

SmartSafe^{iQ} – v.1.0.3

Technical Requirements

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Technical Requirements

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Technical requirements for the application servers for systems with different number of safes

- Small system - up to 200 safes
- Medium system - up to 500 safes
- Large system - up to 2,000 safes

Load calculation formula:

Requests per second $P = (N \times B) / (H \times T \times T)$

N – number of safes

B – average number of transactions per shift (8 h)

H – shift duration (hours)

T – seconds (60)

Competitive requests per second: $G = A \times P$

A – time of each operation

P – requests per second

Technical Requirements

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Small system

Small system	
■ Number of safes (N)	200
■ Time of each operation (A)	30 sec
■ Average number of transactions per shift (8 h)	160

Load calculation for a small system	
■ Requests per second	$P = (200 \times 160) / (8 \times 60 \times 60) = 1,11$
■ Competitive requests per second (A)	$G = 30 \times 1,11 = 33$

Recommended server requirements	
■ Minimum server requirements	■ CPU - 2xIntel(R) Xeon(R) E5-2620 or similar
	■ RAM - 16GB
	■ RAID - RAID 0 controller
	■ HDD - 2x136GB 15K
	■ NIC - 1Gbps network adapter

Technical Requirements

January, 2016

Medium system

Medium system	
■ Number of safes (N)	500
■ Time of each operation (A)	30 sec
■ Average number of transactions per shift (8 h) (B)	160

Load calculation for a small system	
■ Requests per second	$P = (500 \times 160) / (8 \times 60 \times 60) = 2,78$
■ Competitive requests per second	$G = 30 \times 2,78 = 83$

Recommended server requirements	
■ Minimum server requirements	■ CPU - 4xIntel® Xeon® E7-4850 or similar
	■ RAM - 128 GB
	■ RAID - RAID 0 controller
	■ HDD - 2x136GB 15K
	■ NIC - 1Gbps, 4 ports per controller

Technical Requirements

January, 2016

Large system

Large system	
■ Number of safes (N)	2000
■ Time of each operation (A)	30 sec
■ Average number of transactions per shift (8 h) (B)	160

Load calculation for a small system	
■ Requests per second	$P = (2000 \times 160) / (8 \times 60 \times 60) = 11,1$
■ Competitive requests per second	$G = 30 \times 11,1 = 333$

Recommended server requirements	
■ Minimum server requirements	■ CPU - 8xIntel® Xeon® E7-4870 or similar
	■ RAM - 256 GB
	■ RAID - RAID 0 array controller
	■ HDD - 2x136GB 15K
	■ 1Gbps Ethernet Adapter 4 Ports per controller

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