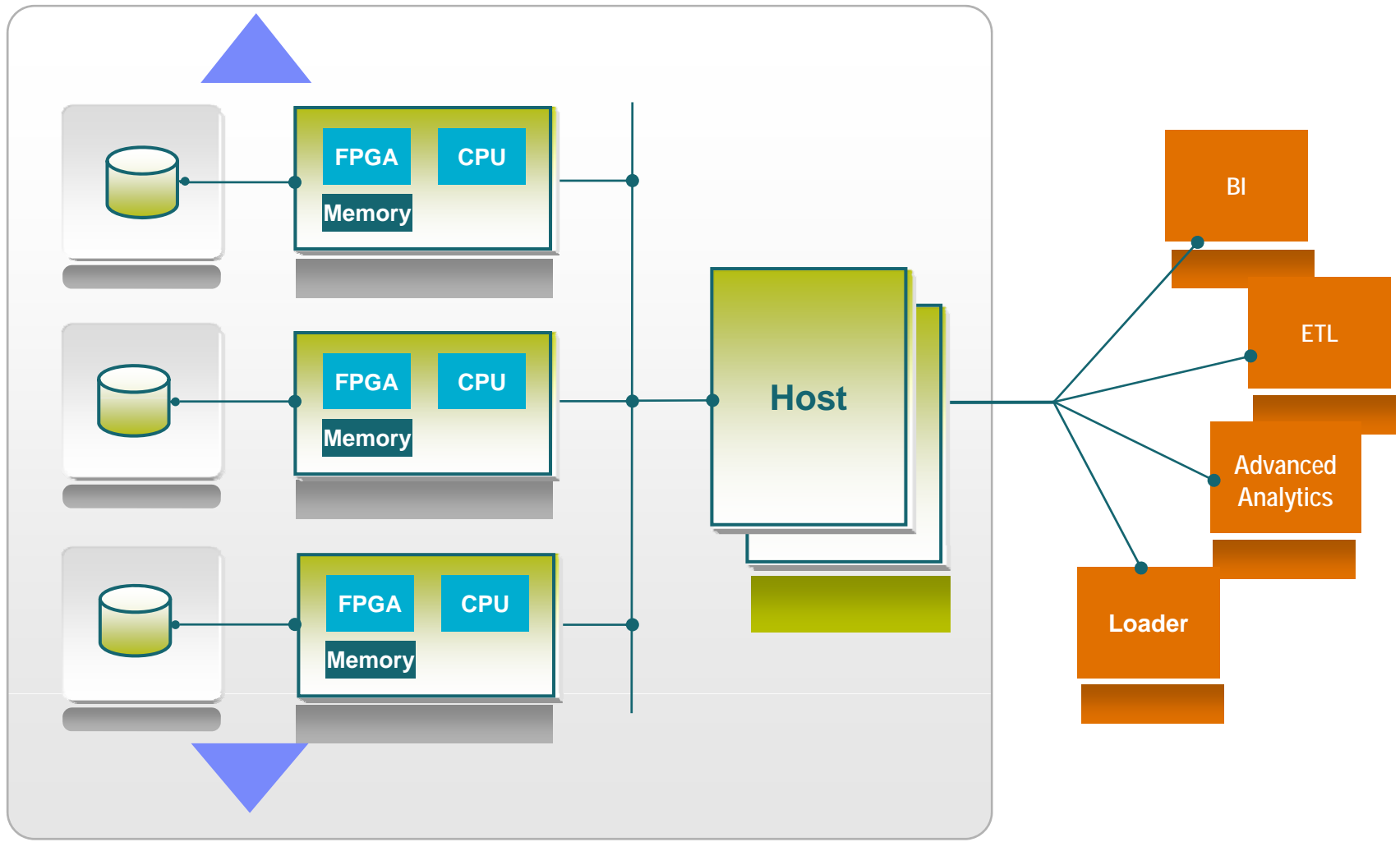


4 Dual-Core FPGAs

Netezza DB Accelerator







