



FortiGate-60 Modem Interface

Technical Bulletin

<i>FortiGate-60 Modem Interface Technical Bulletin</i>	
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Description:	Describes how to configure FortiGate-60 modem support and describes the FortiGate-60 modem CLI commands.
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Version	Date	Description of changes
First Release	21 October 2003	

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FortiGate-60 modem configuration

You can connect a modem to the FortiGate unit and use it as either a backup interface or standalone interface.

- In backup mode, the modem interface automatically takes over from a selected ethernet interface when that ethernet interface is unavailable.
- In standalone mode, the modem interface is the connection from the FortiGate unit to the Internet.

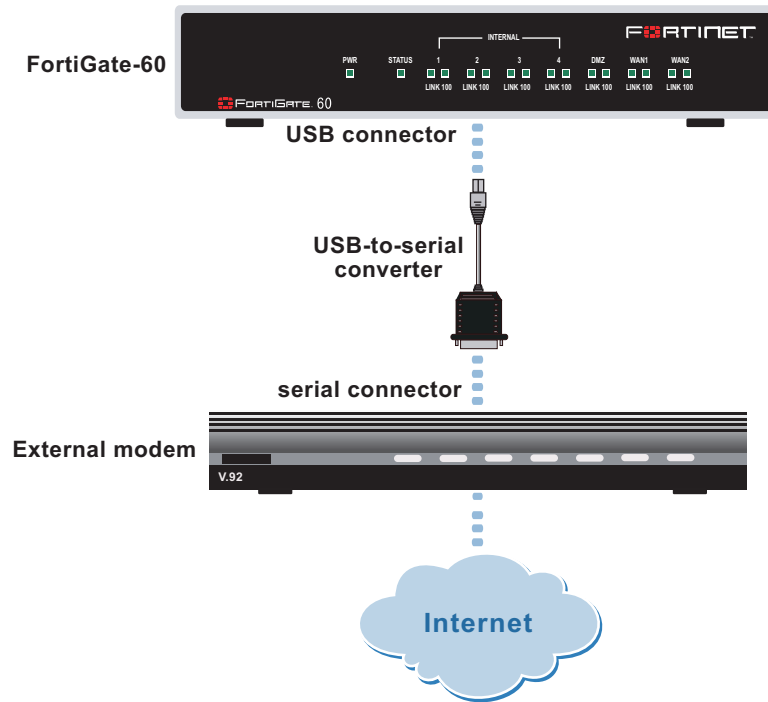
When connecting to the ISP, in either configuration, the FortiGate unit modem can automatically dial up to three dialup accounts until the modem connects to an ISP.

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Connecting a modem to the FortiGate unit

The FortiGate unit can operate with most standard external serial interface modems that support standard Hayes AT commands. To connect, install a USB-to-serial converter between one of the two USB ports on the FortiGate unit and the serial port on the modem. The FortiGate unit does not support a direct USB connection between the two devices.

Figure 1: Example modem interface network connection



Configuring modem settings

Configure modem settings so that the FortiGate unit uses the modem to connect to your ISP dialup accounts. You can configure the modem to connect to up to three dialup accounts. You can also enable and disable FortiGate modem support, configure how the modem dials, and select the FortiGate interface that the modem is redundant for.

To configure modem settings:

- 1 Go to **System > Network > Modem**.
- 2 Select Enable USB Modem.
- 3 Change any of the following dialup connection settings:

Redial Limit	The maximum number of times (1-10) that the FortiGate unit dials the ISP to restore an active connection on the modem interface. The default redial limit is 1. Select None to allow the modem to never stop redialing.
Holddown Timer	For backup configurations. The time (1-60 seconds) that the FortiGate unit waits before switching from the modem interface to the primary interface, after the primary interface has been restored. The default is 1 second. Configure a higher value if you find the FortiGate unit switching repeatedly between the primary interface and the modem interface.
Redundant for	To associate the modem interface with the ethernet interface that you want to either back up (backup configuration) or replace (standalone configuration).
- 4 Enter the following Dialup Account 1 settings:

Phone Number The phone number required to connect to the dialup account. Do not add spaces to the phone number. Make sure to include standard special characters for pauses, country codes, and other functions as required by your modem to connect to your dialup account.

