Overview

This document will guide you through the installation and uninstallation process of the NetBorder Express Gateway on Windows and Linux.

NetBorder Express supports the following Operating Systems:

- Windows XP 32-bits

- Windows 2003 32-bits

- Windows 7 32-bits/64-bits

- Windows 2008 32-bits/64-bits

- Linux CentOS 5.5 distribution 32-bits

WARNING: **Remove any Sangoma device drivers software and hardware before proceeding with the installation.** The Gateway has been validated with a given version of the Sangoma device drivers that is packaged with the software.

Windows Installation

You will find detailed instructions on how to obtain the NetBorder Express software and license in the *Quick_Start_Guide_for_Windows.pdf* file provided in the installation package.

1. To begin the installation, run the setup executable file appropriate for your host operating system.

    *   *NetborderExpressGateway_Setup_**X.Y.Z**_win**AA** /**Options***

        Where **X** is a major revision number, **Y** and **Z** are minor revision numbers, **AA** is either 32 or 64 depending on the operating system of the system. The command line options are:

        *   **"/h"**: Display usage

        *   **"/S"**: Perform the installation without any prompting

        *   **"/U"**: Perform the update without any prompting

        *   **"/D=Windows_Style_Installation_Folder"**: Specify an installation folder.

        Return codes

        *   0-99: Installer return codes

        *   100-199: Import return codes

        *   200-299: Export return codes

        *   0: normal

        *   1: user aborted installation (should never see this during silent install)

        *   2: aborted by script (installation failure)

        *   3: gateway is already installed (update option not passed)

        *   4: installer version is more then one major version from the installed version

        *   5: installed version is newer then the installer version

        *   6: could not retrieved installed version (missing registry key)

        *   7: failed to uninstalled currently installed version.

        *   100: import application failure

        *   101: update succeeded, but some things require your attention

- • 102: invalid configuration archive file format

- • 103: export information is missing from configuration archive

- • 104: configuration comes from a different platform

- • 105: version of the configuration greater then the currently installed application version

- • 106: application currently installed version is more then one major version from the configuration being imported

- • 107: brand is not matching

- • 108: sub brand is not matching

- • 200: export application failure

2. After accepting the license agreement on the initial screen. You will be presented with the following screen to select the components you wish to install.
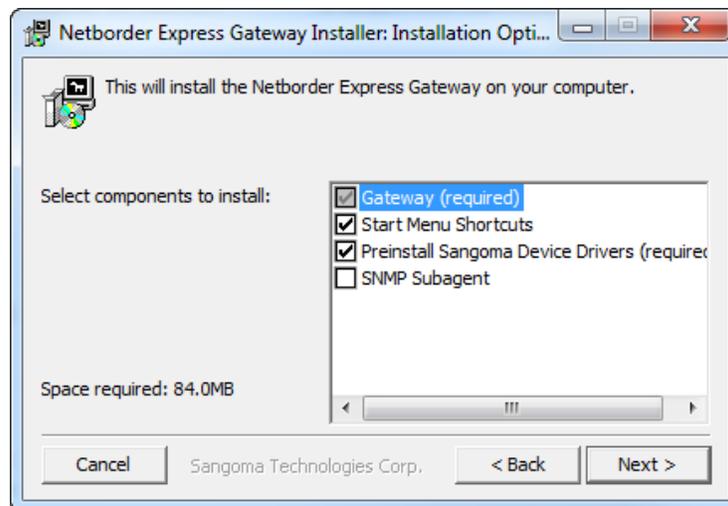
To install Start Menu shortcuts (recommended), leave this option pre-selected. Start Menu shortcuts provide you with quick access to the documentation, the Gateway Manager, logging information and configuration files.

If you would like to enable SNMP on the gateway, you must select the SNMP Subagent option.

Please refer to the *SNMP_User_Guide.pdf* located in **$INSTALLDIR/doc** for more information on SNMP*.*

> **N**ote*: $INSTALLDIR refers to the following path in Linux:*
> *"/opt/Netborder/Express/Gateway" and in Windows:* **"C:\Program Files\Netborder\Express\Gateway"**

3. The following screen in the installation process will set the home directory location
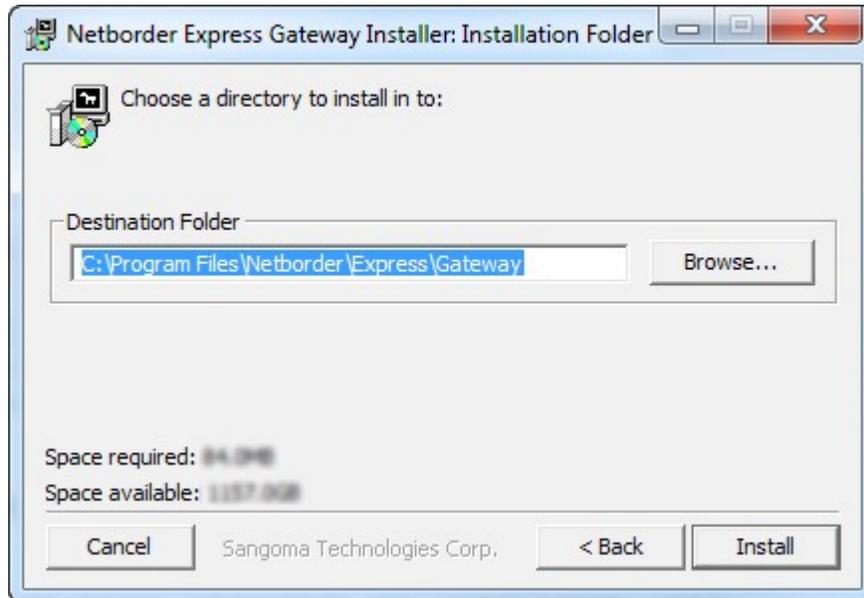
4. Once you have selected the directory location, click **Install** to complete the installation process.

5. Once the installation is completed, restart the server.

6. After Windows starts, your web browser will open automatically to http://127.0.0.1:7783 to run the Quick Setup Wizard detailed on page 11.

Upgrade for Windows

Introduced in version 4.1, the smart update feature enables any version of NetBorder Express above 3.0 to be updated without any uninstallation/reinstallation.