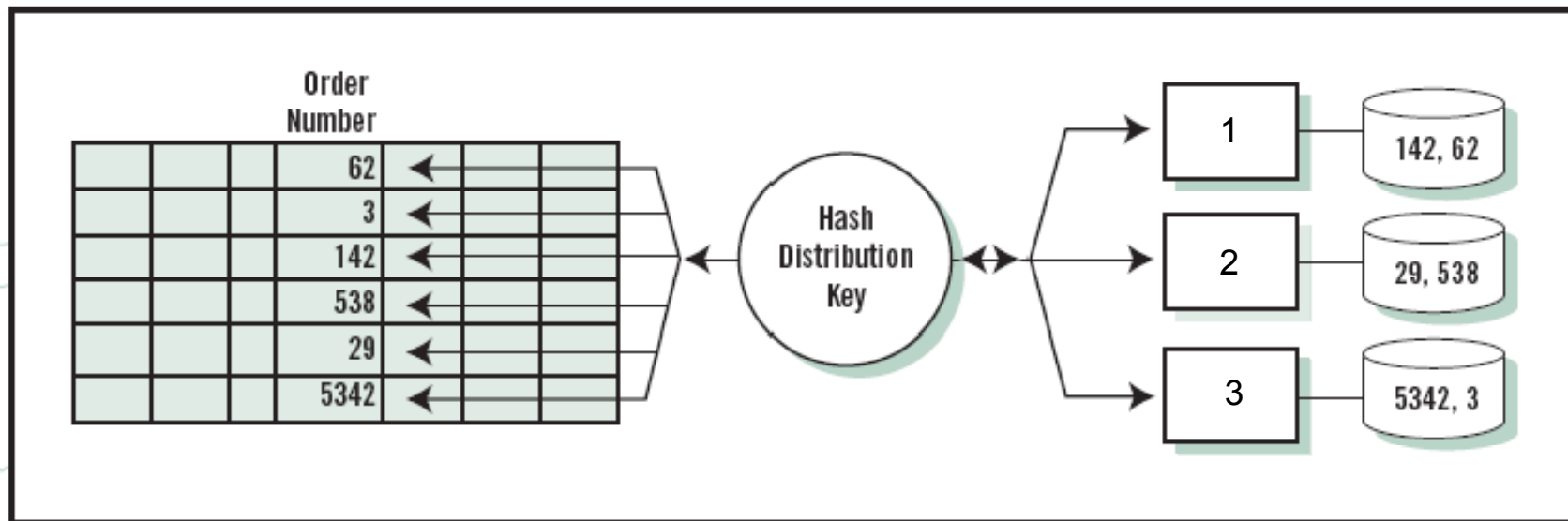
# DDL

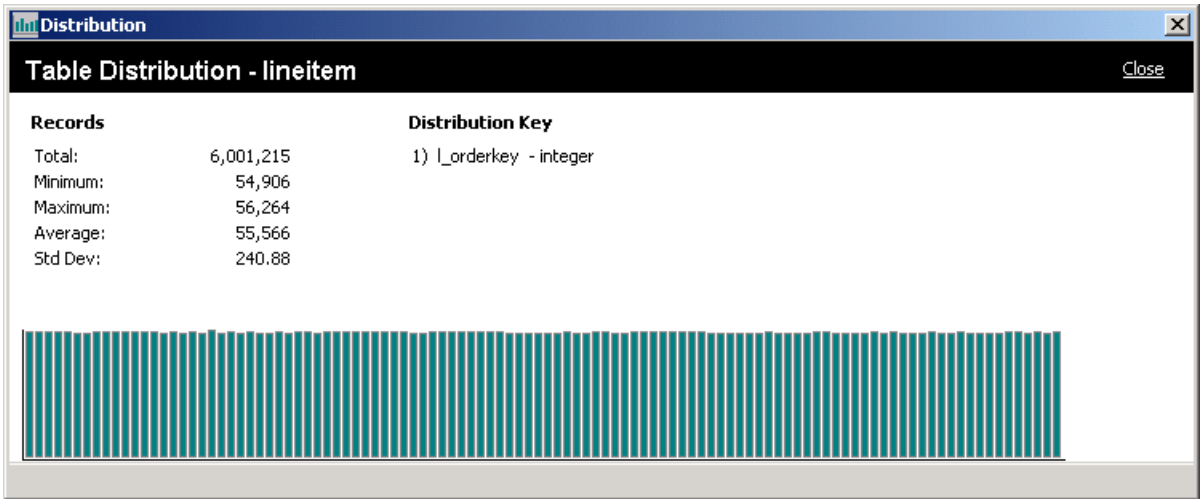
