# RAS and RM servers for PBX and linkus client network

In sensitive parts of the government, banking systems, transaction centres, data centres, are vulnerable to network attacks, almost network administrators take some network restriction measures to avoid damage caused by attacks, but not possible to completely isolate the external network, they greatly wish RAS/FQDN service to run properly so employees who are travelling or off duty are still possible to make calls from linkus app, ensuring call service is smooth. This is quite same for linkus client network, both have to add whitelist servers and ports to each firewall.

This article mainly lists the required servers, protocols and ports respectively for P-Series PBX and linkus client networks, you don't have to add servers for linkus client network if it is not restricted.

## RAS and RM servers for PBX network

*In case some firewall is not possible to add domain in whitelist, have to nslookup each domain from pbx in normal network and add all IPs to firewall once not only one ip for one domain in nslookup result. For servers without a specified domain name, like 'PBX DNS server', you need to check the specific pbx settings, which may vary from client to client, afterward nslookup for the ip address corresponding to the domain name, do not have to allow custom email service if doesn't configure it.*

| SERVERS | PORTS | PROTOCOLS |
|---|---|---|
| PBX DNS server | 53 | UDP |
| NTP Server | 123 | UDP |
| active.yeastar.com | 443 | TCP |
| lcsd.yeastar.com | 443 | TCP |
| 162.62.27.79 | 443, 5001-65535 | UDP&TCP |
| Yeastar smtp server check here | 443 | TCP |
| custom smtp server | 25, 587/465 for tls | TCP |
| custom pop server | 110, 995/993 for tls | TCP |
| api.push.apple.com | 443 | TCP |
| fcm.googleapis.com | 443 | TCP |
| linkus-im.yeastar.com | 443 | TCP |
| ycm.yeastar.com | 443, 11006 | TCP |

## RAS servers for Linkus client network

*For IM Server, it is dynamic servers and do not have designated IPs while provides required target ports, only have to allow to access those TCP ports in firewall, ignore those ports if doesn't require chat service in linkus app.*

| SERVERS | PORTS | PROTOCOLS |
|---|---|---|
| Local DNS server | 53 | UDP |
| lcsd.yeastar.com | 443 | TCP |
| 162.62.27.79 | 443, 5001-65535 | UDP&TCP |
| IM Server | 80, 443, 8000, 8080, 8083, 9090, 9092, 10000 | TCP |