1. The installer will detect a previous version of NetBorder Express is installed on the system and request a confirmation to proceed with the update.
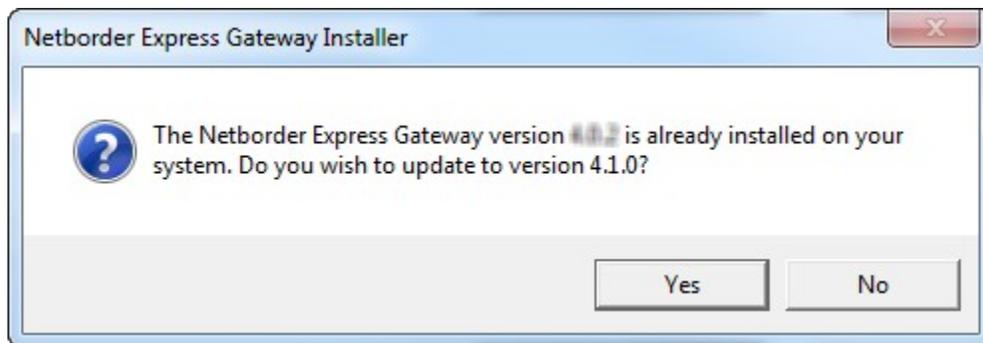

2. The installer will then ask you whether you want to backup the configuration. Select "Yes".
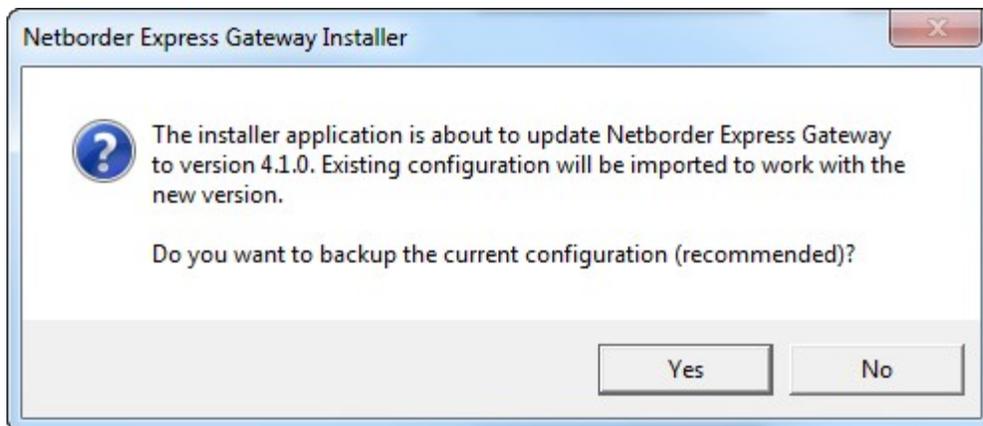
3. Enter the location where the configuration backup will be saved.
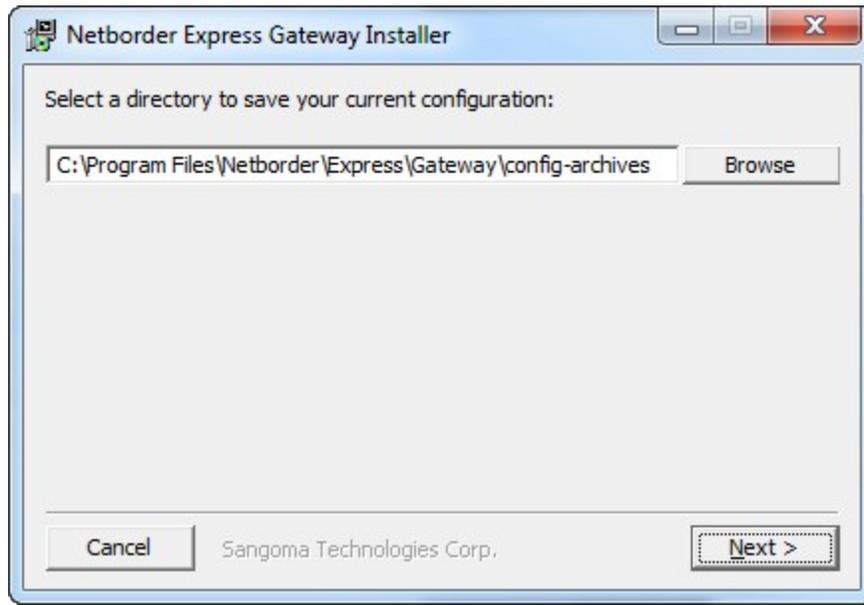
4. A message box will display the location of the saved configuration
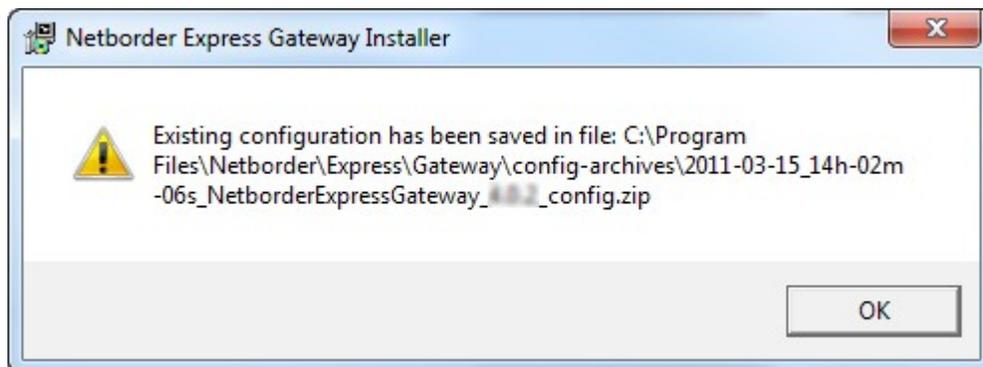
5. The installation will proceed and automatically uninstall the previous version of NetBorder Express and install the new version.

Uninstall for Windows

1. Uninstall the Gateway software by launching the Gateway uninstaller from the Start Menu:

Start > Programs > NetBorder Express Gateway > Uninstall.