User Name The user name (maximum 63 characters) sent to the ISP.

Password The password sent to the ISP.

- 5 If you have multiple dialup accounts, enter Phone Number, User Name, and Password for Dialup Account 2 and Dialup Account 3.
- 6 Select Apply.

Connecting to a dialup account

Use the following procedure to connect the modem to a dialup account.

To connect to a dialup account

- 1 Go to **System > Network > Modem**.
- 2 Select Enable USB Modem.
- 3 Make sure there is correct information in one or more Dialup Accounts.
- 4 Select Apply if you make any configuration changes.
- 5 Select Dial Up.
The FortiGate unit initiates dialing into each dialup account in turn until the modem connects to an ISP.

Disconnecting the modem

Use the following procedure to disconnect the modem from a dialup account.

To disconnect the modem

- 1 Go to **System > Network > Modem**.
- 2 Select Hang Up if you want to disconnect from the dialup account.

Viewing modem status

To view the status of the modem connection go to **System > Network > Modem**.

Modem status is one of the following:

not active The modem interface is not connected to the ISP.

active The modem interface is attempting to connect to the ISP, or is connected to the ISP.

A green check mark indicates the active dialup account.

The IP address and netmask assigned to the modem interface appears on the System Network Interface page of the web-based manager.

Backup mode configuration

The modem interface in backup mode backs up a selected ethernet interface. If that ethernet interface disconnects from its network, the modem automatically dials the configured dialup accounts. When the modem connects to a dialup account, the FortiGate unit routes IP packets normally destined for the selected ethernet interface to the modem interface.

The FortiGate unit disconnects the modem interface and switches back to the ethernet interface when the ethernet interface can again connect to its network.

For the FortiGate unit to be able to switch from an ethernet interface to the modem you must select the name of the interface in the modem configuration and configure a ping server for that interface. You must also configure firewall policies for connections between the modem interface and other FortiGate interfaces.



Note: Do not add policies for connections between the modem interface and the interface that the modem is backing up.

To configure backup mode

- 1 Go to **System > Network > Modem**.
- 2 From the Redundant for list, select the ethernet interface that you want the modem to back up.
- 3 Configure other modem settings as required.
See [“Configuring modem settings” on page 6](#).
- 4 Configure a ping server for the ethernet interface selected in step 2.
See the *FortiGate Installation and Configuration Guide* for information about adding a ping server.
- 5 Configure firewall policies for connections to the modem interface.
See [“Adding firewall policies for modem connections” on page 9](#).

Standalone mode configuration

In standalone mode, you manually connect the modem to a dialup account. The modem interface operates as the primary connection to the Internet. The FortiGate unit routes traffic through the modem interface, which remains permanently connected to the dialup account.

If the connection to the dialup account fails, the FortiGate unit redials the modem. The modem redials the number of times specified by the redial limit, or until it connects to a dialup account.

In standalone mode the modem interface replaces the WAN1 or WAN2 ethernet interface. When configuring the modem, you must set Redundant for to the name of the ethernet interface that the modem interface replaces. You must also configure firewall policies for connections between the modem interface and other FortiGate interfaces.



Note: Do not add a default route to the ethernet interface that the modem interface replaces.



Note: Do not add firewall policies for connections between the ethernet interface that the modem replaces and other interfaces.

To operate in standalone mode

- 1 Go to **System > Network > Modem**.
- 2 From the Redundant for list, select the ethernet interface that the modem is replacing.
- 3 Configure other modem settings as required.
See [“Configuring modem settings” on page 6](#).
Make sure there is correct information in one or more Dialup Accounts.
- 4 Select Dial Up.
The FortiGate unit initiates dialing into each dialup account in turn until the modem connects to an ISP.
- 5 Configure firewall policies for connections to the modem interface.
See [“Adding firewall policies for modem connections” on page 9](#).

