

 **Crux Labs** presents
Simplifying Technology


CRUX LX & VX

ALL-IN-ONE TELEPHONY
SOLUTIONS FOR SME OFFICES &
CALL CENTRES

PRE-DEPLOYMENT REFERENCE



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Work From
Anywhere



Up to 250 Users &
30 Concurrency

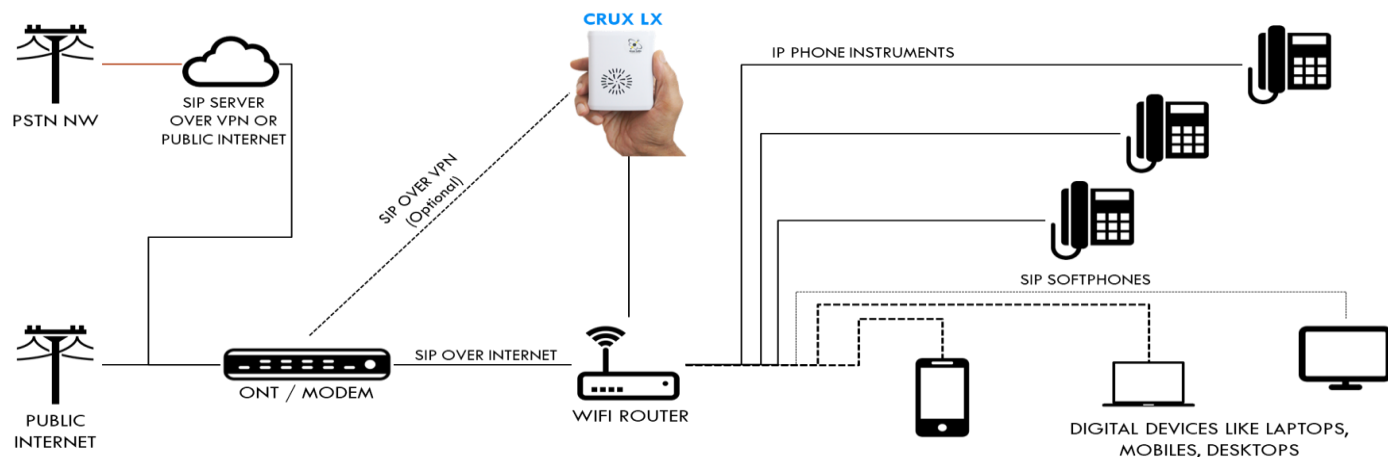


SIP & GSM
Trunks



IVR & Call
Recording

CRUX LX & VX DEPLOYMENT SCENARIOS

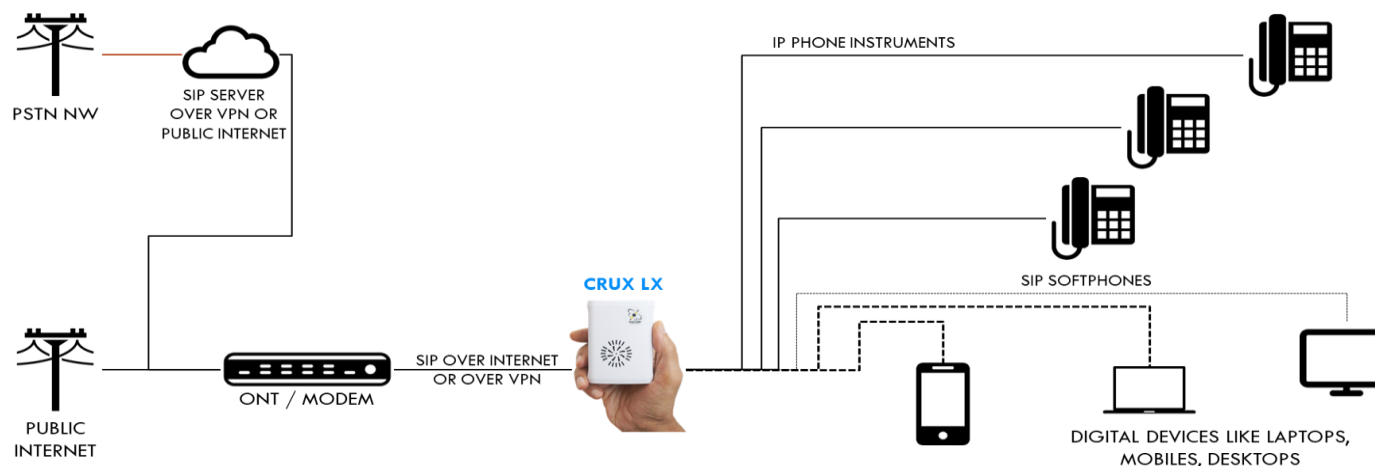