The following window appears.
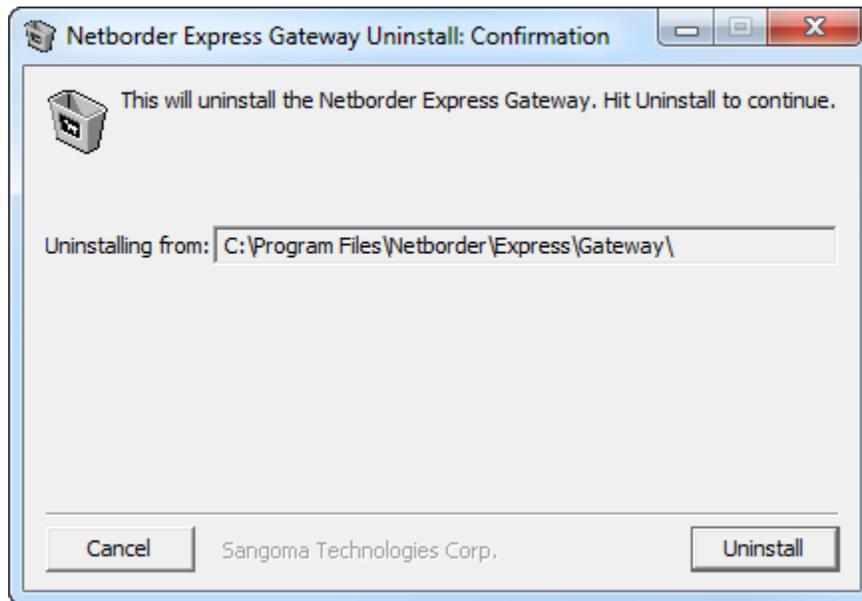
2. Click **Uninstall**

3. Click **Yes** to remove the Sangoma device drivers when the uninstaller will ask if you want to uninstall the device drivers.

4. The Gateway software is removed from your system

Uninstaller command line options:

- "/S": Perform the uninstallation without any prompting.

- "_?=Gateway_installation_directory": Stops the uninstaller from copying itself to a temporary directory.

Note:_? must be the last parameter used in the command line and must not contain any quotes.

Linux Installation

You will find detailed instructions on how to obtain the NetBorder Express software and license in the *Quick_Start_Guide_for_Linux.pdf* file provided in the installation package.

The Linux gateway installer is packaged in an RPM file. This RPM file installs the gateway files and also compiles and installs the Sangoma drivers for the telephony boards on the system.

The RPM installation package is supported on Centos 5.x.

Installation:

```
$ rpm -ihv --prefix=<dir> netborder-gateway
```

- The default installation directory is **/opt/Netborder/Express/Gateway** which can be overridden by the --prefix=<dir> option.

- Once the installation is completed and the system is restarted, proceed to the Web Manager located on http://<server IP>:7783 to complete the Quick Setup Wizard detailed on page 11.

Upgrade (version 4.1+):

```
$ rpm -U netborder-gateway
```

- Version 4.1 introduces the smart update feature that automatically updates the configuration files for version 4.1+ of the software.

- Your configuration files will be backed up in the **/opt/Netborder/Express/Gateway/config-archives** folder.

- The previous version will be uninstalled and the new version will be installed automatically.

Uninstallation:

```
$ rpm -e netborder-gateway
```

# Configuration Backup/Restore

It is possible to backup your configuration settings to a zip file that can be restored back into the gateway. The backup and restore functionality can be accessed through the Gateway Manager under the **"Configuration / Backup/Restore"** tab.

To backup, click the "Backup Configuration" button.
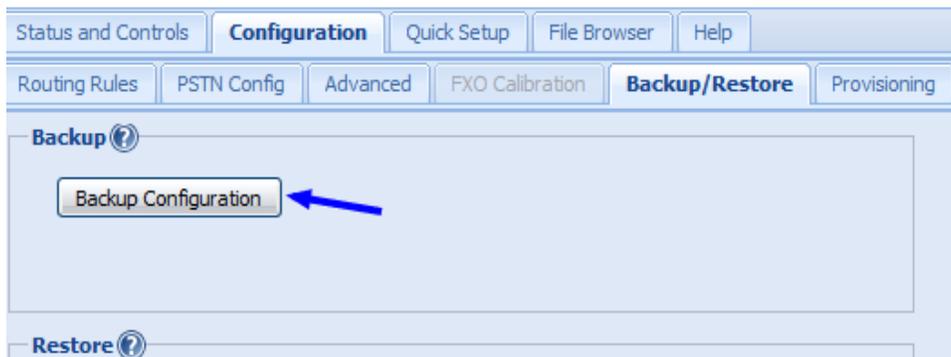
Once done, the backup process will either ask you to save the zip file in a local directory or automatically download the file according to your browser settings.

To restore a configuration, browse to the location of the zip archive containing the backed up configuration
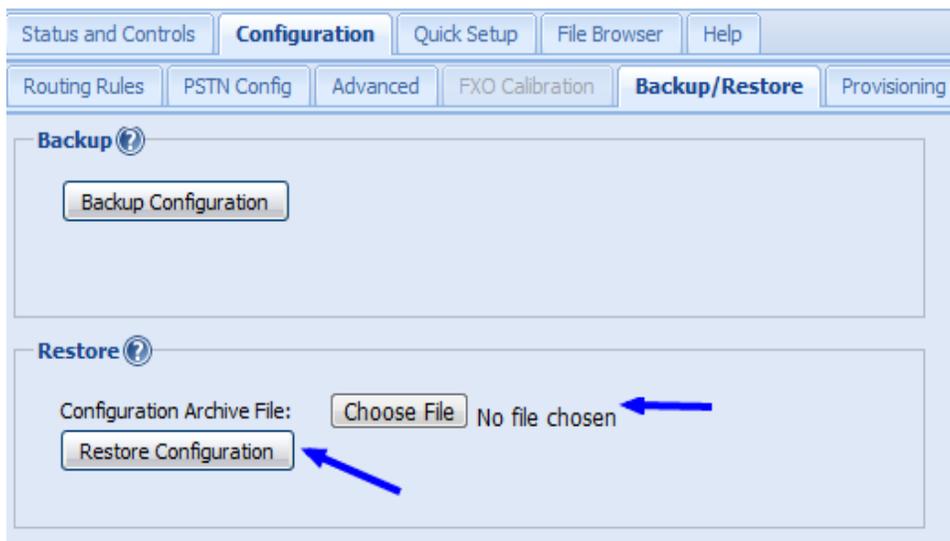
setting and click the "Restore Configuration" button.

Provisioning

Using xml template files provided by Sangoma, it is possible to automatically generate configuration for a given system.