Adding firewall policies for modem connections

The modem interface requires firewall addresses and policies. You can add one or more addresses to the modem interface. For information about adding addresses, see the *FortiGate Installation and Configuration Guide*. When you add addresses, the modem interface appears on the policy grid.

You can configure firewall policies to control the flow of packets between the modem interface and the other interfaces on the FortiGate unit. For information about adding firewall policies, the *FortiGate Installation and Configuration Guide*.

FortiGate-60 modem CLI commands

This section describes the following FortiGate-60 modem CLI commands:

- [set system modem dial](#)
- [set system modem isp](#)
- [set system modem status](#)
- [get system modem](#)

set system modem dial

Use this command to initiate dialing up or hanging up a modem connected to the FortiGate-60 unit.

Syntax description

Keyword	Description	Default	Availability
{up down}	Dial or hang up the modem.	No default.	FortiGate-60 only.

Example

Use the following command to initiate dialing the modem:

```
set system modem dial up
```

Related commands

- [set system modem isp](#)
- [set system modem status](#)
- [get system modem](#)

set system modem isp

Use this command to add the information to connect to up to three dialup accounts using a modem connected to the FortiGate-60 unit. The modem interface to the FortiGate-60 unit can act as a backup interface for one of the FortiGate ethernet interfaces or as a standalone dialup interface.

Syntax description

Keyword	Description	Default	Availability
{1 2 3}	You can enter information for up to 3 dialup accounts. Use this command to enter the information for dialup accounts 1, 2, or 3.	No default.	FortiGate-60 only.
passwd <password_str>	Enter the password used to access the specified dialup account.	No default.	FortiGate-60 only.
phone <phone number>	Enter the phone number required to connect to the dialup account. Do not add spaces to the phone number. Make sure to include standard special characters for pauses, country codes, and other functions as required by your modem to connect to your dialup account.	No default.	FortiGate-60 only.
user <name_str>	Enter the user name used to access the specified dialup account.	No default.	FortiGate-60 only.

Example

Use the following command to add the information for dialup account 1:

```
set system modem isp 1 passwd testpass phone 1234567891 user testuser
```

Related commands

- [set system modem dial](#)
- [set system modem status](#)
- [get system modem](#)

set system modem status

Use this command to enable and disable the modem connected to the FortiGate-60 USB port. You can also use this command to configure the holddown timer, redial limit and backup interface.

Syntax description

Keyword	Description	Default	Availability
{enable disable}	Enable or disable modem support.	No default.	FortiGate-60 only.
hold <timer_integer>	Used only when the modem is configured as a backup for an interface. Set the time (1-60 seconds) that the FortiGate unit waits before switching from the modem interface to the primary interface, after the primary interface has been restored.	1 second	FortiGate-60 only.
interface <name_str>	Enter an interface name to associate the modem interface with the ethernet interface that you want to either back up (backup configuration) or replace (standalone configuration).	No default.	FortiGate-60 only.
redial {<repeat_integer> none}	Set the maximum number of times (1-10) that the FortiGate unit dials the ISP to restore an active connection on the modem interface. Select None to allow the modem to redial without a limit.	1	FortiGate-60 only.

Example

Use the following command to enable the modem with a redial limit of 10, a holddown time of 5 seconds, and as a backup for the WAN1 interface:

```
set system modem status enable redial 10 hold 5 interface wan1
```

Related commands

- [set system modem dial](#)
- [set system modem isp](#)
- [get system modem](#)

get system modem

Display the modem configuration on a FortiGate-60 unit.

```
get system modem
```

Related commands

- [set system modem dial](#)
- [set system modem isp](#)
- [set system modem status](#)