

# FXO Gateway Deployment Guide

FortiVoice 6.4.5



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FortiVoice 6.4.5 FXO Gateway Deployment Guide

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# Change log

Date	Change description
2022-07-07	Initial release of the FortiVoice 6.4.5 FXO Gateway Deployment Guide.

# Overview

The FortiVoice foreign exchange office (FXO) gateway works in conjunction with the FortiVoice phone system, an IP private branch exchange (IP PBX), to expand resources and support additional analog phone lines. With the FortiVoice FXO gateway, you connect your analog phone lines to your FortiVoice phone system.

This document describes how to deploy a FortiVoice FXO gateway.

This section includes the following topics:

- [Supported models on page 5](#)
- [Topology on page 5](#)

## Supported models

The supported Fortinet FXO gateway model is FortiVoice Gateway GO08. This FXO gateway has 8 ports for traditional analog phone lines.

For more details about features and specifications, see the [FortiVoice Gateways Data Sheet](#).

The following FortiVoice phone systems can manage an FXO gateway:

- FortiVoice 100E and larger
- FortiVoice-VM-100 and larger

For details about the capacity of FortiVoice phone systems for managed gateways, see the [FortiVoice Phone System Capacities Data Sheet](#).

For more details about the FortiVoice phone systems, see the [FortiVoice Phone Systems Data Sheet](#).

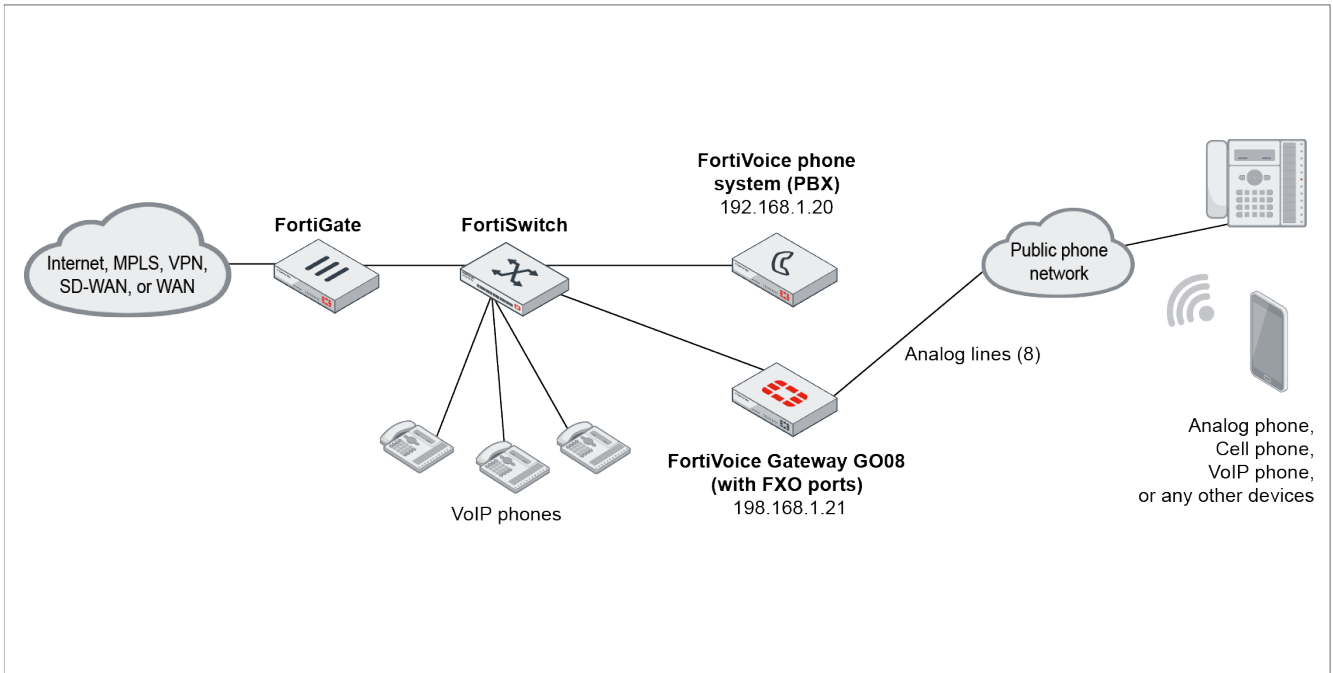
## Topology

You can configure an FXO gateway to be on the same LAN as the FortiVoice phone system or over a VPN.

