

Firewall 101

Can I use babyTEL devices from behind my firewall?

Yes. However, for some firewalls you may need to make a minor adjustment to avoid a rare situation where incoming calls can be blocked by your firewall. If unsure of how to make the recommended changes below, refer to the firewall help or contact your firewall provider for assistance.

Consistent NAT:

Firewalls that do not use a Consistent NAT can block incoming calls. In this situation the firewall keeps changing the public IP port used to communicate with babyTEL. If a call arrives at that moment, before babyTEL is notified of the new IP port assigned by the firewall, then that call will not reach your device. To avoid this, change your firewall setting to enable Consistent NAT.

SIP-aware firewalls:

SIP-aware firewalls can prevent calls from reaching your device. If this is the situation, disable the SIP awareness option on the firewall.

Strict firewalls:

In the case of very strict firewalls, such as the ones allowing traffic only on limited well-known IP ports, your calls may be blocked. Modify rules to allow UDP packets from and to natX.babytel.ca, and to be redirected to your device for incoming packets.

Firewall (deeper) considerations

In most cases you can use your SIP device or IP-PBX with babyTEL whether it is placed in a public domain or privately behind a firewall.

Where a firewall is in place the overall quality of service should not be affected provided the firewall can handle the extra traffic without degrading throughput and introducing significant latency. The other important factor is that the Network Address Translation (NAT) functionality of the firewall must use a Consistent NAT behavior model.

With Consistent NAT outbound UDP traffic is consistently assign the same remapped public IP address and public UDP port pair to each internal private IP address and private UDP port pair.

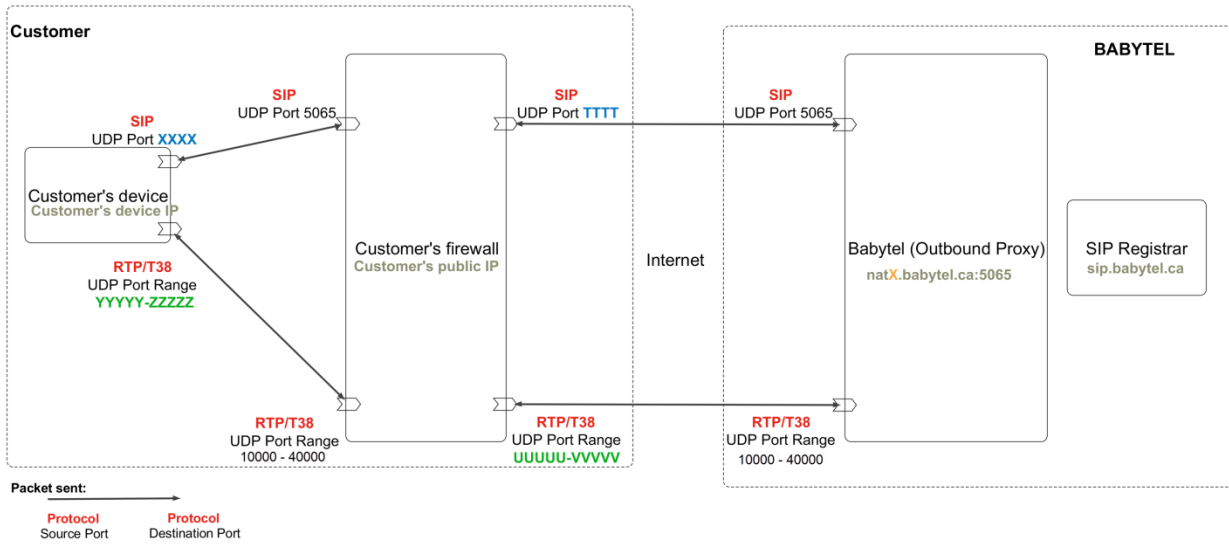
Without Consistent NAT, the remapped port would change with every REGISTER message the SIP device sends to babyTEL, providing no consistency, and no predictability as to where babyTEL should send an INVITE for a new incoming call.

Unless Consistent NAT is used, a problem may happen where a port change takes place and a call happens at that moment, before babyTEL is notified of the new port number. In this situation, the call will not get to the device because babyTEL will have sent the INVITE to the wrong port and the firewall will simply ignore it.

To ensure this problem does not happen, change the firewall setting to enable Consistent NAT. If unsure, check with your firewall provider for information on how to accomplish this.

For strict firewall, you will need your firewall administrator to adjust the configuration. See example bellow:

Firewall configuration example on Strict-Firewalls:



Where in most cases, SIP ports **XXXX** and port **TTTT** will be 5060, also RTP ports range **YYYYY-ZZZZZ** will be equivalent to port range **UUUUU-VVVVV**, although ports used are dependent on your device and firewall configuration.

In natX.babytel.ca, X should have the value provided with your account.

Source	Source Port(s)	Destination	Destination Port(s)	Protocol	Direction	Action
Your device IP address	XXXX (device/configuration dependent, often 5060)	natX.babytel.ca	5065	SIP/UDP	Inside to outside	Allow
Your device IP address	YYYYY-ZZZZZ (device/configuration dependent)	natX.babytel.ca	10000-40000	(RTP/T38)/UDP	Inside to outside	Allow
natX.babytel.ca	5065	Your public IP address	TTTT (firewall/configuration dependent, often 5060)	SIP/UDP	Outside to inside	Allow
natX.babytel.ca	10000-40000	Your public IP address	UUUUU-VVVVV (firewall/configuration dependent, often equal to YYYYY-ZZZZZ)	(RTP/T38)/UDP	Outside to inside	Allow