- Small & Mid Size Offices
- Pre-existing WIFI / LAN at client site
- Crux LX used as IP-PBX
- Users connected by wire / wireless
- Local & Remote users

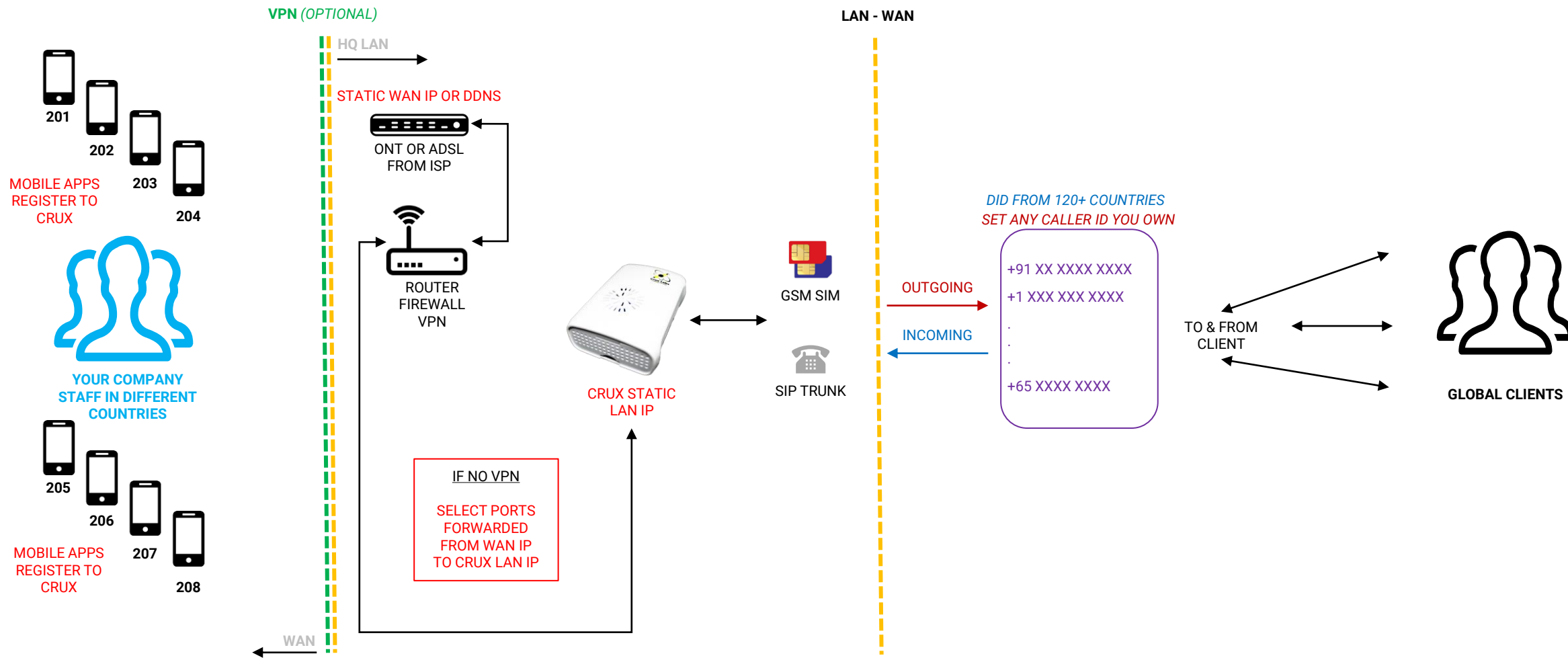
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- Small Offices
- No WIFI / LAN at client site
- Crux LX used as WIFI AP & IP-PBX
- Users connected by wireless only
- Local & Remote users