The FortiVoice phone system manages all configuration information for extensions and ports. However, the FXO gateway manages the following settings:

- Network settings
- Administrator accounts
- System options
- SIP settings

The following image shows an example topology of a FortiVoice phone system with a FortiVoice Gateway GO08:



# Deployment



Before starting procedures in this guide, make sure to complete the basic setup of the FortiVoice phone system and connect to the web-based manager of that system. For more details, see the [FortiVoice Phone System Administration Guide](#).

To deploy an FXO gateway and manage that device with a FortiVoice phone system, review the tasks and perform the procedures listed in the following workflow:

Task sequence	Description	Procedure
<b>Perform tasks 1 to 4 on the FXO gateway.</b>		
Task 1	Perform the following actions to complete the initial setup of the FXO gateway: <ul style="list-style-type: none"><li>Physically install the FXO gateway.</li><li>Connect the Ethernet port to your network.</li><li>Connect the FXO ports to the public phone network.</li></ul>	
Task 2	Connect to the web-based manager of the FXO gateway	<a href="#">Connecting to the FXO gateway on page 8</a>
Task 3	Configure the following system settings: <ul style="list-style-type: none"><li>Network interfaces</li><li>Static routes</li><li>Administrator accounts</li><li>System options</li><li>SIP settings, optional</li></ul>	<a href="#">Configuring administrator and system settings on page 10</a>
Task 4	Upgrade the firmware of the FXO gateway to the latest GA release.	<a href="#">Upgrading the FXO gateway firmware on page 12</a>
<b>Perform tasks 5 to 12 on the FortiVoice phone system, as applicable.</b>		
Task 5	Add an FXO gateway. The FortiVoice phone system can auto-discover an FXO gateway when they are both on the same LAN.	Perform one of the following procedures: <ul style="list-style-type: none"><li><a href="#">Adding an FXO gateway (auto-discovered) on page 13</a></li><li><a href="#">Adding an FXO gateway (not auto-discovered) on page 15</a></li></ul>
Task 6	Apply the gateway configuration file from the FortiVoice phone system to the FXO gateway.	<a href="#">Applying the FXO gateway configuration on page 16</a>

Task sequence	Description	Procedure
Task 7	Verify the association of the FXO gateway with the FortiVoice phone system.	Verifying the FXO gateway association on page 16
Task 8	Add a trunk profile to an inbound dial plan.	Adding an FXO gateway trunk to an inbound dial plan on page 16
Task 9	Add a trunk profile to an outbound dial plan.	Adding an FXO gateway trunk to an outbound dial plan on page 17
Task 10	Verify the configuration by making test calls.	Verifying the configuration on page 18
Task 11	Optionally, edit a trunk profile.	Optional - Editing a trunk profile for an FXO gateway on page 18
Task 12	Optionally, create an additional trunk profile.	Optional - Creating an additional trunk profile for an FXO gateway on page 19

## Connecting to the FXO gateway

After physically installing the FXO gateway and connecting its Ethernet and FXO ports, review the following table and perform the procedure that applies to your scenario to connect to the web-based manager of the FortiVoice Gateway.

Scenario	Procedure
You are connecting to the device for the first time.	Perform the steps in <a href="#">Connecting to the web-based manager of the FortiVoice Gateway on page 9</a> .
You have reset the device configuration to its default state.	Perform the steps in <a href="#">Connecting to the web-based manager of the FortiVoice Gateway on page 9</a> .
You are a returning user who has completed the basic configuration of the device.	<p>Access the web-based manager using the IP address, administrative access protocol, administrator account, and password that you have already configured, instead of the default settings.</p> <ol style="list-style-type: none"> <li>1. Start a web browser and enter the URL:  <code>https://&lt;IP_address&gt;/admin</code>            Where &lt;IP_address&gt; is the IP address of the FXO gateway that you want to connect to. If the FXO gateway configuration is using a non-default HTTPS port, then add :&lt;port_number&gt; after the IP address. For example: <code>https://&lt;IP_address&gt;:446/admin</code>.</li> <li>2. Enter the name and password associated with your account.</li> <li>3. Click <b>Login</b>.            You have completed this procedure.</li> <li>4. Go to <a href="#">Configuring administrator and system settings on page 10</a> to make sure that you configure the required settings.</li> </ol>