To do so, browse to the template file matching your system hardware, then click "Generate Configuration" button.
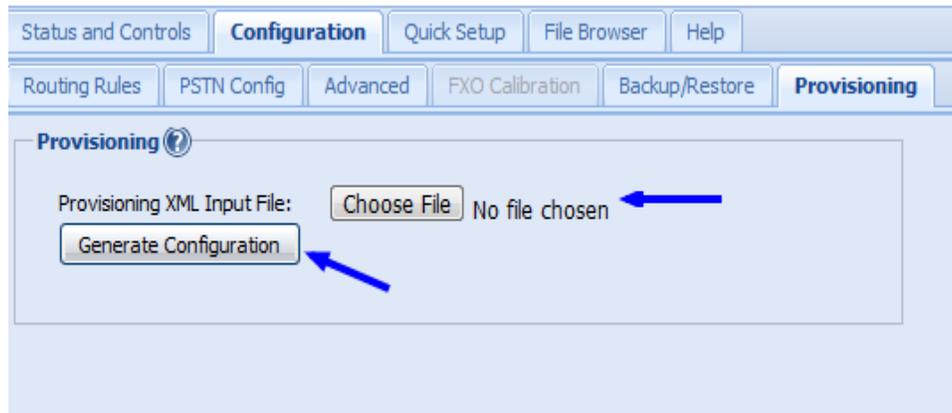
Quick Setup Wizard

Once the installation is completed, you need to run the Quick Setup Wizard from the Web Manager User Interface to configure the gateway. Here is a screenshot of the initial screen of the wizard located under the "Quick Setup" Tab.
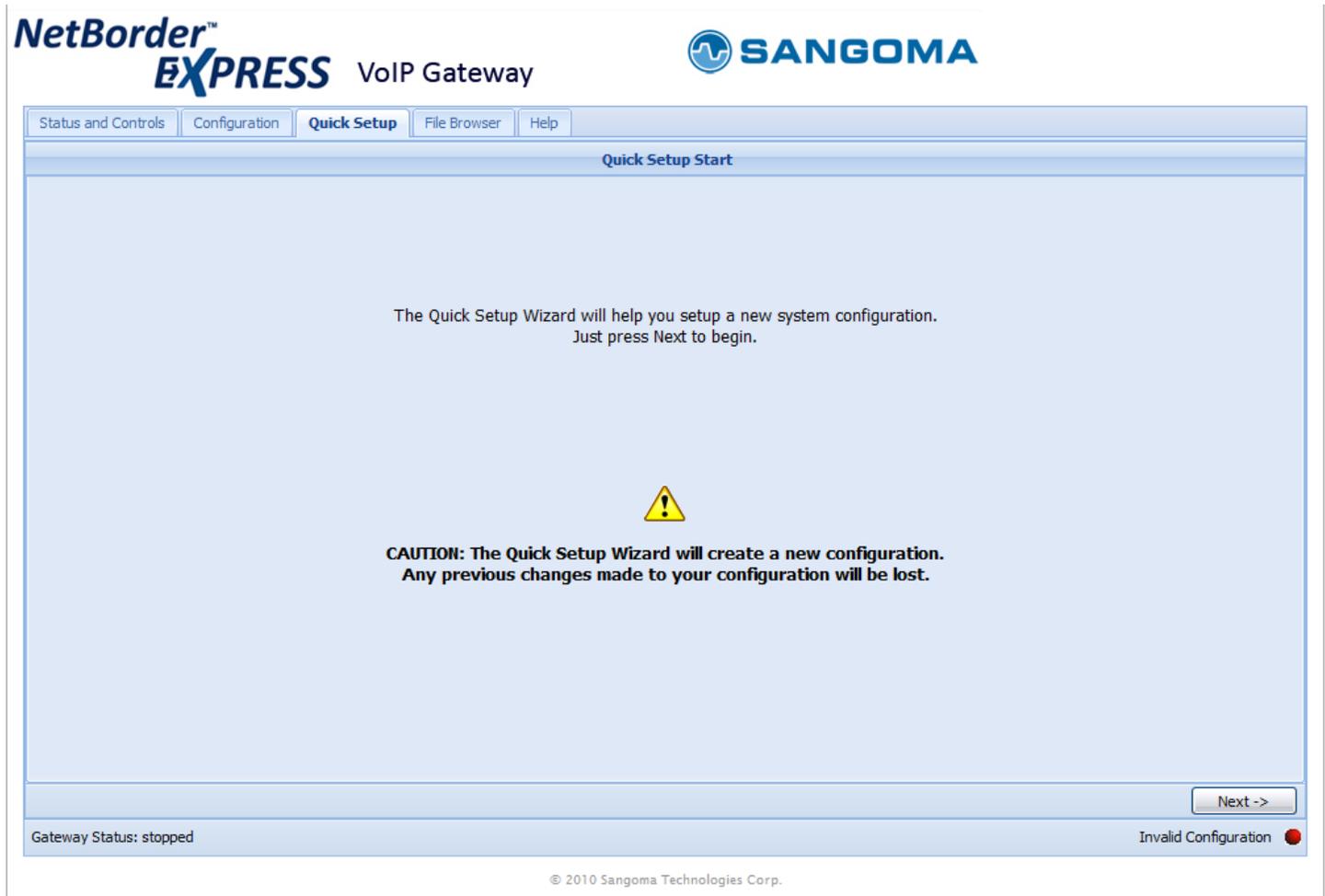

The second screen of the wizard is the hardware configuration page. This document will show you screenshots for the following hardware configurations:

- Analog Card with 2 FXO and 2 FXS channels.

- Digital Card with T1, E1, MFC/R2 and J1 PRI ports.

- Digital Card with BRI ports.

Analog Card – 4 FXO/FXS ports

The screenshot below shows an example of an A200 telephony board with 2 FXO and 2 FXS modules.
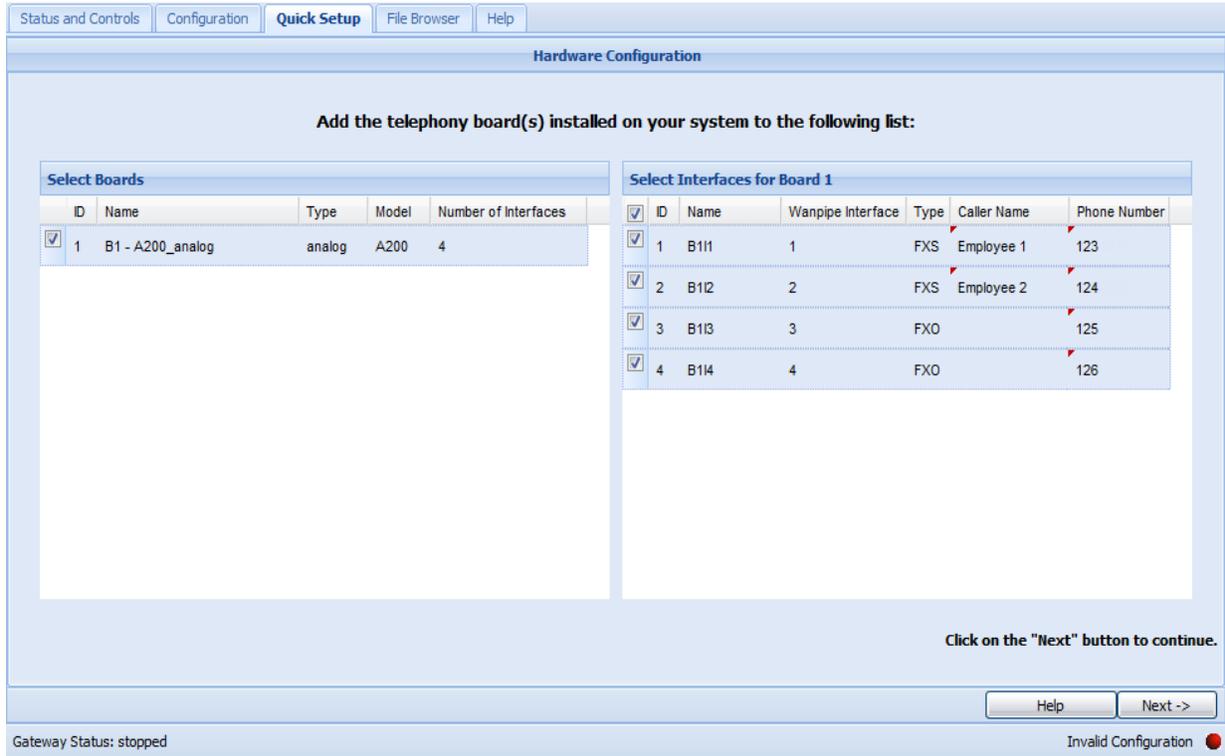
- For FXS ports, it is mandatory to enter the Caller Name and Phone number.