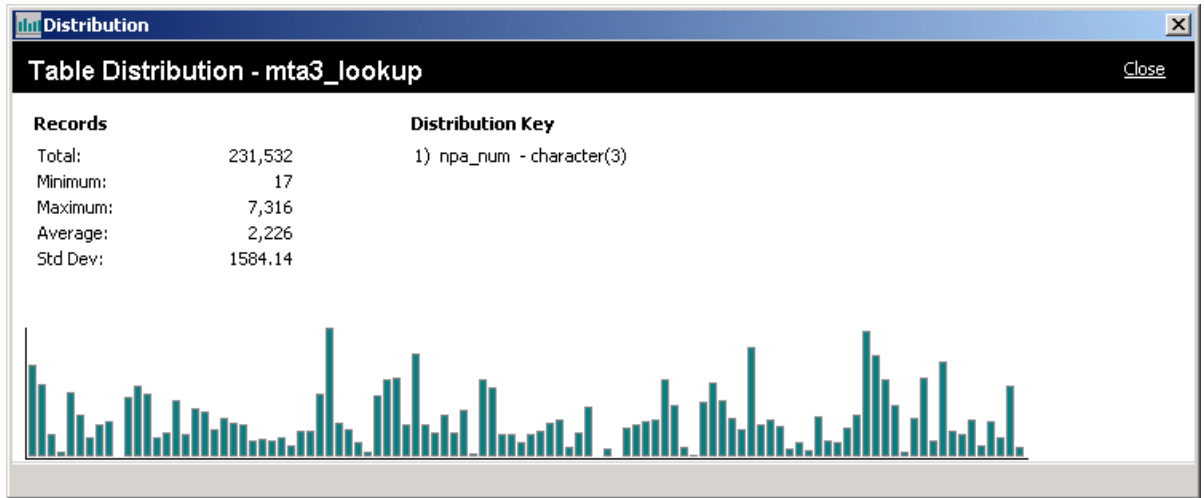
CREATE TABLE ORDERS

