# 1º QlikDev Latino América

## Server Sizing

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# Agenda

- Questions to answer
- Hardware Scaling
- Factors that affect Performance
- Utilities to help

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# What are we trying to Answer?

- How much of a specific dataset can be analyzed?
- How many concurrent users?
- Based on the dataset and number of users what is the server size required?

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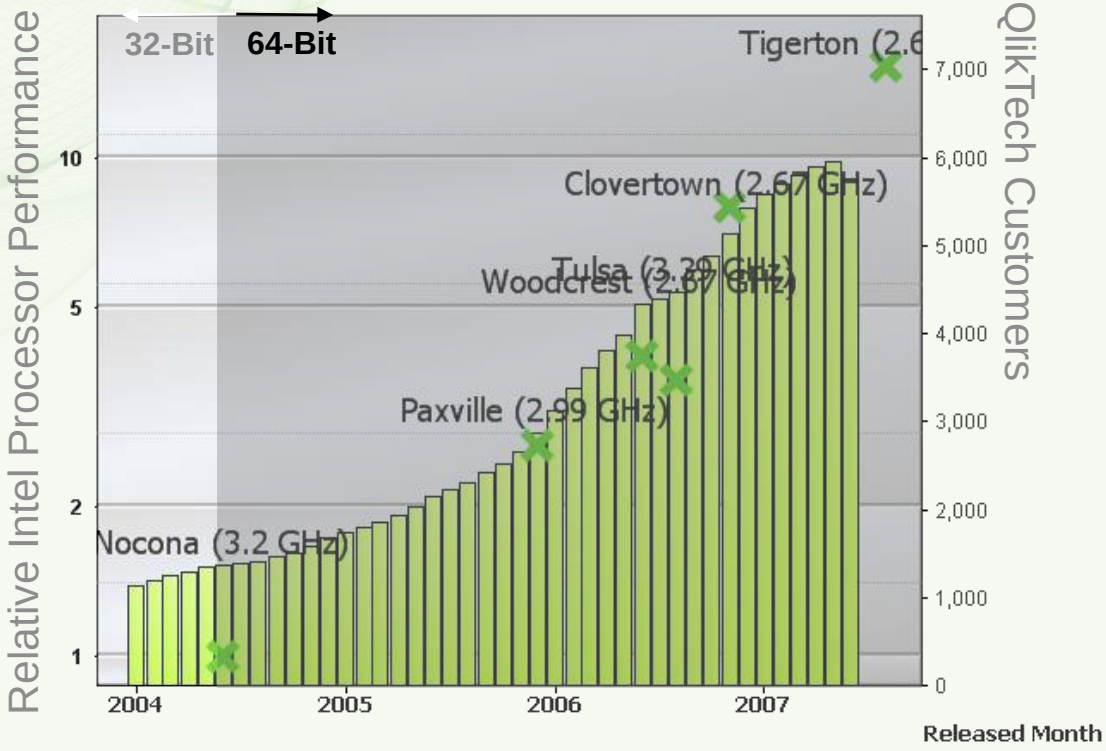
# The Platform Shift over time




- QlikView is uniquely positioned to benefit from the current hardware shift: Multi-core, 64-bit addressable memory
- Technology takes off when its: cheap, pervasive, and stable