- For FXO ports, it is only mandatory to enter the Phone Number.

- The following screen asks you to select the country where the gateway is installed to load the tone specific information.

Digital Card – 2 PRI ports

- The following screen asks you to select the country where the gateway is installed to load the tone specific information.
- After you selected the country, you will see the PSTN digital configuration screen.

T1 Configuration
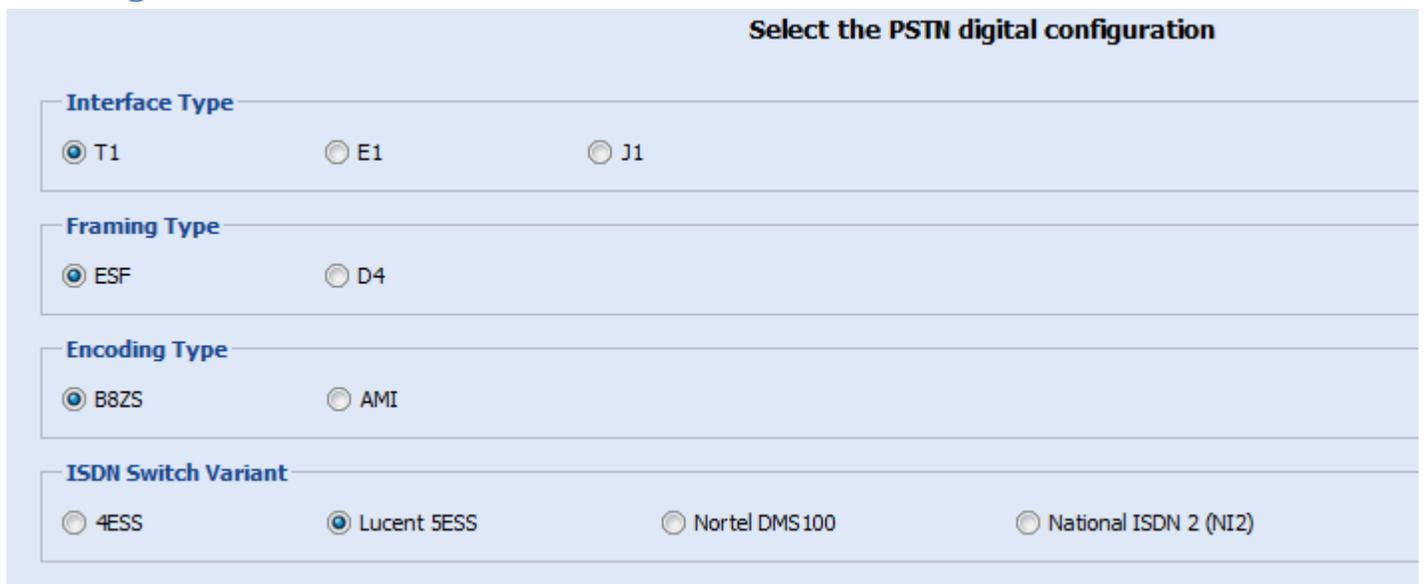
E1 Configuration

Select the PSTN digital configuration

Interface Type

○ T1   ⦿ E1   ○ J1

Signaling Type

⦿ CCS (PRI ISDN)   ○ CAS (MFC/R2)

Framing Type

⦿ CRC4   ○ NON CRC4

Encoding Type

⦿ HDB3   ○ AMI

ISDN Switch Variant

⦿ NET5 (ETSI, EuroISDN)

MFC/R2 Configuration

Select the PSTN digital configuration

Interface Type

○ T1   ⦿ E1   ○ J1

Signaling Type

○ CCS (PRI ISDN)   ⦿ CAS (MFC/R2)