## Connecting to the web-based manager of the FortiVoice Gateway

To connect to the web-based manager of the FortiVoice Gateway using its default settings, you must have the following hardware and software:

- A computer with an RJ-45 Ethernet network port
- One of the recommended web browsers:
  - Google Chrome version 102
  - Mozilla Firefox version 100
  - Microsoft Edge version 102
  - Apple Safari version 15
- An Ethernet cable

### Procedure steps

1. On your management computer, configure the Ethernet port with the static IP address 192.168.1.2 and a subnet mask of 255.255.255.0.
2. Using the Ethernet cable, connect the Ethernet port of the management computer to port1 of the FXO gateway.
3. Start your browser and enter the default URL <https://192.168.1.99/admin>.
4. To support HTTPS authentication, the FXO gateway ships with a self-signed security certificate, which it presents to users whenever they initiate an HTTPS connection to the FXO gateway. When you connect, your browser may display two security warnings related to this certificate:
  - The certificate is not automatically trusted because it is self-signed, rather than being signed by a valid certificate authority (CA). Self-signed certificates cannot be verified with a proper CA, and therefore might be fraudulent. You must manually indicate whether or not to trust the certificate.
  - The certificate may belong to another website. The common name (CN) field in the certificate, which usually contains the host name of the website, does not exactly match the URL you requested. This could indicate a server identity theft, but could also simply indicate that the certificate contains a domain name while you have entered an IP address. You must manually indicate whether this mismatch is expected or not.

Both warnings are normal for the default certificate.

5. Verify and accept the certificate, either permanently (the web browser will not display the self-signing warning again) or temporarily. You cannot log in until you accept the certificate. For details on accepting the certificate, see the documentation for your web browser.
6. In **Name**, enter `admin`.
7. Leave the **Password** field empty. In its default state, there is no password for this account.
8. Click **Login**.  
With a successful login, the web-based manager appears.
9. Set the password for this account:
  - a. In the right corner of the web-based manager, click **admin**.
  - b. Click **Change Password**.



Enter an administrator password that is six characters or more. For better security, enter a longer password with a complex combination of characters and numbers, and change the password regularly. Failure to provide a strong password could compromise the security of your FortiVoice FXO gateway.

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- c. Enter a password in **New password** and **Confirm password**.  
The password can contain any character except spaces.
- d. Click **OK**.

You have completed this procedure.

10. Go to [Configuring administrator and system settings on page 10](#).

## Configuring administrator and system settings

Configure administrator and system settings on the FortiVoice Gateway by completing the following procedures:

- [Editing a physical network interface on page 10](#)
- [Configuring a static route on page 10](#)
- [Creating an additional administrator account on page 11, optional](#)
- [Configuring system options on page 11](#)
- [Configuring SIP settings on page 12, optional](#)



If you need more details about the configuration of system settings presented in this section, see the [Configuring system settings](#) section in the [FortiVoice Gateway Administration Guide](#).

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### Editing a physical network interface

Perform this procedure to set the IP address, netmask, and administrative access protocols of the FXO gateway.

1. In the web-based manager of the FortiVoice Gateway, go to **System > Network**.  
The **Network** tab displays the following ports:  
Port 1 has a default IP address and netmask set to 192.168.1.99/24.  
Port 2 has a default IP address set to 192.168.2.99/24.
2. Double-click a network interface that you want to use to set the IP address of the FXO gateway.
3. In **Addressing Mode, Manual**, go to **IP/Netmask** and edit the IP address and netmask of the interface. Make sure that this IP address is outside of the FortiGate DHCP range.
4. In **Advanced Setting**, make sure to enable the protocols that you want the network interface to use to accept connections to the FXO gateway.
5. In **Administrative status**, make sure that **Up** is selected for the network interface to be available to receive traffic.
6. Click **OK**.

### Configuring a static route

Perform this procedure to configure a static route to the router.