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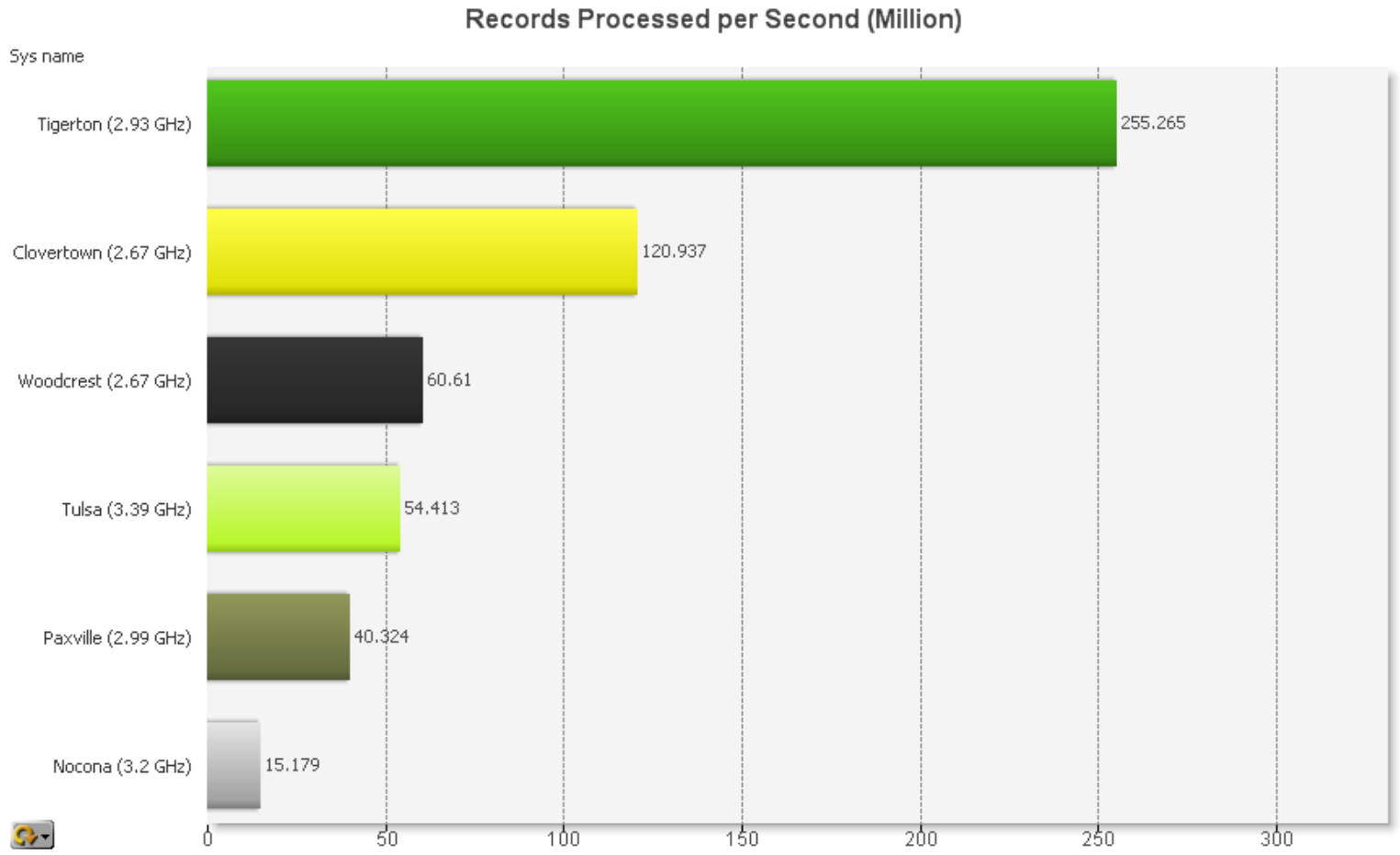