Framing Type

○ CRC4   ⦿ NON CRC4

Encoding Type

⦿ HDB3   ○ AMI

CAS (MFC/R2) Variant

Country: ▼ ITU Standard

J1 Configuration

Digital Card – 4 BRI ports

SIP configuration

Once the hardware configuration is complete, you will proceed to the SIP configuration screen.
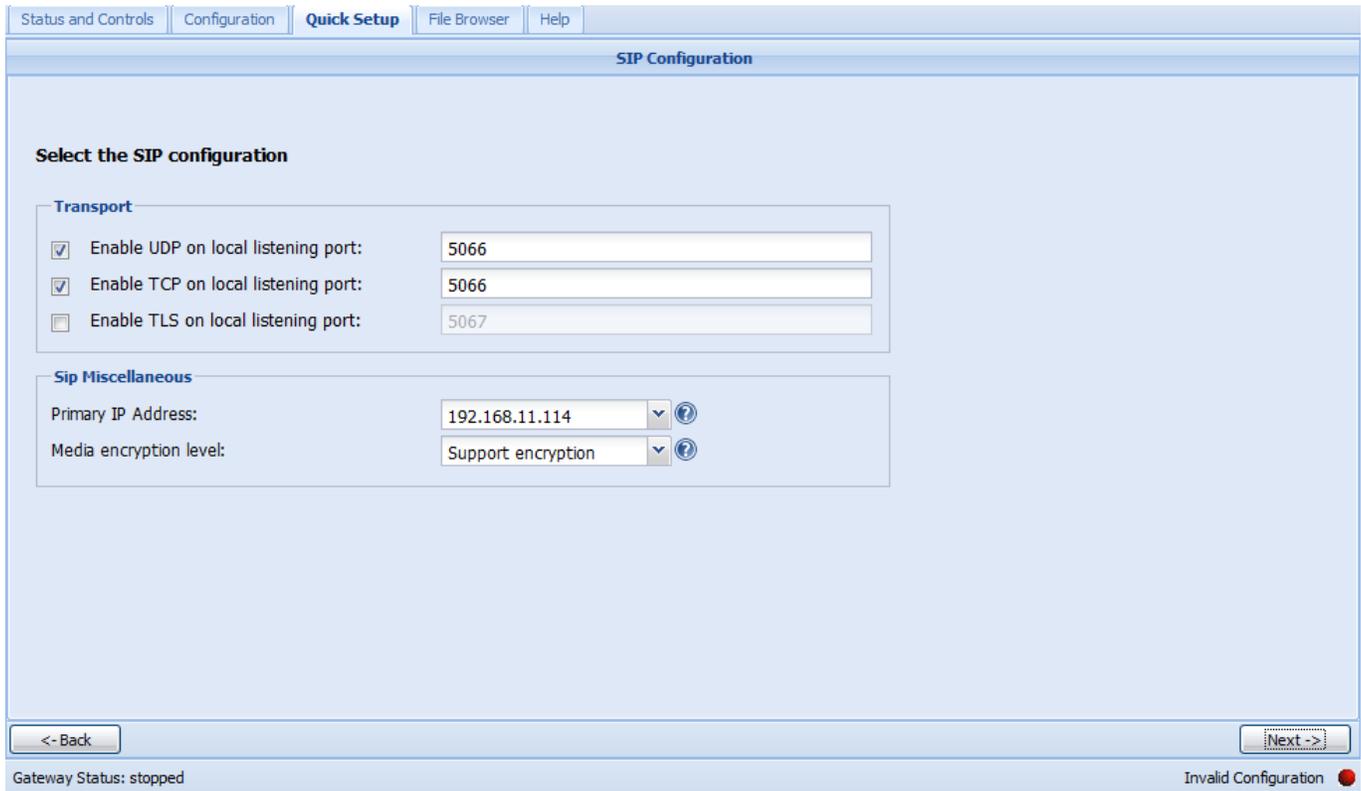
You will need to define :

- The UDP, TCP and TLS listening ports

- The primary IP address for the media gateway

- The level of media encryption support.

The input fields labelled with the blue interrogation mark icons contain helpful information. Please click on the icon to display the documentation.

Routing-rule configuration

This screen will enable you to configure the primary default routing-rule for incoming PSTN calls to SIP and the incoming SIP calls to PSTN .
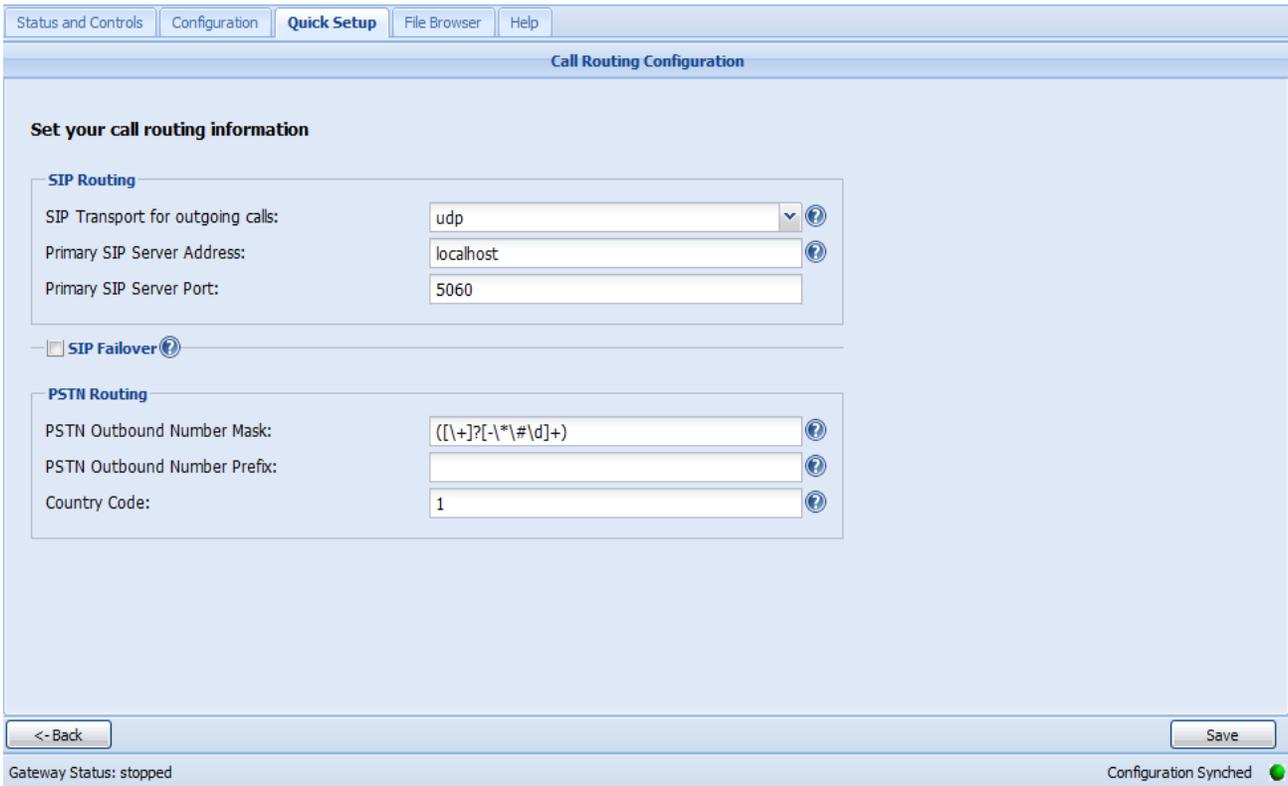
For the SIP Routing configuration:

- You can choose between the **udp**, **tcp** or **tls** transport protocols for your outgoing calls.

- You will be able to define the primary SIP destination address and port for all incoming PSTN calls to be routed to.

- You can optionally define a SIP failover destination if the the primary is out of service.

For the PSTN routing configuration:

- You can define a regular expression to extract the phone number from the user part of the incoming SIP call to be sent on the PSTN.

- You can define a prefix to place in front of the outgoing phone number.

- You can also define the country code for international calling.