1. In the web-based manager of the FortiVoice Gateway, go to **System > Network**, and then click the **Routing** tab.
2. Click **New**.
3. Make sure that **Enable** is selected.
4. In **Destination IP/Netmask**, enter the destination IP address and netmask of packets subject to this static route. To create a default route that matches all destination IP addresses, enter **0.0.0.0/0**.
5. In **Interface**, select the interface that this route applies to.
6. In **Gateway**, enter the IP address of the router.

7. In **Comment**, enter any notes for this static route.
8. Click **OK**.

## Creating an additional administrator account

Optionally, perform this procedure to create an additional administrator account with restricted permissions. By default, the FXO gateway has a single administrator account called *admin*.

### Before you begin

If you want to create or edit an admin profile, perform this task on the FortiVoice phone system first. For more details about the admin profile, see the Configuring administrator profiles section in the [FortiVoice Phone System Administration Guide](#).

### Procedure steps

1. In the web-based manager of the FortiVoice Gateway, go to **System > Administrator**.
2. Click **New**.
3. In **Administrator**, enter the name for this administrator account.  
The name can contain numbers (0-9), uppercase and lowercase letters (A- Z, a- z), hyphens ( - ), and underscores ( \_ ). Other special characters and spaces are not allowed.
4. In **Email address**, enter the email address of the administrator.
5. In **Admin profile**, select the admin profile. This profile determines which functional areas the administrator account can view or affect.
6. In the **New password** and **Confirm password**, enter the password for this account.  
The password can contain any character except spaces.



Do not enter an FXO gateway administrator password that is less than six characters long. For better security, enter a longer password with a complex combination of characters and numbers, and change the password regularly. Failure to provide a strong password can compromise the security of your FXO gateway.

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7. In **Trusted hosts**, enter the IPv4 or IPv6 address or subnet and netmask from which this administrator can log in. For example, if your private network has an IP address of 192.168.1.0 and you want to allow the administrator to log in to the FXO gateway from your private network, enter `192.168.1.0/24`.  
If you want the administrator to access the FXO gateway from any IP address, use `0.0.0.0/0`.
8. In **Select language**, select the language to display in the web-based manager when this administrator logs in.
9. In **Select theme**, select the theme to display in the web-based manager when this administrator logs in.
10. In **Description**, enter any notes for this account.
11. Click **Create**.

## Configuring system options

Perform this procedure to set the system idle timeout and administration ports.

1. In the web-based manager of the FortiVoice Gateway, go to **System > Configuration**, and then click the **Option** tab.
2. In **Idle timeout**, enter the amount of time in minutes that an administrator can be inactive before the FXO gateway automatically logs out the administrator.

3. In **Administration Ports**, specify the TCP ports for the administrative access on all interfaces.

Default port numbers:

- **HTTP port number:** 80
- **HTTPS port number:** 443
- **SSH port number:** 22
- **TELNET port number:** 23

4. Click **Apply**.

## Configuring SIP settings

Optionally, perform this procedure to configure SIP settings.

1. In the web-based manager of the FortiVoice Gateway, go to **System > Advanced Setting**, and then click the **SIP** tab.
2. In **SIP Transport**, enable the ports as required.  
SIP communications commonly uses TCP or UDP port 5060.  
Port 5060 is used for nonencrypted SIP signaling sessions.  
Port 5061 is typically used for SIP sessions encrypted with the TLS protocol.
3. In **RTP Setting**, keep the default values.
4. Click **Apply**.  
You have completed this procedure.
5. Go to [Upgrading the FXO gateway firmware on page 12](#).

## Upgrading the FXO gateway firmware

Perform this procedure to upgrade the FXO gateway firmware.

### Procedure steps

1. Identify the firmware version that is running on the gateway:
  - a. In the web-based manager of the FortiVoice Gateway, go to **Dashboard**.
  - b. In the **Status** tab, go to the **System Information** widget and review the **Firmware version** row.
  - c. Take note of the firmware version and build number.
2. Identify the latest software release that is available for the gateway firmware:
  - a. Go to the [Fortinet Technical Support](#) website.
  - b. Log in to your existing account or register for an account.
  - c. Click **Support** and then in **Downloads**, click **Firmware Download**.
  - d. In **Select Product**, select **FortiVoiceEnterprise**.
  - e. In the **Release Notes** tab, review the FortiVoiceEnterprise 6.4 list to identify the latest firmware version.
  - f. Compare the firmware version and build number with the firmware version that is running on the gateway.
  - g. If the build number of the firmware version running on the gateway matches the one on the Fortinet Support website, then you do not need to perform an upgrade. You have completed this procedure. Go to one of the following procedures:
    - [Adding an FXO gateway \(auto-discovered\) on page 13](#)
    - [Adding an FXO gateway \(not auto-discovered\) on page 15](#)