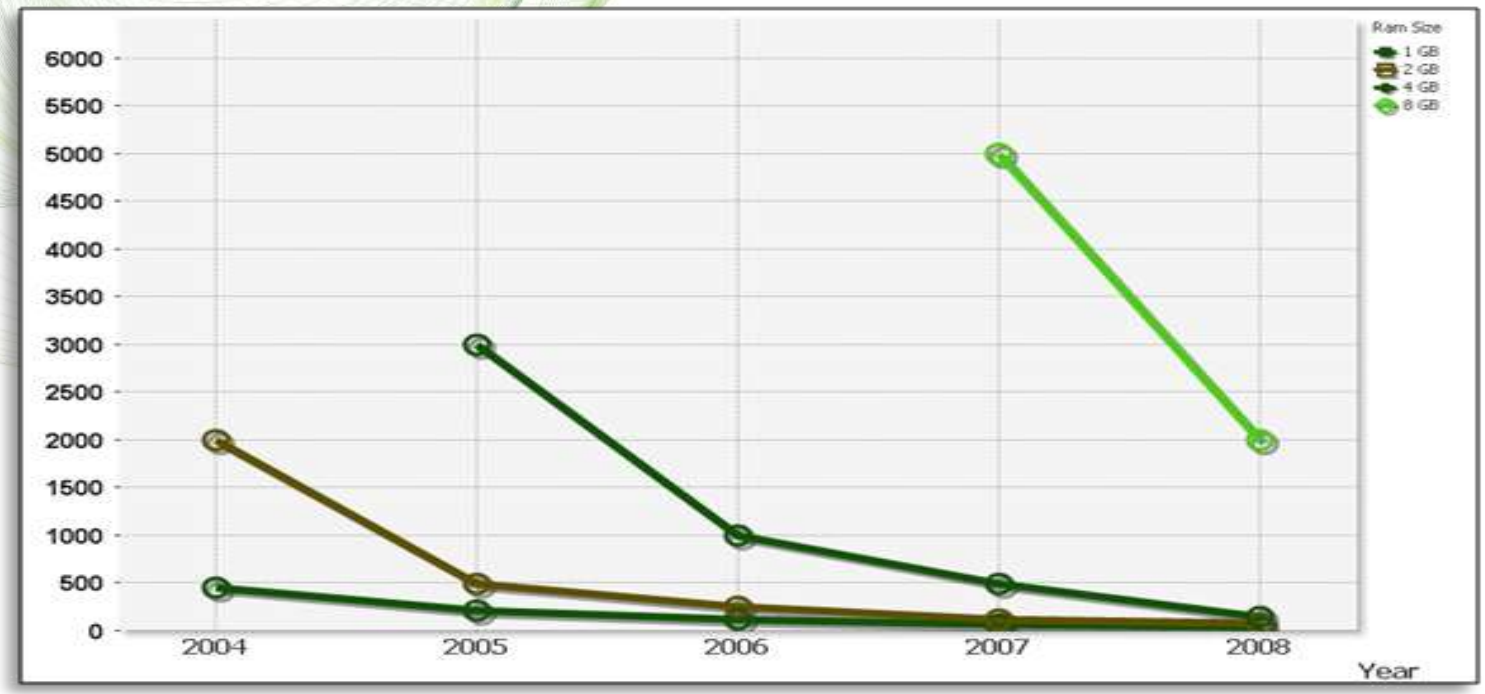
# On The Right Side of Moore's Law