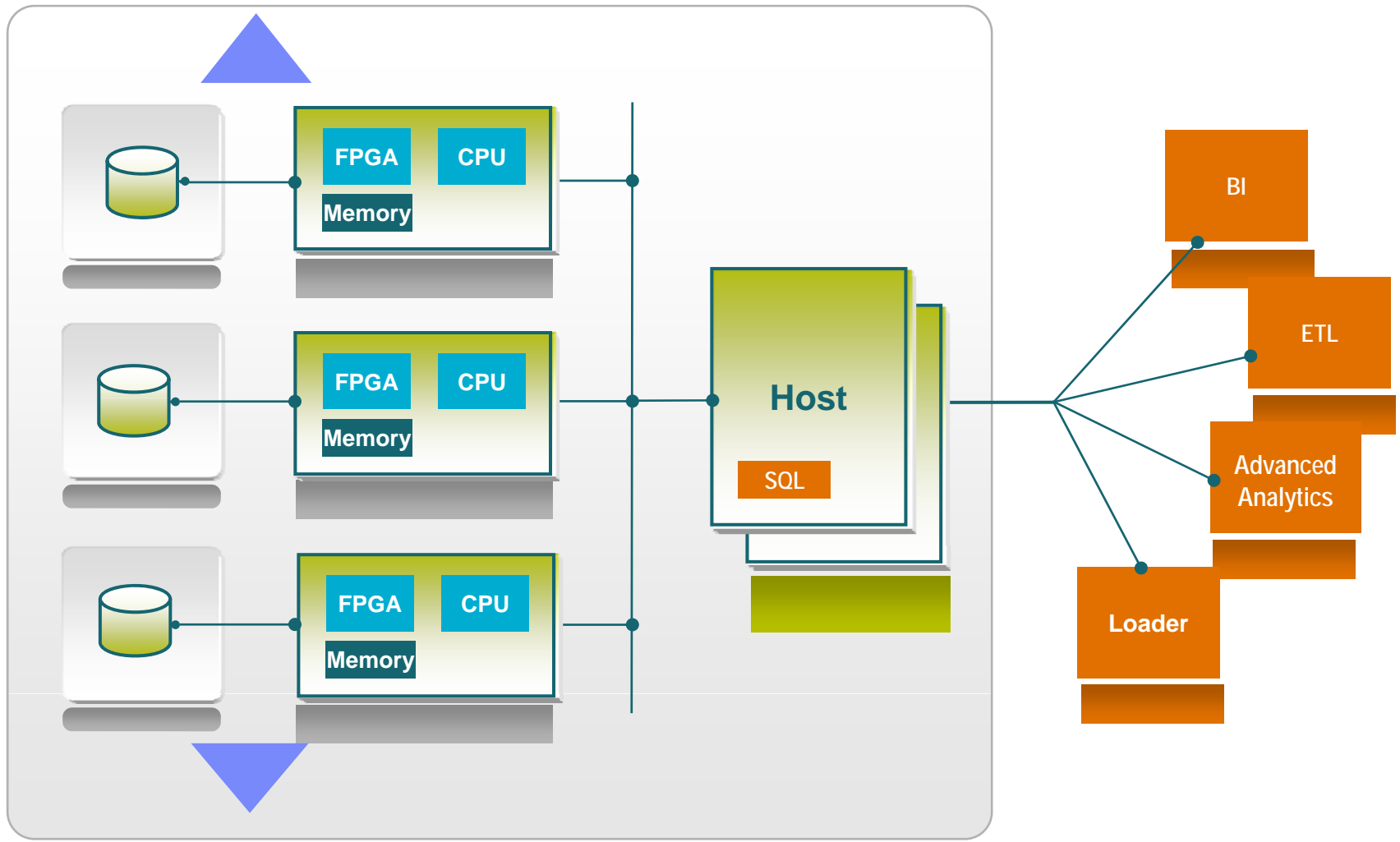
```
(  ORDER_NUMBER          BIGINT          NOT NULL ,
   ORD_DATE              DATE              NOT NULL ,
   PROD_CATEGORY        VARCHAR(6)         ,
   STORE                 VARCHAR(6)         ,
   CUSTOMER              INTEGER,
   UNITS                 INTEGER,
   AMOUNT                NUMERIC(18,2)
)
```