- h. If the build number of the firmware version running on the gateway is an earlier build, then you need to prepare for an upgrade:
  - i. Review the [FortiVoice Phone System Release Notes](#). This document includes the most current upgrade information such as supported upgrade paths and may also contain details that were unavailable at the time this procedure was created.
  - ii. In the **Download** tab, navigate through the v6.00 directories to locate the firmware image file. For example, FVG\_GO08-v64-build0343-FORTINET.out.
  - iii. To download the firmware image file to your management computer, click **HTTPS**.
  - iv. Save the file on your management computer and take note of the location where you save the file.
3. Back up the configuration file:
  - a. In the web-based manager of the FortiVoice Gateway, go to **Dashboard**.
  - b. In the **Status** tab, go to the **System Information** widget and the **System configuration** row.
  - c. Click **Backup**.
  - d. Save the file on your management computer and take note of the location where you save the file.
4. Upgrade the firmware:
  - a. In the **System Information** widget, go to the **Firmware version** row.
  - b. Click **Update**.
  - c. Locate the firmware file and then upload that file.  
Your web browser uploads the firmware file to the gateway.
  - d. To confirm, click **Yes**.  
The gateway installs the firmware and restarts.
  - e. To make sure that the FortiVoice Gateway web-based manager reloads correctly and displays all changes, clear the cache of your web browser and restart it.
5. Verify that the firmware is successfully installed:
  - a. In the **System Information** widget, go to the **Firmware version** row.
  - b. Make sure that the firmware version is the one that you upgraded to.  
You have completed this procedure.
6. Go to one of the following procedures:
  - [Adding an FXO gateway \(auto-discovered\) on page 13](#)
  - [Adding an FXO gateway \(not auto-discovered\) on page 15](#)


## Adding an FXO gateway (auto-discovered)

The FortiVoice phone system can auto-discover an FXO gateway when they are on the same LAN. With an auto-discovered device, you can create a new configuration for that gateway or replace an existing gateway configuration.

### Procedure steps

1. Connect to the web-based manager of the FortiVoice phone system.
2. Go to **Managed System > Gateway**.
3. In the **FXO Gateway** tab, click **Unmanaged Gateway**.  
The dialog opens and displays all the gateways discovered on the LAN of the FortiVoice phone system.
4. Select the FXO gateway that you want to add.

5. In the **Actions** drop-down list, select one of the following actions:
  - **Create New Device** to add the gateway as a new entry into the FortiVoice phone system. Go to [step 6](#).
  - **Replace Existing Device** to choose which gateway to replace. You can use this option in a situation where, for example, you want to replace a defective gateway. Go to [step 9](#).
6. If you selected **Create New Device**, then configure the following settings:

GUI field	Description
<b>Name</b>	Enter a unique name to identify the FXO gateway.
<b>Enabled</b>	Select to activate the configuration of the FXO gateway.
<b>Display name</b>	Not required. You can leave this field empty.
<b>Hostname/IP address</b>	<p>The hostname or IP address of the auto-discovered FXO gateway. For an auto-discovered FXO gateway, the FortiVoice phone system autopopulates this field.</p> <p><b>Get Device Information:</b></p> <ul style="list-style-type: none"> <li>• Before you click this button, make sure to enter the required information in the <b>Admin user name</b> and <b>Admin password</b> fields below.</li> <li>• Click this button to poll the FXO gateway and get the MAC address of the gateway. This action can confirm that the systems can communicate and that the password is valid.</li> </ul> <p><b>Connect Device:</b> This procedure does not use this button. With this button, you would access the FortiVoice Gateway web-based manager in a separate tab in your web browser.</p>
<b>Admin user name</b>	<p>Enter the user name of the administrator account used for logging in to the FXO gateway.</p> <p>The default is admin.</p>
<b>Admin password</b>	<p>Enter the password associated with the Admin user name.</p> <p>To show the password, click the eye icon .</p> <p>The default is no password.</p>
<b>Serial number</b>	The serial number of the gateway that you are adding to the FortiVoice phone system. For an auto-discovered FXO gateway, the FortiVoice phone system autopopulates this field.
<b>Type</b>	The type of gateway that you are adding to the FortiVoice phone system.
<b>MAC address</b>	The MAC address of the gateway that you are adding to the FortiVoice phone system.
<b>Description</b>	Optionally, add any applicable notes for this gateway.

