



# DAKTELA PROCEDURES

# MINIMUM REQUIREMENTS

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## INFRASTRUCTURE

### Connectivity and bandwidth requirements

- One-way latency (mouth to ear) no more than 150 ms
- 100 kbits UP/DOWN per concurrent voice call, plus web traffic bandwidth for the Daktela web interface (average is 100kbits DOWN for each active working agent)
- Loss no more than 1 percent IP exchanges, VoIP networks
- Average one-way jitter targeted at less than 30 ms
- Optional: Voice traffic should be marked to DSCP EF per the QoS Baseline and RFC 3246
- When using a firewall, the customer must configure and change it for the VoIP and data stream to allow communication between the on premise instance, its phones and the Daktela platform
- Disabled SIP-ALG on LAN devices and firewall, as default. May be enabled in some specific cases.
- Due to their complexity, Daktela doesn't provide support for customer LAN infrastructure and firewalls!
- Professional LAN network infrastructure based on min. full duplex 100 Mbit/s switches and of type CAT5e or better.
- The network must not run at full capacity even during peak hours. Adequate capacity must be available for the anticipated voice traffic. It is ideal to separate and prioritise the telephony data, e.g. via VLAN.
- Separate switches for IP phones and PCs are recommended for high volume data exchange over the local network.
- IP phones must be assigned a valid IP configuration including internet gateway designated for voice traffic by means of a DHCP server.

### For on-premise Daktela installations we require to open ports for backup, monitoring and remote management

- Incoming ports TCP usually 22 (SSH) from: backup.daktela.com - 82.113.42.139; gw.daktela.com - 95.80.200.192; zabbix.daktela.com - 82.113.42.131
- Outgoing: Full access to internet from the on-premise installation is preferred (upgrades/monitoring)

### For Daktela implementations in the Daktela Cloud

Allowed ports for WebRTC phones

- Open outgoing port ( to pbx ): 8089/TCP
- Open incoming/outgoing ports ( from/to pbx ): 10000-20000/UDP
- Open outgoing port to stun.l.google.com: 19302/UDP

Allowed ports for SIP phones

- Open outgoing port ( to pbx ): 5061/TCP
- Open incoming/outgoing port ( from/to pbx ): 5060/UDP, 10000-20000/UDP

Outgoing

- Full access to the IP address of the cloud pbx is preferred (optionally can be further limited to these outgoing ports TCP/80, TCP/443, ICMP, TCP/20, TCP/21, TCP/UDP/123, TCP/44000-44100)

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## BROWSERS

### Min. browser requirements

- Daktela supports the latest versions of Chrome, Firefox, Opera , Safari, Edge

### Min. requirements for Daktela Wallboards

- Daktela supports the latest versions of Chrome, Firefox, Opera , Safari, Edge. Wallboards can also run on Smart TVs and LCDs with the latest version of supported browsers.



## HARDWARE and PHONES

### Software IP Phones

- We support SW phones – see our [Documentation](#).
- SW phones for Windows – Microsip – download the [Daktela branded version](#) – or [Linphone](#).
- SW phones for Linux – [Zoiper](#) or [Linphone](#).
- SW phones for MacOS – Telephone (available in the App Store), [Zoiper](#) or [Linphone](#).

While Daktela V6 will work with all of the SW phones above, Daktela provides support only for the Daktela Software Phone.

### Hardware IP Phones

- Suggested HW phones: Yealink IP phones, Cisco SPA, Siemens Gigaset
- Phone transport set as UDP, allowed codecs G.711 A-law

### Min. computer requirements

- PC with CPU min. 2.0 GHz (4+ cores ), min. 8 GB RAM (16 GB RAM preferred), Audio In/Out
- Macbook with min. 8 GB RAM (16 GB RAM preferred)



## EMAILS and TICKETS

### Requirements to send and receive email using the Daktela Helpdesk

- Daktela must be the only mail client using the mailbox.
- The customer must be aware of the allowed quantity of sent emails to prevent blocking etc.
- The customer must provide:
  - access to the incoming and outgoing mail server.
  - any additional required parameters.