

## 1. Introduction

This document is designed to help you to configure Xeepe PBX for using Media Relay feature.

Media Relay is technology used as NAT/Firewall traversal solution.

There are 3 relay modes:

- *None*
- *MediaRelayStun*
- *MediaRelayMapped*

None mode is provided for debug purpose or if all computers in your office are in the open Internet (sound fantastic :-).

By default Xeepe is installed with the *MediaRelayStun* mode. This works only for non Symmetric NAT types and usually works without any efforts from administrator.

The main reason to switch to the *MediaRelayMapped* mode is Symmetric NAT type of your ISP.

The advantages of this mode:

- Support ALL NAT/Firewall types
- Optimal performance for all NAT types

But you have to perform some configuration tasks with your network equipment and Xeepe.

## 2. Preparation

First of all you have to decide max number of voice streams managed by Media Relay. It depends from your Internet connection bandwidth. If you use ADSL connection you have to keep in mind only upstream bandwidth. Use the next expressions to calculate port range for Media Relay:

$$\text{maxPortRange} = \text{bandwidth} / 64\text{k} * 2$$
$$\text{usedPortRange} \leq \text{maxPortRange}$$

For example for ADSL connection with upstream speed 128k you may relay only 2 voice streams (port range = 4). It is default value.

In order to use Xeepe PBX in *MediaRelayMapped* mode you need:

- own public IP address for your Internet router
- router with port forwarding feature supported

### 3. Router configuration

Only for the MediaRelayMapped mode!

You have to configure your Internet router to forward port range directly to Xeepe PC.

If you need additional information about port forwarding check your router documentation and <http://portforward.com> site.

We recommend using the same port range for external side and for Xeepe PBX.

### 4. Configure Xeepe

Open Xeepe Administrator and go to the “Settings” page.

Enter new values for the following parameters:

#### **MediaRelayType - MediaRelayStun**

*MediaNumberOfRtpPorts* – port range size

*MediaLocalRtpFirstPort* – first port of port range configured for Xeepe PBX, usually default value is OK, change it only if you have conflict with another application.

#### **MediaRelayType - MediaRelayMapped**

*MediaNumberOfRtpPorts* – port range size

*MediaLocalRtpFirstPort* – first port of port range configured for Xeepe PBX, usually default value is OK, change it only if you have conflict with another application.

*MediaPublicRtpFirstPort* - first port of port range configured on router (visible from public Internet)

*IPPublic* – public IP of your router

Go to “Services” page:

Restart Repro1 and Gateway1 services.

Upon startup Xeepe will perform NAT type and Media Relay tests.

Check tests results:

- If you use MediaRelayStun mode – be sure that NAT type is not Symmetric.
- If you use MediaRelayMapped mode – be sure that Media Relay test is successful.

### 5. Do you have any questions or problems?

Go to <http://xeepe.com> for documentations and FAQ.

Feel free to ask any questions on Xeepe support forum <http://support.xeepe.com>.