7. Click **Finish**.  
The FortiVoice phone system creates a trunk profile. By default, all eight ports are mapped to a single trunk.
8. You have completed this procedure. You can now go to [Applying the FXO gateway configuration on page 16](#).
9. If you selected **Replace Existing Device**, then follow the system prompts to choose which gateway configuration you want to replace and then replace it.
10. When the replacement of the existing device is complete, go to [Applying the FXO gateway configuration on page 16](#).


## Adding an FXO gateway (not auto-discovered)

Use this procedure to add an FXO gateway to the FortiVoice phone system in cases such as in the following examples:

- You are preconfiguring the FortiVoice phone system before deploying the FXO gateway.
- You are setting up the FortiVoice phone system and locating the FXO gateway on a VPN. Therefore, the devices are not on the same LAN.

### Procedure steps

1. Connect to the web-based manager of the FortiVoice phone system.
2. Go to **Managed System > Gateway**.
3. In the **FXO Gateway** tab, click **New**.
4. Configure the following settings:

GUI field	Description
<b>Enabled</b>	Select to activate the configuration of the FXO gateway.
<b>Name</b>	Enter a unique name to identify the FXO gateway.
<b>Display name</b>	Not required. You can leave this field empty.
<b>Hostname/IP address</b>	<p>Enter the hostname or IP address of the FXO gateway.</p> <p>If the FXO gateway is configured to use a non-default HTTPS port, then add <code>:&lt;port number&gt;</code> after the IP address. For example, <code>192.168.1.21:4430</code>.</p> <p><b>Get Device Information:</b></p> <ul style="list-style-type: none"> <li>• Before you click this button, make sure to enter the required information in the <b>Admin user name</b> and <b>Admin password</b> fields below.</li> <li>• Click this button to poll the FXO gateway to get the serial number and the MAC address of the gateway. This action can confirm that the systems can communicate and that the password is valid.</li> </ul> <p><b>Connect Device:</b> This procedure does not use this button. With this button, you would access the FortiVoice Gateway web-based manager in a separate tab in your web browser.</p>
<b>Admin user name</b>	<p>Enter the user name of the administrator account used for logging in to the FXO gateway.</p> <p>The default is admin.</p>
<b>Admin password</b>	<p>Enter the password associated with the Admin user name.</p> <p>To show the password, click the eye icon  .</p> <p>The default is no password.</p>
<b>Serial number</b>	Enter the serial number of the FXO gateway that you are adding to the FortiVoice phone system.
<b>Type</b>	The type of gateway that you are adding to the FortiVoice phone system.
<b>MAC address</b>	Enter the MAC address of the FXO gateway that you are adding to the FortiVoice phone system.
<b>Description</b>	Optionally, add any applicable notes for this gateway.

5. Click **Create**.

The FortiVoice phone system creates a trunk profile. By default, all eight ports are mapped to a single trunk.

You have completed this procedure.

6. Go to [Applying the FXO gateway configuration on page 16](#).

## Applying the FXO gateway configuration

The FortiVoice phone system stores a gateway configuration file. Use this procedure to apply this gateway configuration file to the FXO gateway.

### Procedure steps

1. In the web-based manager of the FortiVoice phone system, go to **Managed System > Gateway**.

2. In the **FXO Gateway** tab, review the list and select the gateway to which you want to apply the configuration file.

3. Click **Apply Configuration**.

FortiVoice displays the following message:

*Do you really want to update selected gateway?*

4. Click **OK**.

The FortiVoice phone system applies configuration changes to the dial plan routes of the FXO gateway.

With a successful update, the FXO gateway displays the following message:

*Gateway upgrade finished.*

*Successful:<gateway\_name>*

5. Click **OK**.

You have completed this procedure.