Services Configuration

This screen of the wizard sets the gateway services behavior and completes the Quick Setup configuration wizard.
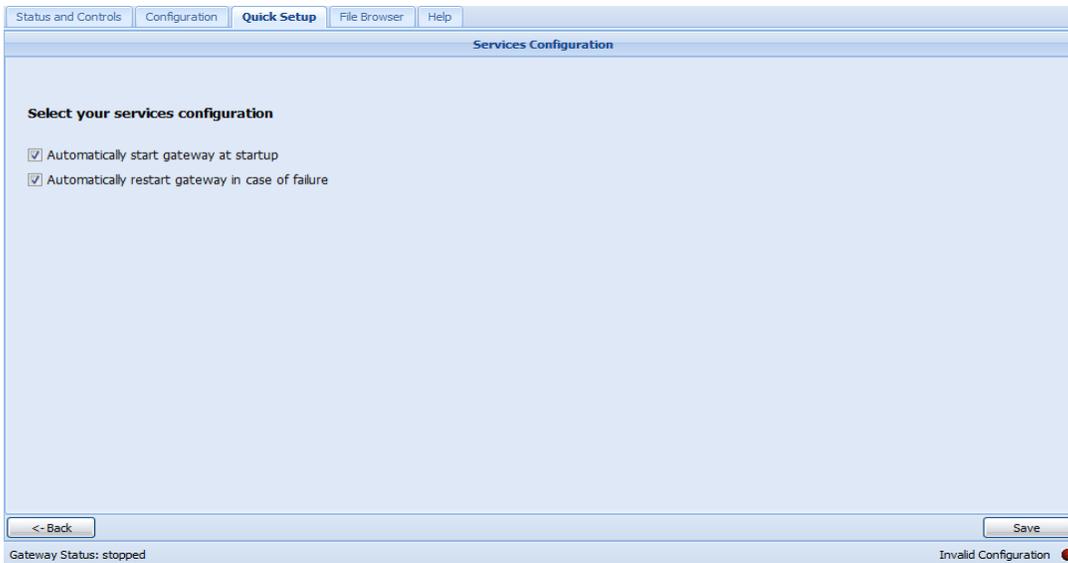
Once you have clicked on the Save button, you will be asked to restart the gateway to apply the configuration changes or exit the wizard without restarting the gateway.
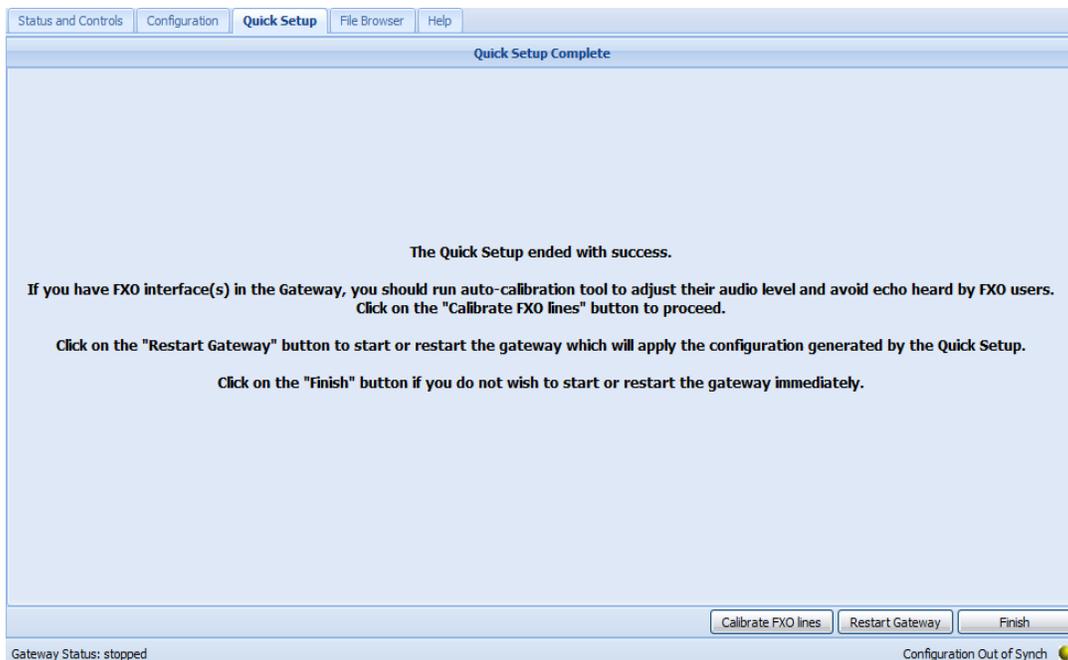
FXO Calibration

If you have a Sangoma Telephony Card with FXO modules (A200, B600 or B700). You will be asked to run the FXO Calibration wizard to calibrate your FXO lines to optimize the audio quality of the line.

Status and Controls	**Configuration**	Quick Setup	File Browser	Help

Routing Rules	PSTN Config	Advanced	**FXO Calibration**

FXO Calibration Wizard

The purpose of FXO calibration is to properly adjust audio level of individual FXO interface in order to reduce the echo experienced by the user. Those levels depend only on the electrical characteristics of the line and remote equipment connected to an FXO interface.

⚠ **You MUST run the calibration on a FXO interface connected to a new network access point.**

⚠ **You do NOT need to re-calibrate a FXO interface as long as it is connected to the same network access point.**

Next ->

Gateway Status: stopped   Configuration Out of Synch ●

You will need to have a valid configuration for the gateway and the FXO ports must be connected to the remote equipment for the calibration to work.

| Status and Controls	**Configuration**	Quick Setup	File Browser	Help

Routing Rules	PSTN Config	Advanced	**FXO Calibration**

FXO Lines Calibration Start

In order to perform auto-calibration:

A valid configuration file must exist. (I.E.: 'Quick Setup' MUST have been completed)

The Gateway will be stopped.

Each FXO interface to be calibrated MUST be connected to its final remote equipment.

Up to 3 minutes per interface may be required.

Optimized calibration values will be applied next time gateway is started.

<- Back   Next ->

Gateway Status: stopped   Configuration Out of Synch ●

Select the FXO interfaces you wish to calibrate and start the calibration.