# Perfect Scaling on multi-processor, multi-core hardware

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# The Impact of Best Practices on Sizing

- Well written data models out perform poor designs
- Design and hardware are interrelated.

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# The RAM factor

- Entire QVW loaded
- Virtual Memory is Slow
- Dedicate the server

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# The Processor Factor

- QlikView scales ~100%
- Calculations affected


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# The Hard Disk Space Factor

- Rarely an issue
- Drive speed
- Cheap

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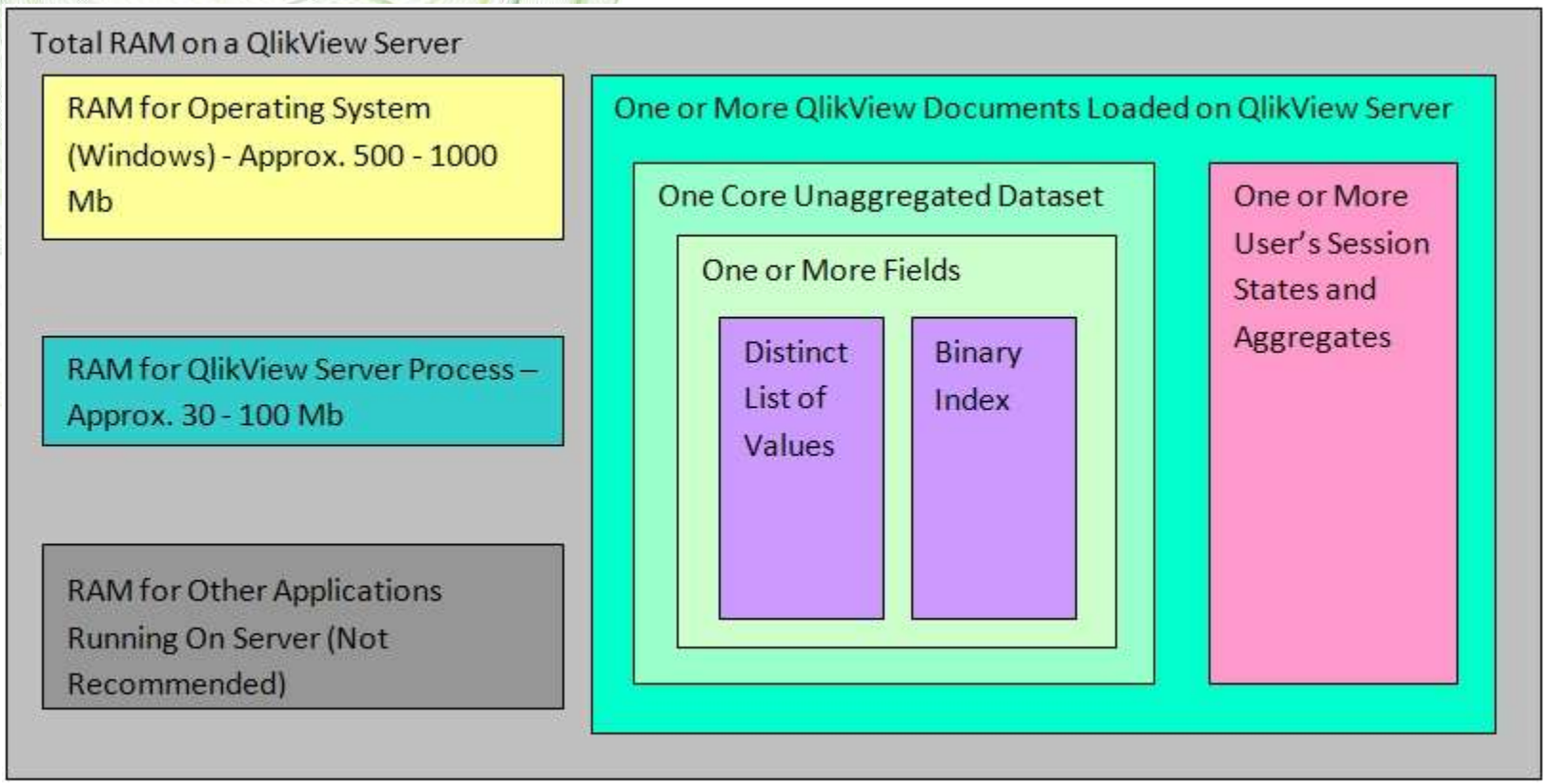
# How RAM is Used

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# The data

| Applications | A | B |
|---|---|---|
| File Size | 7,252,383 | 2,828,396 |
| File to Memory Ratio | 2.5 | 3.4 |
| Memory | 18,233,232 | 9,570,388 |
| Memory Per User | 7,352 | 33,612 |
| Fact Table Records | 540,151,959 | 236,314,172 |
| # Tables | 31 | 45 |
| # Fields | 117 | 284 |
| # Objects | 41 | 260 |

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# The data

| Applications | C | D |
|---|---|---|
| File Size | 3,542,617 | 3,637,201 |
| File to Memory Ratio | 2.0 | 1.6 |
| Memory | 6,995,868 | 5,872,648 |
| Memory Per User | 8,968 | 23,572 |
| Fact Table Records | 538,376,420 | 69,857,941 |
| # Tables | 8 | 1 |
| # Fields | 56 | 33 |
| # Objects | 25 | 185 |