6. Go to [Verifying the FXO gateway association on page 16](#).

## Verifying the FXO gateway association

Use this procedure to verify that the association of the FXO gateway with the FortiVoice phone system is successful.

### Procedure steps

1. In the web-based manager of the FortiVoice phone system, go to **Trunk > Gateway**.

2. Locate the trunk entry for the FXO gateway.

3. Verify that the **Status** column shows *In service*.

You have completed this procedure.

4. Go to [Adding an FXO gateway trunk to an inbound dial plan on page 16](#).

## Adding an FXO gateway trunk to an inbound dial plan

Use this procedure to add an FXO gateway trunk to an inbound dial plan. This plan defines the call flow for incoming calls to the FortiVoice phone system.



**Procedure steps**

1. In the web-based manager of the FortiVoice phone system, go to **Call Routing > Inbound**.
2. In the **Inbound** tab, click **New**.
3. In the **Name** field, enter a unique name for this inbound dial plan.
4. In the **From Trunk** section, click the plus sign (+) and then select the entries that you want to add.
5. In the **Call Handling** section, update the settings to address your requirements for inbound call routing.
6. Click **Create**.  
You have completed this procedure.
7. Go to [Adding an FXO gateway trunk to an outbound dial plan on page 17](#).

## Adding an FXO gateway trunk to an outbound dial plan

Use this procedure to add an FXO gateway trunk to an outbound dial plan. This plan defines the call flow for outbound calls from the FortiVoice phone system.

**Procedure steps**

1. In the web-based manager of the FortiVoice phone system, go to **Call Routing > Outbound**.
2. In the **Outbound** tab, click **New**.
3. In the **Name** field, enter a unique name for this outbound dial plan.
4. In the **Call Handling** section, click **New**.
5. Configure the following settings:

GUI field	Description
<b>Schedule</b>	Select the FortiVoice operation schedule to implement this plan.
<b>Action</b>	Select the call handling action. If you select <i>Allow with warning</i> or <i>Deny with warning</i> , set the warning details in the <b>Warning message</b> field.
<b>Outgoing trunk</b>	Select the FXO gateway trunk profile for the outbound calls.
<b>Caller ID modification</b>	Optionally, select the caller ID modification configuration. This choice changes the phone number, caller name, or both that display on the destination phone. For more details, see the Modifying caller IDs section in the <a href="#">FortiVoice Phone System Administration Guide</a> .
<b>Warning message</b>	If you select <i>Allow with warning</i> or <i>Deny with warning</i> in the <b>Action</b> field, then select the sound file for the warning. For details about sound files, see the Managing sound files and music on hold section in the <a href="#">FortiVoice Phone System Administration Guide</a> .
<b>Delay</b>	If you want to discourage certain users from making outbound calls, enter the call delay time in seconds.

6. To save changes to the Call Handling section, click **Create**.
7. To save changes for the outbound call routing, click **Create**.  
You have completed this procedure.
8. Go to [Verifying the configuration on page 18](#).

## Verifying the configuration

After completing the procedures to set up the FortiVoice phone system and FXO gateway, use this procedure to verify the configuration.

### Procedure steps

1. Verify the call flow for incoming calls from the public phone system:
  - a. Make an incoming test call from the public phone system to a number attached to the phone line connected to the FXO gateway.
  - b. Make sure that your FortiFone can perform the following functions:
    - i. Receive the phone call.
    - ii. Display the caller ID correctly.
    - iii. Transmit and receive audio (two-way audio).
2. Verify the call flow for outgoing calls to the public phone system:
  - a. Make an outgoing test call from your FortiFone using the destination number pattern defined in the outbound call routing rule on the FortiVoice phone system so the call can be forwarded to the FXO gateway.
  - b. Make sure that the callee's phone can perform the following functions:
    - i. Receive the phone call.
    - ii. Display the caller ID correctly.
    - iii. Transmit and receive audio (two-way audio).

## Editing a trunk profile for an FXO gateway

The FortiVoice phone system automatically creates a trunk profile when you add an FXO gateway. By default, all eight ports are mapped to a single trunk. However, you can reassign the ports to multiple trunks, if required. For example, four trunks can have two ports each. If you want to edit the trunk profile, perform this procedure.