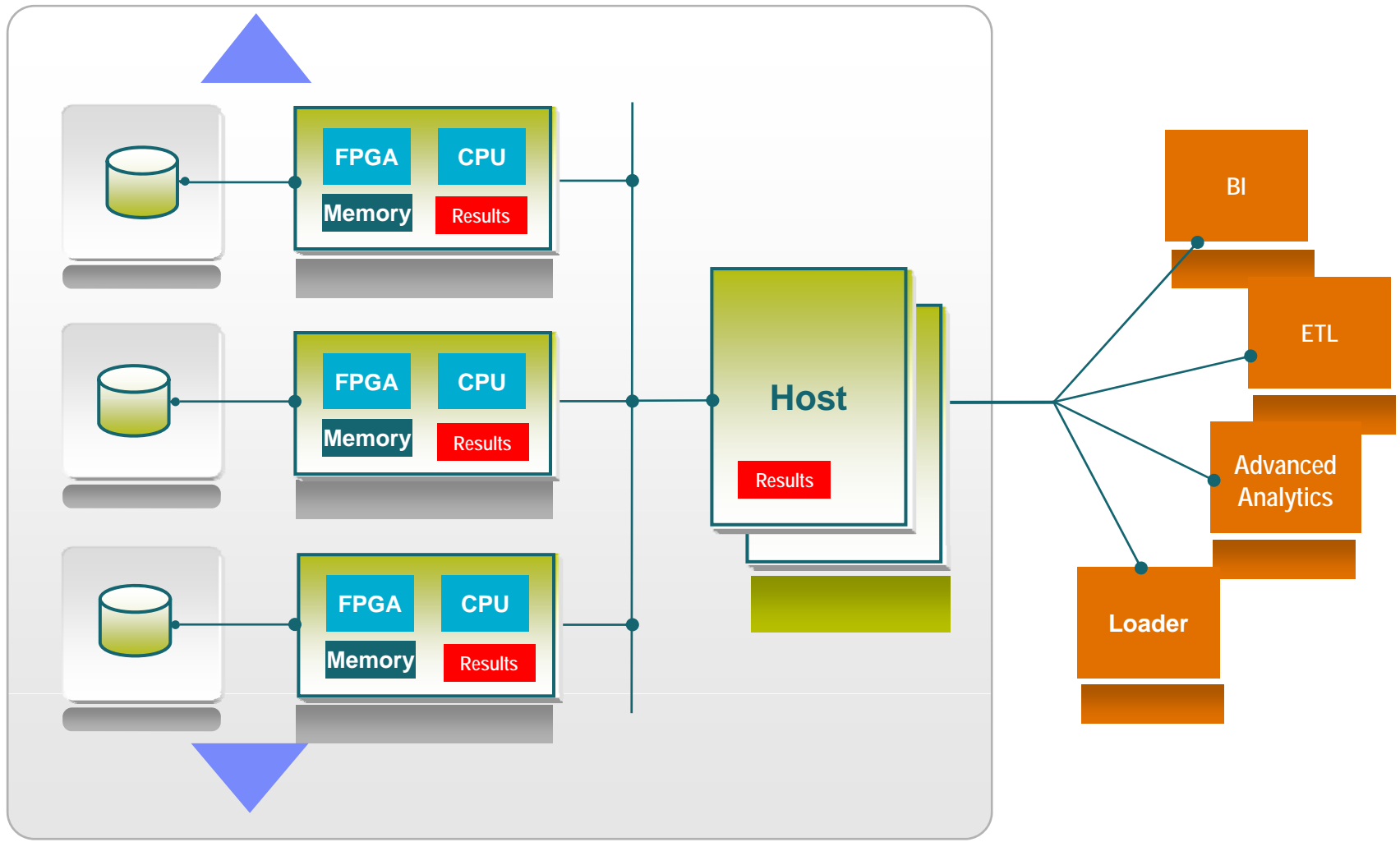
DISTRIBUTE ON (ORDER\_NUMBER)

