Configuring sipXecs to work with FXO-FXS Gateways

Introduction

Since a FXO/FXS gateway resides both on the line side and the station side, the sipx configuration must be a little different than when you have a standalone FXO gateway and a standalone FXS gateway.

The problem arises because you need a gateway configured in sipX for the FXO gateway you are using. And if FXS gateway has the same IP address as FXO gateway, authorization rules required to enforce permission for external calls will interfere with internal calls to extensions registered through FXS part of the gateway.

Depending on your configuration your calls to those extension will be refused or dropped into voice mail box. In order to resolve this problem, you need to reconfigure sipX so that no authentication is required to reach extensions registered by FXS gateway.

You can accomplish this by adding custom rules in sipXconfig UI or – by editing authrules.xml.in file directly. Using UI is preferable if you use sipXconfig to manage your dialing plans.

Using UI to add custom rule

Go to Dialing Plan screen, clink on Add Dialing Rule and select Custom type for Dialing Rule. On a rule screen click Enable checkbox, select name for your rule and optionally description (it will make it easier to locate the rule if you ever need to look in XML file).
In Dialed Numbers section add patterns for FXS extensions. Please note that you can be as specific as you want and that you can add muliple patterns. The easiest thing to do is to select your internal extension length (for example no prefix + 4 digits).

In Resulting Call section select "digits", which means that no translation will be performed. (It is perfectly legal to have this rule perform translations such as adding or removing prefix, but it's not required in most cases.) Please make sure that none of the Required Permissions is checked.

Add your FXS gateway to the list of gateways for the rules. You probably already have it defined so just click "Add Existing Gateway" link.

After rule is saved Activate your Dialing Plan. sipXconfig will offer to restart necessary servers for you automatically.

You can read more on How to configure Dial Plans.

Manual editing authrules.xml.in file

The following snippet needs to be inserted in authrules.xml.in file. Please note that order matters - you need to place the rule allowing certain extensions to be reached, before the rule that blindly disallows access to the gateway (it is usually the last rule in the file).

As an example, if the extensions of the FXS interfaces are 775, 776, and 889, you could add the following code to the xml script:

```
${GW_LOCAL_DIALING_ADDR}

77x
889
```

After the xml script has been added to the authrules.xml.in file, sipX should be restarted so the new xml script takes effect. This can be done by executing the following command: "service sipxpbx restart".