### Procedure steps

1. In the web-based manager of the FortiVoice phone system, go to **Trunk > Gateway**.
2. Double-click the trunk profile that you want to edit.
3. You can edit the following settings:

GUI field	Description
<b>Trunk gateway</b>	The unique name for the trunk profile.
<b>Enabled</b>	To activate this trunk profile, select this option.
<b>Type</b>	FXO is the gateway type.
<b>Display name</b>	Not required. You can leave this field empty.
<b>Main number</b>	Not required. You can leave this field empty. Optionally, you can add a main number for reference. For example, you can use the number assigned by your service provider to identify a group of analog lines.

GUI field	Description
<b>Mapped FXO ports</b>	The port numbers included in this profile. For a port range, enter the starting and ending ports separated by a dash. For separate ports, use a comma. For example, 1-4,6. The default is 1-8.
<b>Gateway device</b>	The device type for this profile.
<b>Gateway SIP address</b>	The SIP address of the gateway.
<b>Gateway SIP port</b>	The SIP port of the gateway.
<b>Caller ID modification</b>	Optionally, select the caller ID modification configuration. This choice changes the phone number, caller name, or both that display on the destination phone. For more details, see the Modifying caller IDs section in the <a href="#">FortiVoice Phone System Administration Guide</a> .
<b>Off hook only</b>	If the managed FXO gateway is connected to a third-party paging system and you select this option, then the gateway is kept off hook without dialing any digits. The following behaviors apply: <ul style="list-style-type: none"> <li>For a paging system (without zones), the paging user lifts the handset and makes an announcement through all speakers.</li> <li>For a paging system (with zones), the paging user lifts the handset, dials digits or a code to access a zone, and makes an announcement through speakers associated with the specified zone.</li> </ul>
<b>Description</b>	Optionally, add notes for this trunk profile.

- To save changes, click **OK**.
- Send the configuration changes to the FXO gateway by following the instructions in [Applying the FXO gateway configuration on page 16](#).

## Creating an additional trunk profile for an FXO gateway

An FXO gateway has eight FXO ports. By default, all eight ports are mapped to a single trunk. However, you can reassign the ports to multiple trunks, if required. For example, you can create four trunks with two ports each. If you want to create an additional trunk profile for an FXO gateway, perform this procedure.

### Before you begin



Before adding any port to a trunk, reduce the port number in the default trunk accordingly. For details about how to edit a trunk profile, see [Editing a trunk profile for an FXO gateway on page 18](#).

### Procedure steps

- In the web-based manager of the FortiVoice phone system, go to **Trunk > Gateway**.
- Click **New**.

## 3. Configure the following settings:

GUI field	Description
<b>Trunk gateway</b>	Enter a unique name for this trunk profile.
<b>Enabled</b>	To activate this trunk profile, select this option.
<b>Type</b>	Select <b>FXO</b> .
<b>Display name</b>	Not required. You can leave this field empty.
<b>Main number</b>	Not required. You can leave this field empty. Optionally, you can add a main number for reference. For example, you can use the number assigned by your service provider to identify a group of analog lines.
<b>Mapped FXO ports</b>	The port numbers included in this profile. For a port range, enter the starting and ending ports separated by a dash. For separate ports, use a comma. For example, 1-4,6. The default is 1-8.
<b>Gateway device</b>	Select the device type for this profile.
<b>Gateway SIP address</b>	Enter the SIP address of the gateway.
<b>Gateway SIP port</b>	Enter the SIP port of the gateway.
<b>Caller ID modification</b>	Optionally, select the caller ID modification configuration. This choice changes the phone number, caller name, or both that display on the destination phone. For more details, see the Modifying caller IDs section in the <a href="#">FortiVoice Phone System Administration Guide</a> .
<b>Off hook only</b>	If the managed FXO gateway is connected to a third-party paging system and you select this option, then the gateway is kept off hook without dialing any digits. The following behaviors apply: <ul style="list-style-type: none"> <li>For a paging system (without zones), the paging user lifts the handset and makes an announcement through all speakers.</li> <li>For a paging system (with zones), the paging user lifts the handset, dials digits or a code to access a zone, and makes an announcement through speakers associated with the specified zone.</li> </ul>
<b>Description</b>	Optionally, add notes for this trunk profile.

- To save changes, click **Create**.
- Send the configuration changes to the FXO gateway by following the instructions in [Applying the FXO gateway configuration on page 16](#).



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