

ClickSoftware

Hardware Sizing

For

Telecom Portugal

v8.3

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# General

The main goal of this document is to provide initial estimation for Hardware for **Telecom Portugal**.

The initial HW sizing in the R&D performance lab is based on OOTB scenarios and statistics that were provided by CSKW large scale customers.

However, HW sizing estimations cannot be guaranteed to be correct in each and every case as the performance is highly dependent on the specific customer application, environment and requirements. The Initial HW sizing should be tuned in a performance and load test process as well as, later by monitoring the production environment during rollout.

## Support call

Case number - 00221629

# Executive Summary

## Application Servers

|  |  |  |  |
| --- | --- | --- | --- |
| Role | #Cores | RAM | #Servers |
| SO Integration | 8 | 8GB | 2 |
| Dispatchers | 8 | 8GB | 6 |
| Agents | 8 | 8GB | 1 |
| CM Agents + CM MT ISAPI | 8 | 8GB | 2 |
| GIS (PTV) | 8 | 8GB | 6 |

## Database Servers

|  |  |  |  |
| --- | --- | --- | --- |
| Role | #Cores | RAM | Disk Space |
| Main Application Database | 8 | 8GB | 60GB |
| ClickMobile MT DB | 4 | 8GB | 50GB |

# Hardware Sizing Estimations

## Notes and Assumptions:

**General**

1. The estimated HW sizing is for supporting a full load production environment. The HW sizing is calculated according to assumptions and volumes provided by the customer. The assumptions are described in the attached excel file. In case of missing info / data the customer hereby agrees to the default values presented.
2. The HW sizing assumes a system configuration and data modelling according to Click’s best practices and is similar to what Click uses in the R&D QA Lab. Examples of configuration changes that might lead to deviations from the hardware sizing are: (1) setting the GIS Grid size to be smaller than 200 meter; (2) objects (e.g. Task) with more than 29 Multi Values properties; (3) Appointment Booking horizon longer than 4 weeks. In Click’s experience, changes such the ones described above as well as other changes in configuration may cause an increase of 50% and more of the hardware sizing.
3. Changing any of these assumptions and/or default values might impact the HW Sizing and will require re-evaluation.
4. CPU specification: Intel Xeon® CPU E5420 @ 2.50 GHz or higher.
5. For High Availability and Disaster Recovery, please refer to "Planning for High Availability" chapter on SO Administrator Guide.
6. The disk space size is determined just for SO products requirements and doesn't include the operation system requirements.

**Virtualization**

* This HW sizing for this section is done for virtual machines (for GIS servers there might be a performance degradations up to 25%).
* ClickSoftware’s recommendation is to start with 1:1 ratio and increase the vCPU ratio up to gradually, while making sure performance is not harmed and monitoring the standard industry virtualization metrics. That said, the decision of the vCPU:pCPU ratio is the customers' , under the understanding that the sizing was provided for 1:1 ratio and the possible implications of altering this ratio. If any issue will be reported by the customer, ClickSoftware may ask to reproduce the issue under 1:1 ratio as first step of reproduction in order to eliminate the hypervisor layer CPU over-booking as potential fault.
* For more information regarding virtualization certifications please refer to “Certified Environments” page (<http://solutions.clicksoftware.com/saleswiki/pages/certified%20environments.aspx>)

## Hardware Sizing:

