

Basic Architecture of the Industrial Environment

For an industrial environment with an average load of up to 400 thousand calls per day (250-350 simultaneous calls with call recording) and about 100 thousand chats per day, it is necessary to prepare 3 virtual machines, which are described in paragraphs 1-3 of the table below. You just need to install the operating system and leave Internet access to be able to download and install all additional software. After installation is complete, Internet access from virtual machines can be disabled. Access to the servers is provided to developers via SSH with the root user permissions for the time which is needed for the applications installation and testing. Virtual machines 1-3 should be able to operate on the same VLAN without filtering traffic by ports (allow all).

The reservation should be provided by the capacity of virtual machines.

Object	Software	Resources (min)	Connectivity	Description
1. Webitel Server	Debian 12 Linux 64bit- basic server installation with SSH connection; Additionally, we will install: OpenSIPS 3.4; rtpengine; nginx; SSL; webitel	<ul style="list-style-type: none">• 4 vCPU > 2,6 GHz (Haswell generation or newer), No more than 2 virtual cores per 1 physical core• 8Gb RAM• 60 GB, 20 IOPS, <10 ms• 1 network interface >= 1 GbE	in-out: 80/tcp, 443/tcp, 5060/tcp, 5060/udp in-out: 10000-50000/udp	Telephony server. SSL certificates with a trusted CA are required to provide a secure connection via HTTPS protocol and telephony in a browser.
2. Database / Cache Server / Storage Server	Debian 12 Linux 64bit - basic server installation with SSH connection; Additionally, we will install: Linux; PostgreSQL 15; Grafana; Consul; RabbitMQ; Webitel Storage	<ul style="list-style-type: none">• 8 vCPU, > 2,8 GHz (Haswell generation or newer), No more than 2 virtual cores per 1 physical core• 16Gb RAM• 250+ GB, 100 IOPS, <8 ms• 1 TB, 10 IOPS, <10 (depends on quantity, duration and time of call recording storage)• 1 network interface >= 1 GbE		Database. Call recording storage.
3. Application Server	Debian 12 Linux 64bit - basic server installation with SSH connection; Additionally, we will install: FreeSWITCH 10; Webitel FlowManager; Webitel App; Webitel API GW; Storage; CallCenter; Engine; Messages	<ul style="list-style-type: none">• 8 vCPU, > 2,6 GHz (Haswell generation or newer), No more than 2 virtual cores per 1 physical core• 16Gb RAM• 80 GB, 20 IOPS, <8 ms• 1 network interface >= 1 GbE		Voice menu server. Application Server
4. External Data Services				Interaction with external systems runs via HTTP REST (needs to be discussed).
5. Team	Microsoft Windows 10 / Linux 64bit Google Chrome / Microsoft Edge (the latest or previous version)	<ul style="list-style-type: none">• 4 vCPU• 8Gb RAM	Connection to the IS not less than 2 Mb/s per user, with delays of no more than 15-20 ms.	Employees' workplace
6. Hardware SIP Phone			Connection to the IS not less than 5 Mb/s per device, with delays of no more than 15-20 ms. in-out: 5060/udp, 10000-20000/udp	Hardware phone with SIP 2.0 protocol support
7. PSTN				Public Switched Telephone Network is a general subscriber communication network, the access to which is provided by telephone sets, PBX, and data transmission equipment.