# Distribution



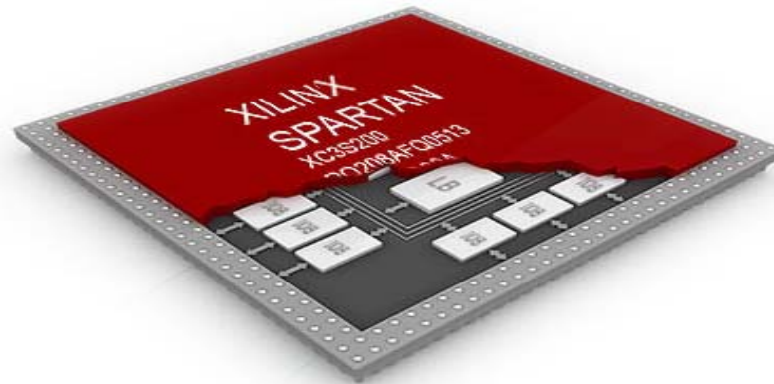




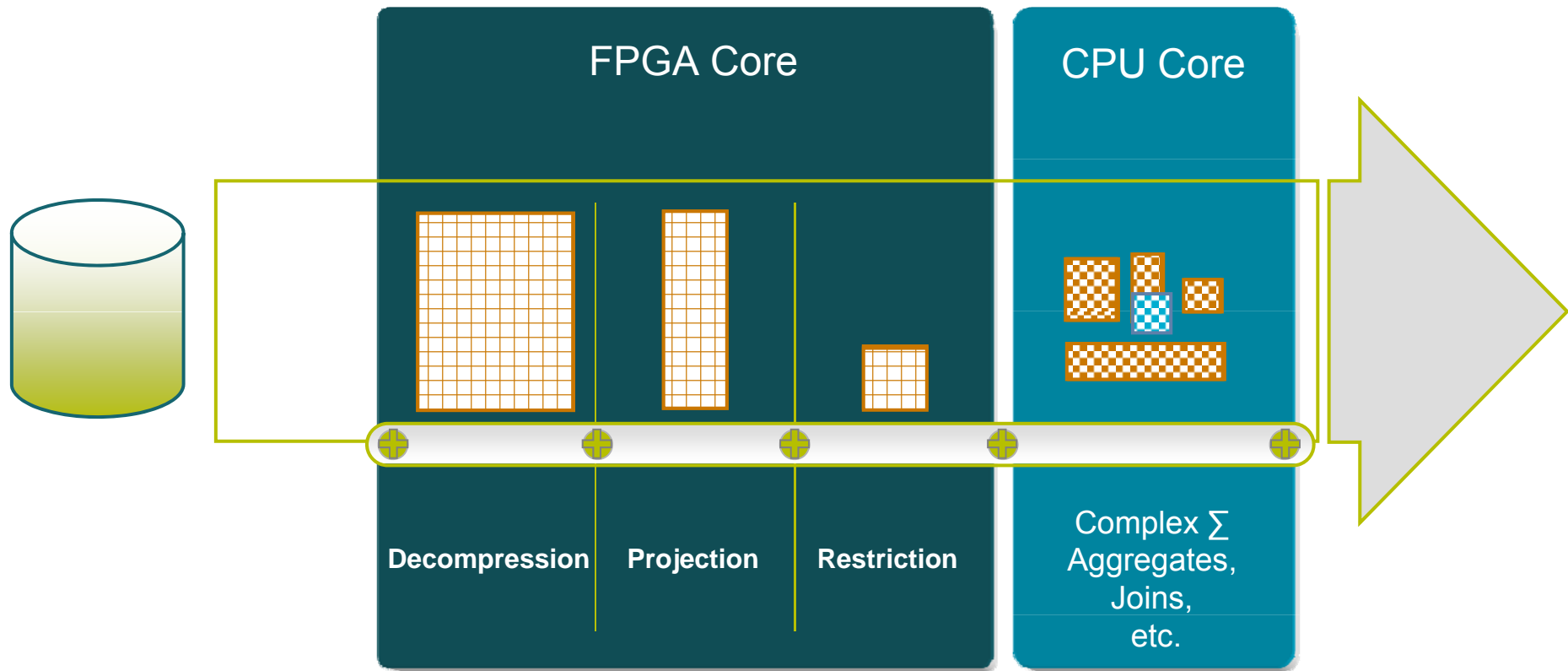




# Field-programmable gate array (FPGA)



```
Select gender, age, count(*)  
From MultiBillionRowTable  
Where BirthDate < '01/01/1967'  
And PostCode like '20%'  
Group by gender, age;
```



# Performance

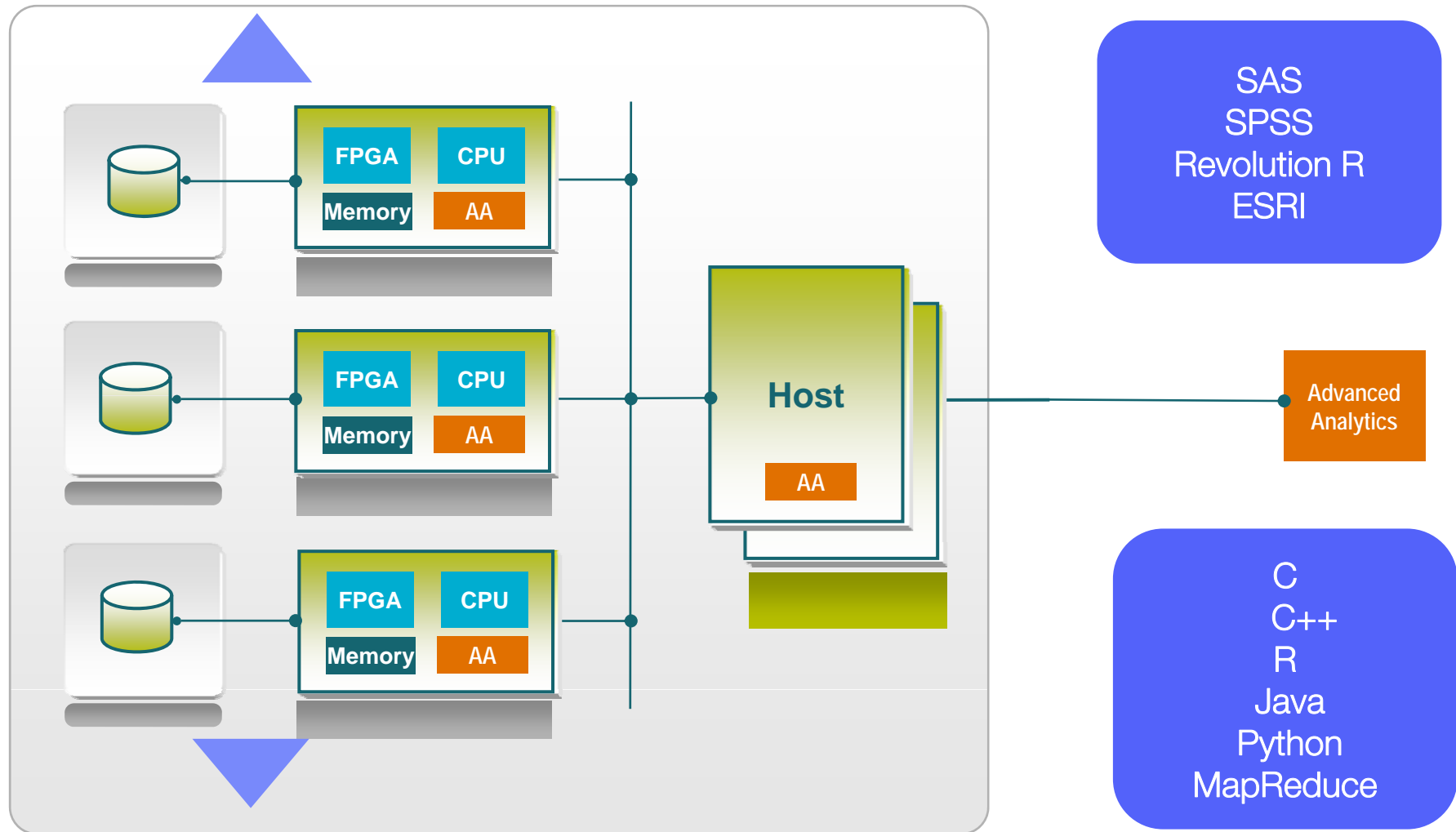
“[Expletive] this is fast. “

- Australian Government Customer

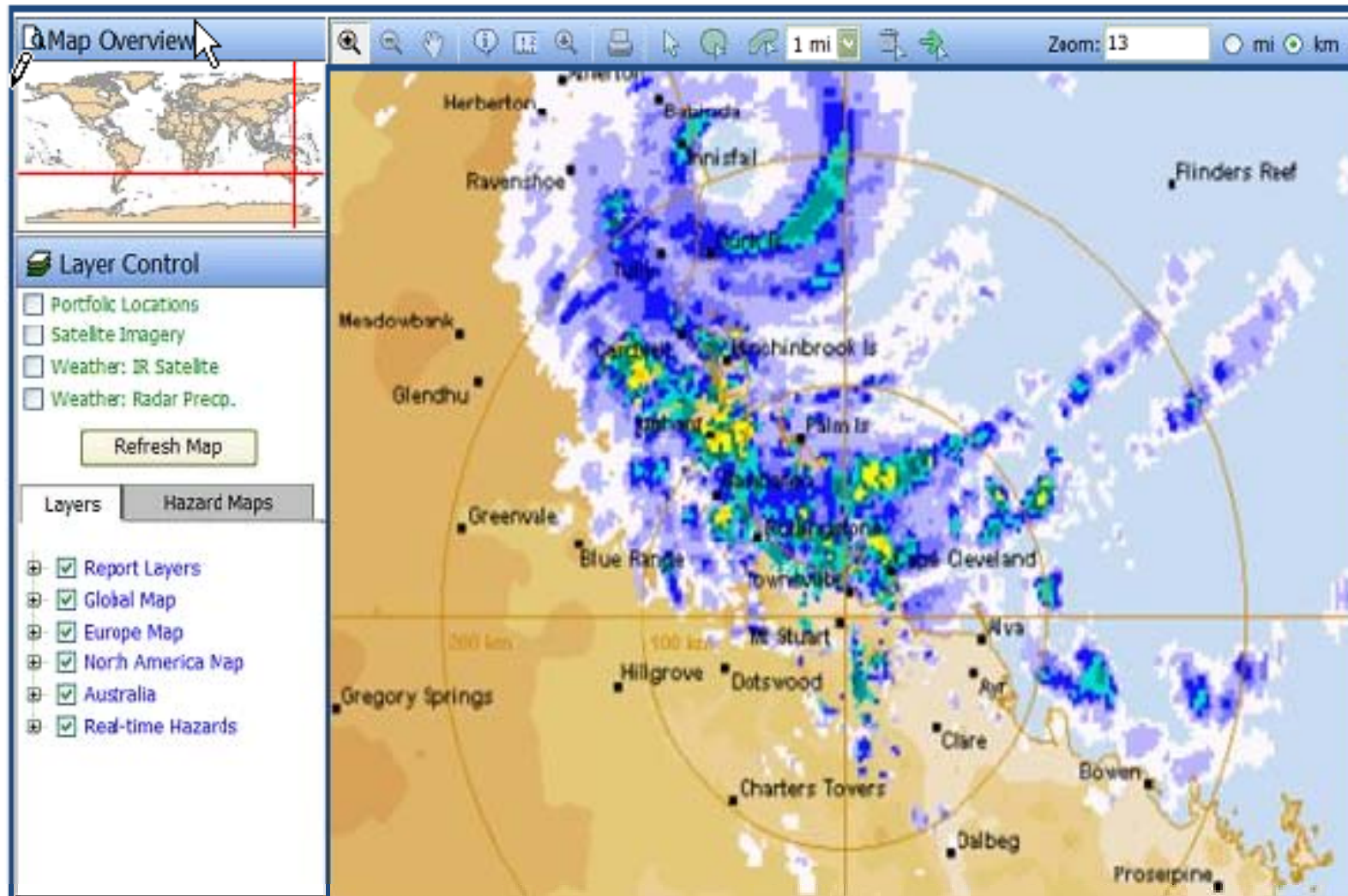
## Simplicity

<b>Telecom Call Detail Record FACT (6 billion rows)</b>	<b>Incumbent Object Count</b>
Tables	1
Indexes	12
Table Partitions	47
Index Partitions	564
Table Partitions tablespaces	47
Index Partitions tablespaces	47
Table Data Files	170
Index Data Files	122
<b>TOTAL</b>	<b>1,010</b>

# Advanced Analytics



# Spatial





## Appliance family



**Netezza 100**

Development &  
Test System

up to 10 TB



**Netezza 1000**

Data Warehouse  
High-Performance  
Analytics

up to 1.5 PB



**High Capacity**

Queryable Archiving  
Backup/DR

up to 10 PB

# Netezza 1000 models



Model	3	6	12	24	... 48	... 120
Snippet Processors	24	48	96	192	384	960
Raw Capacity (TB)	8	16	32	64	128	320
Effective Capacity (TB)*	32	64	128	256	512	1280

\*: 4X compression assumed

