Configuring a Remote Extension (RE) on Quadro

An RE can exist at a remote location to the PBX, where that remote location has a broadband internet connection with a static IP address. An IP Phone or Softphone at the remote site can register with the Quadro via the WAN port. The Remote extension has all of the functionality of a local extension except that it can only support 2 line appearances. For quality purposes it is recommended to use a Quadro at the remote site when there will be more than 2 phones there.

RE's can mirror a local FXS or SIP extension or exist on their own line. For example a user of local extension 20 could also have an RE at home using extension 20 (both using the same line). As RE's take precedence over local extensions, all calls to extension 20 would ring only the RE when the RE is registered on the Quadro. The local extension would not receive any calls until the RE is deregistered. Therefore it is recommended to configure an RE with its own line.

The first step is to configure a line for the RE to use. Go to Telephony menu and select Line Settings. In this example we will use IP Line 3 (extension 17) to create the remote extension. Click on IP Line 3.

Set the line to SIP Phone. In this example we will set the phone model to other to allow different models of phones to be used. Set the Line Appearance.

RE's can have a total of 2 Line Appearances. If a higher value is set here it will still be limited to 2.

Give a Username and Password.

Go to extensions management and find the extension that will be the RE. In this case it will be extension 17 as it is paired with IP Line 3. Tick the box of the extension and then click the Edit link.

Select the Remote Settings link and enable the RE. Set the Username and Password. This username and password must be different than used for the IP Line. In this case both will be 17r. These are the details the remote phone will use to authenticate with the Quadro.

Tick on the Enable RTP Proxy setting if you want the Quadro to proxy the RTP as well as SIP between the endpoints where the call is made between the RE and an external party (recommended).

Tick on the Symmetric RTP setting to ensure that the RTP path between the endpoints is optimised (recommended).

If the RE is mirrored from a local extension, tick on the 'Fallback to Local Extension When Not Registered' setting. This means that when the RE is not registered the local extension will automatically register.

The next step is configuring the RE Phone. We will use 2 examples, Snom and Aastra. Snom phones require less configuration for remote extensions because they support UPnP (Universal Plug and Play) which means on the majority of routers, they do not require port forwarding. Aastra phones will need port 5060 opened to them from the router.

Snom also supports variable SIP ports, which means that more than one Snom can register to an external SIP server (Quadro in this case) from behind a single NAT router. Only one Aastra phone can do this as they only listen for SIP on port 5060 and NAT routers will only allow a specific port to be forwarded to one device.

Snom as RE

By default the DHCP client is enabled and the Snom will get all its network settings from the router.

Otherwise assign an IP Address, Gateway, and DNS server settings manually.

Under the Login tab of Identity 1, enter the Account, Password and Authentication Username settings. The Username and Authentication name must match the Username that was set in the Remote Settings of the Quadro for this extension. The Password must also match that password. The registrar must be set as the public IP Address of the Quadro.

The remote Snom phone should now register as a remote extension of the Quadro.

Aastra as RE

As with Snom, the Aastra phone can pick up its network details dynamically from the router or they can be manually assigned

In the Global SIP Settings enter the Phone Number, Authentication Name and Password settings. The Phone Number and Authentication Name must match the Username that was set in Remote Settings of the Quadro for this extension. The Password must also match that password.

The Proxy Server and Registrar Server Address must be set as the public IP Address of the Quadro. And the Proxy Port and Registrar Port as 5060.

As stated above, port 5060 must be forwarded to the Aastra from the router for the phone to be able to register on the Quadro.