

# QlikView Sizing

## RAM Consumption Calculation Example



	.QVW File Size (in MB)	RAM Footprint	Per User Footprint	# Users Concurrent	Total RAM Consumed (MB)
QVW #1	500	2,000	200	50	12,000
QVW #2	1,000	4,000	400	100	44,000
					<b>Total: 56,000</b>

File Size is roughly 8% of original data size

File Size X 4 is estimated Footprint Size

Footprint Size X 10% is estimated Per User Footprint



For exact RAM Footprint save application with *Compression = None*



Connections

#qconnections

$$\text{RAM} = (\text{RAM}_{\text{user}} \times \text{No. users}) + \text{RAM}_{\text{initial}}$$

Where

$\text{RAM}_{\text{initial}} = \text{QVW}_{\text{size}_{\text{disk}}} \times \text{FileSizeMultiplier}$ ; this is the initial RAM footprint for any application

$\text{RAM}_{\text{user}} = \text{RAM}_{\text{initial}} \times \text{userRAMratio}$ ; this is the RAM each incremental user consumes

$\text{QVW}_{\text{size}_{\text{disk}}} = \text{SourceData} \times (1 - \text{CompressionRatio})$ ; this is the size, on disk, of a QlikView file

Assumptions:

userRAMratio: range between 1%–10%

FileSizeMultiplier: range between 2–10

CompressionRatio: range between 20%–90%

No. users is the number of concurrent users hitting a system, not the total number of supported users.

Example:

SourceData            50GB

CompressionRatio    90%

FileSizeMultiplier    4

userRAMratio         5%

No. of concurrent users    30

$$\text{QVW}_{\text{size}_{\text{disk}}} = 50\text{GB} \times (1 - 0.9) = 5\text{GB}$$

$$\text{RAM}_{\text{initial}} = 5\text{GB} \times 4 = 20\text{GB}$$

$$RAM_{user} = 20GB \times 5\% = 1GB$$

Therefore, the RAM footprint to support 30 concurrent users in this deployment would be:

$$RAM = (1GB \times 30) + 20GB = 50GB$$

A more pragmatic approach is to understand the best practices techniques for using the various QlikView platform components to provide for a very large data size addressing while maintaining very fast user response characteristics. These techniques are detailed below:

## Application Architecture



### Scenario:

You have 800 million rows of data and a total user audience of 400 users.  
 A max concurrency of around 10%, gives you 40 max users at any given time.  
 1 QlikView application has been identified to meet the needs.

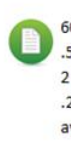
#### Option #1



800 M rows  
 4GB file size  
 16 GB footprint  
 1.6 GB per user  
 avg. resp. time ~5 sec

Avg. Resp. Time	Avg. Sessions per Day	Avg. Selections per Session	Total Wait Time per Day	# QVS Needed	CPU Cores	RAM
~5 sec	400	10	5.6 hours	2	24	64

#### Option #2



60 M rows  
 .5 GB file size  
 2 GB footprint  
 .2 GB per user  
 avg. resp. time <1 sec



800 M rows  
 4GB file size  
 16 GB footprint  
 1.6 GB per user  
 avg. resp. time ~5 sec

	Avg. Response Time	Avg. Sessions per Day	Avg. Selections per Session	Total Wait Time per Day	# QVS Needed	CPU Cores	RAM
App 1	<1 sec	350	10	.95 hours	-	-	-
App 2	~5 sec	50	10	.7 hours	-	-	-
				<b>1.7 hours</b>	<b>1</b>	<b>24</b>	<b>48</b>

#### Option #2 is:

- The same solution
- Less than half the hardware needed
- Average 300% improvement in response times for users



Connections

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