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LAN & WAN CONFIGURATION



NETWORK REQUIREMENTS

CRUX LX ON LAN

- Allocate a static LAN IP for Crux.
- Port Forwarding from WAN IP to Crux LAN IP
- WAN port: 10080 LAN port: 80 (TCP)
- WAN port: 10443 LAN port: 443 (TCP)
- WAN port: 10022 LAN port: 22 (TCP)
- WAN port: 5060 LAN port: 5060 (UDP & TCP)
- WAN port: 4445 LAN port: 4445 (TCP)
- WAN port: 10050 LAN port: 10050 (TCP)
- WAN port range: 15000-16000 LAN port range: 15000-16000 (UDP) [This range can be shorter based on exact concurrency requirement]

IN CASE OF FIREWALL

- Check if following or equivalent being used,
 - Fortinet, Fortigate, CloudRoam, Cato, SonicWall, or similar.
- If yes, then Disable SIP ALG or SIP Helper service and Enable VOIP service under Advanced settings or Application Layer Gateway (ALG) settings
- Your firewall, router or any network equipment must allow VoIP traffic and NOT change the SIP headers or packet information for Crux to fully function.

SUGGESTED TROUBLESHOOTING

- Use nmap utility (like Zen nmap) to check if ports are correctly forwarded
- Some ISPs are known to block these ports or SIP traffic. If you have port forwarding and firewall correctly setup, then check with ISP.
- If registration is not going through or calls are not ringing, then check forwarding of SIP port 5060
- If calls are ringing but no audio can be heard then check forwarding of RTP ports 15000-16000

IMPORTANT

Remember to change all default passwords in Crux before you start configuring it for use. It is critical to change following passwords:

- FreePBX admin user
- WiFi Portal admin user
- Passwords for default extensions 200 to 299

Always use a strong password for all the above users

OTHER REQUIREMENTS TO CONSIDER

IVR

- IVR can be easily setup by users of Crux themselves in their own voice at no extra cost. Crux GUI has the provision for recording the announcements over a call initiated to an extension.
- If you wish to get a professional voice over recorded, Crux Labs can help you do that as well as setup IVR for you as an optional service
- For getting a professional voiceover recording, you will need to finalize the message (recommended to keep it below 200 words) and pass it on to Crux Labs team. Getting it recorded typically takes 2-3 days
- At the time of requesting recording, you may specify the preferred accent, gender of voice, and if you would like a soft music in background
- Crux supports Time Groups and Schedules hence consider recording multiple announcements – for example, what would you like your users to hear when they call you during working hours and non-working hours, etc.

EXTENSIONS

- By default, extensions 200 to 299 are pre-configured on every Crux device, along with a default Ring Group 401 (parallel ring on 200-205) and a default conference room 301 (participant code 1234# and host code 6789#)
- These are default number schemes and can be changed anytime. We advise you review these and choose what is most suitable for your use
- **IMPORTANT:** We strongly advise that all default passwords of extensions and admin users for both FreePBX and WiFi Router Portal be changed immediately on first use since continuing with default passwords can be a big security and financial threat and risk

TRUNK LINES

- Select between GSM or SIP or a combination of these to be used on your Crux
- Setting these up takes only a few minutes but procuring these may take time depending upon the telecom operator or service provider
- Also think about how you want the users to use the trunk lines, a 0 dial or some such sequence



Contact Us



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