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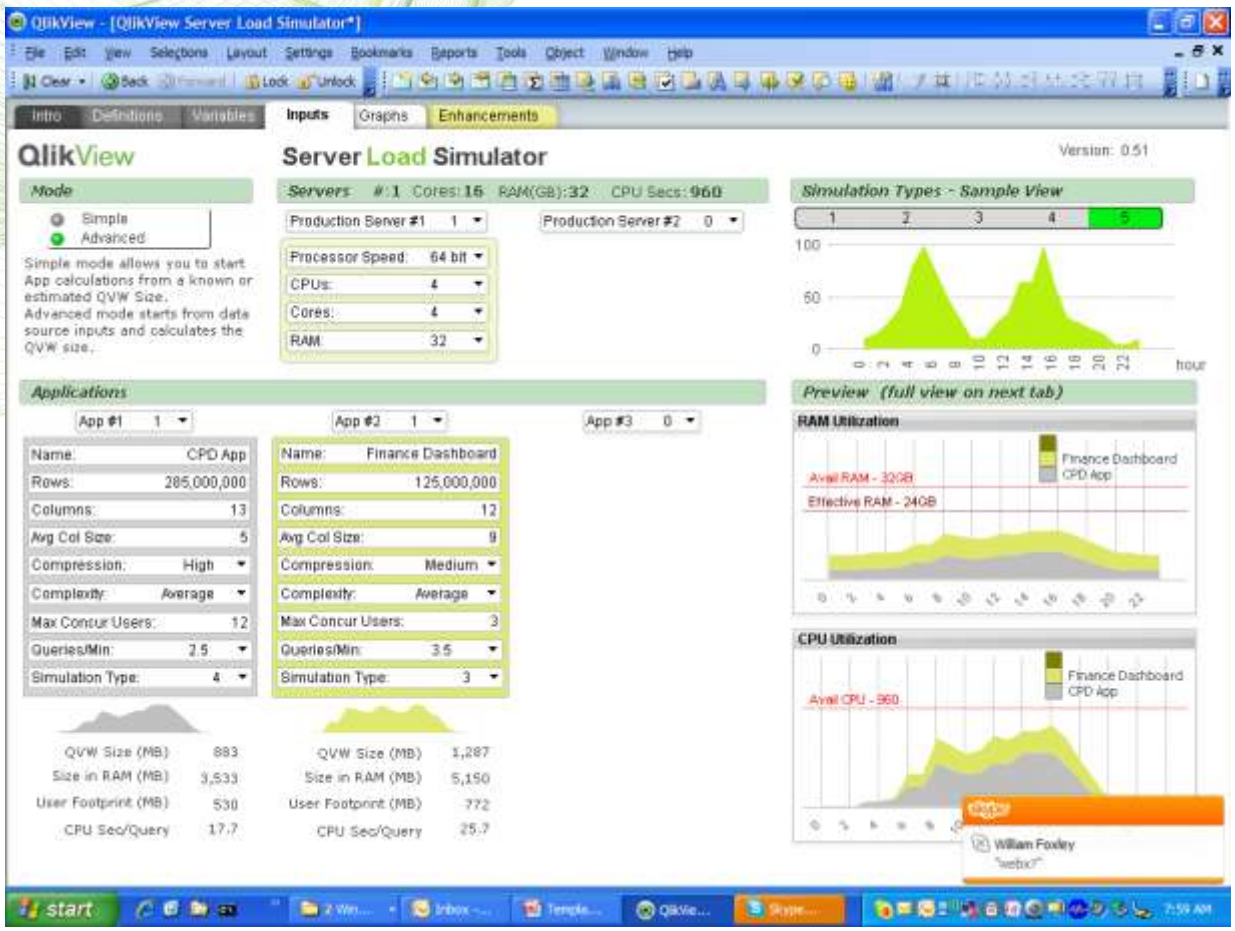
# Simulator

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# Design Considerations

- Flatter is better
- Avoid Counts and Count distinct
- No Synthetic Keys
- Set Analysis faster than nested If(sums)
- Aggregation can help
- Use Numeric Keys

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