Status and Controls	**Configuration**	Quick Setup	File Browser	Help

Routing Rules	PSTN Config	Advanced	**FXO Calibration**
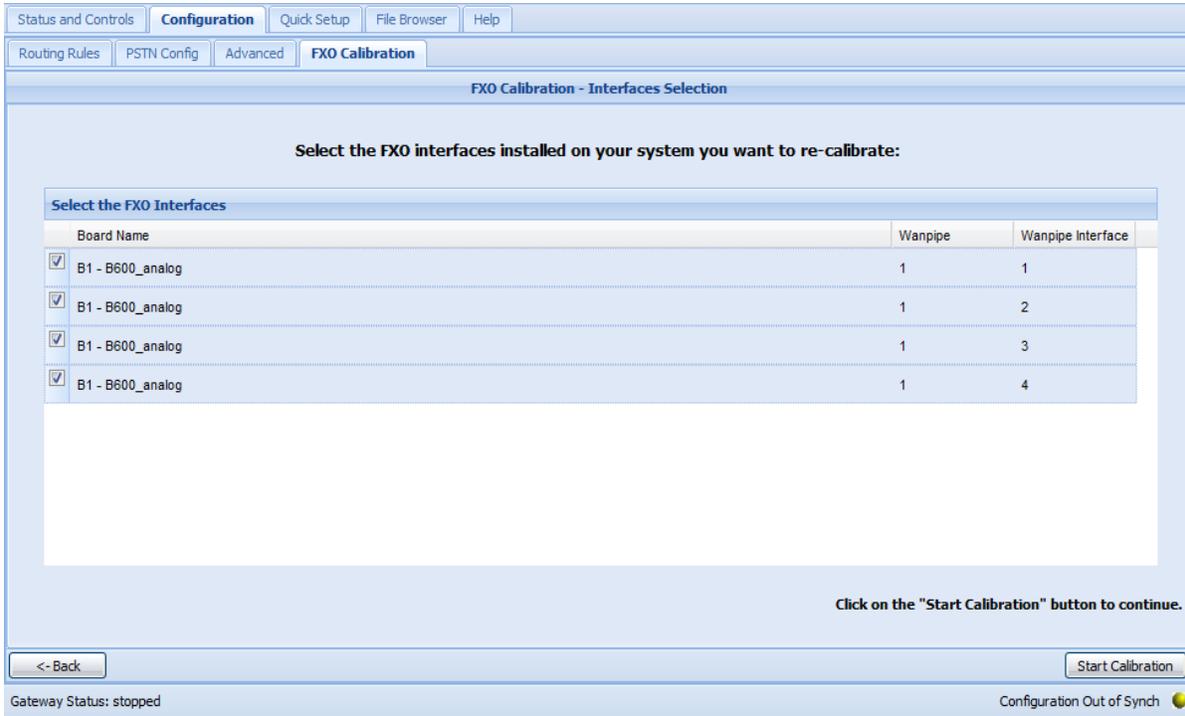
FXO Calibration - Interfaces Selection

**Select the FXO interfaces installed on your system you want to re-calibrate:**

Select the FXO Interfaces

	Board Name	Wanpipe	Wanpipe Interface
☑	B1 - B600_analog	1	1
☑	B1 - B600_analog	1	2
☑	B1 - B600_analog	1	3
☑	B1 - B600_analog	1	4

Click on the "Start Calibration" button to continue.

<- Back		Start Calibration

Gateway Status: stopped   Configuration Out of Synch ●

Once the calibration is completed, you will see the following screen with the status of each port.

Status and Controls	**Configuration**	Quick Setup	File Browser	Help

Routing Rules	PSTN Config	Advanced	**FXO Calibration**
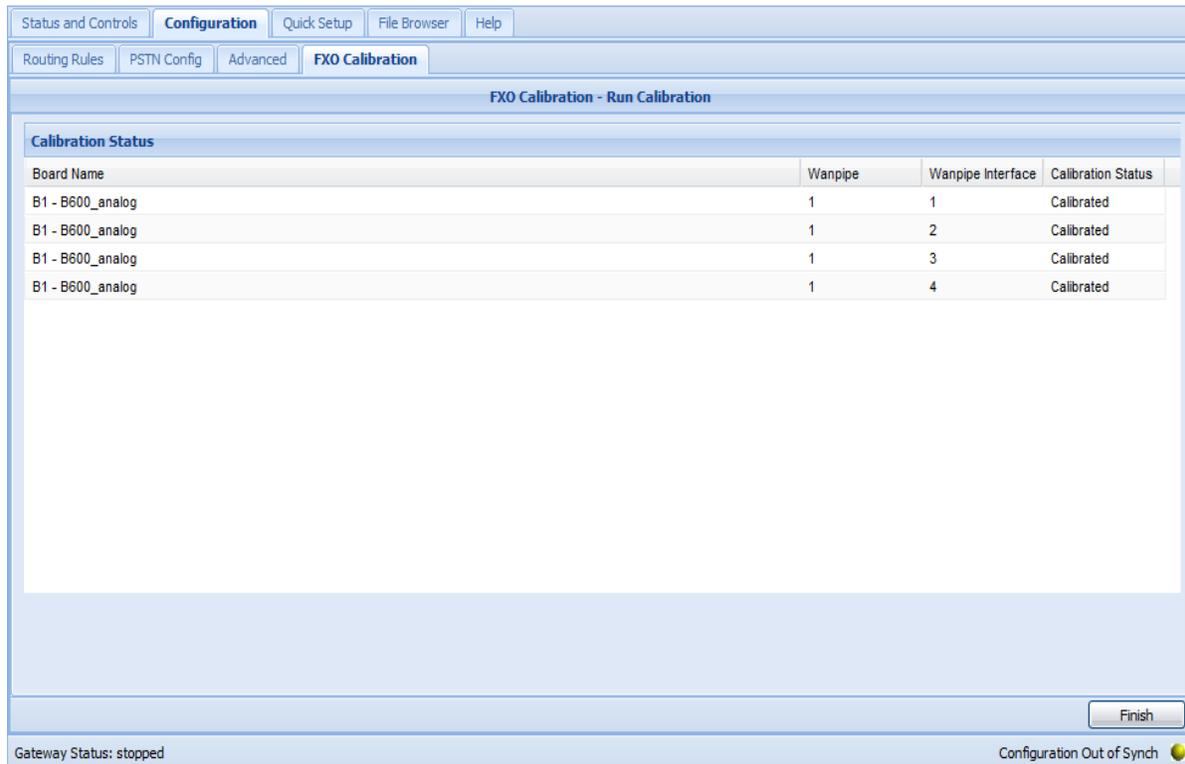
FXO Calibration - Run Calibration

Calibration Status

Board Name	Wanpipe	Wanpipe Interface	Calibration Status
B1 - B600_analog	1	1	Calibrated
B1 - B600_analog	1	2	Calibrated
B1 - B600_analog	1	3	Calibrated
B1 - B600_analog	1	4	Calibrated

	Finish

Gateway Status: stopped   Configuration Out of Synch ●