

Configuring Username and Password Security

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Overview

Feature	Default	Menu	CLI	Web
Set Usernames	none	—	—	page 2-8
Set a Password	none	page 2-5	page 2-7	page 2-8
Delete Password Protection	n/a	page 2-6	page 2-7	page 2-8
show front-panel-security	n/a	—	page 1-13	—
front-panel-security		—	page 1-13	—
password-clear	enabled	—	page 1-13	—
reset-on-clear	disabled	—	page 1-14	—
factory-reset	enabled	—	page 1-15	—
password-recovery	enabled	—	page 1-15	—

Console access includes both the menu interface and the CLI. There are two levels of console access: Manager and Operator. For security, you can set a *password pair* (username and password) on each of these levels.

Note

Usernames are optional. Also, in the menu interface, you can configure passwords, but not usernames. To configure usernames, use the CLI or the web browser interface.

Level	Actions Permitted
Manager:	Access to all console interface areas. <i>This is the default level.</i> That is, if a Manager password has <i>not</i> been set prior to starting the current console session, then anyone having access to the console can access any area of the console interface.
Operator:	Access to the Status and Counters menu, the Event Log, and the CLI*, but no Configuration capabilities. On the Operator level, the configuration menus, Download OS, and Reboot Switch options in the Main Menu are not available.

*Allows use of the ping, link-test, show, menu, exit, and logout commands, plus the enable command if you can provide the Manager password.

To configure password security:

1. Set a Manager password pair (and an Operator password pair, if applicable for your system).
2. Exit from the current console session. A Manager password pair will now be needed for full access to the console.

If you do steps 1 and 2, above, then the next time a console session is started for either the menu interface or the CLI, a prompt appears for a password. Assuming you have protected both the Manager and Operator levels, the level of access to the console interface will be determined by which password is entered in response to the prompt.

If you set a Manager password, you may also want to configure an inactivity timer. This causes the console session to end after the specified period of inactivity, thus giving you added security against unauthorized console access. You can use either of the following to set the inactivity timer:

- **Menu Interface:** System Information screen (Select “2. Switch Configuration.”)
- **CLI:** Use the **console inactivity-timer < 0 | 1 | 5 | 10 | 15 | 20 | 30 | 60 | 120 >**

Note

The manager and operator passwords and (optional) usernames control access to the menu interface, CLI, and web browser interface.

If you configure only a Manager password (with no Operator password), and in a later session the Manager password is not entered correctly in response to a prompt from the switch, then the switch does not allow management access for that session.

If the switch has a password for both the Manager and Operator levels, and neither is entered correctly in response to the switch's password prompt, then the switch does not allow management access for that session.

Passwords are case-sensitive.

Caution

If the switch has neither a Manager nor an Operator password, anyone having access to the switch through either Telnet, the serial port, or the web browser interface can access the switch with full manager privileges. Also, if you configure only an Operator password, entering the Operator password enables full manager privileges.

The rest of this chapter covers how to:

- Set passwords
- Delete passwords
- Recover from a lost password
- Maintain front-panel security

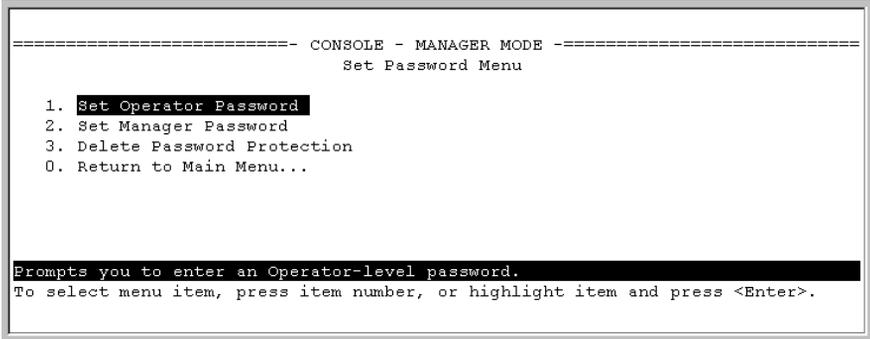
Configuring Local Password Security

Menu: Setting Passwords

As noted earlier in this section, usernames are optional. Configuring a username requires either the CLI or the web browser interface.

1. From the Main Menu select:

3. Console Passwords



```
----- CONSOLE - MANAGER MODE -----  
Set Password Menu  
  
1. Set Operator Password  
2. Set Manager Password  
3. Delete Password Protection  
0. Return to Main Menu...  
  
Prompts you to enter an Operator-level password.  
To select menu item, press item number, or highlight item and press <Enter>.
```

Figure 2-1. The Set Password Screen

2. To set a new password:
 - a. Select **Set Manager Password** or **Set Operator Password**. You will then be prompted with **Enter new password**.
 - b. Type a password of up to 16 ASCII characters with no spaces and press **[Enter]**. (Remember that passwords are case-sensitive.)
 - c. When prompted with **Enter new password again**, retype the new password and press **[Enter]**.

After you configure a password, if you subsequently start a new console session, you will be prompted to enter the password. (If you use the CLI or web browser interface to configure an optional username, the switch will prompt you for the username, and then the password.)

To Delete Password Protection (Including Recovery from a Lost Password): This procedure deletes *all* usernames (if configured) and passwords (Manager and Operator).

If you have physical access to the switch, press and hold the Clear button (on the front of the switch) for a minimum of one second to clear all password protection, then enter new passwords as described earlier in this chapter.

If you do not have physical access to the switch, you will need Manager-Level access:

1. Enter the console at the Manager level.
2. Go to the **Set Passwords** screen as described above.
3. Select **Delete Password Protection**. You will then see the following prompt:

Continue Deletion of password protection? No

4. Press the Space bar to select **Yes**, then press **[Enter]**.
5. Press **[Enter]** to clear the Password Protection message.

To Recover from a Lost Manager Password: If you cannot start a console session at the Manager level because of a lost Manager password, you can clear the password by getting physical access to the switch and pressing and holding the Clear button for a minimum of one second. This action deletes all passwords and usernames (Manager and Operator) used by both the console and the web browser interface.

CLI: Setting Passwords and Usernames

Commands Used in This Section

password	See below.
----------	------------

Configuring Manager and Operator Passwords.

Syntax: [no] password <manager | operator > [user-name ASCII-STR]
[no] password < all >

```
ProCurve(config)# password manager
New password: *****
Please retype new password: *****
ProCurve(config)# password operator
New password: *****
Please retype new password: *****
```

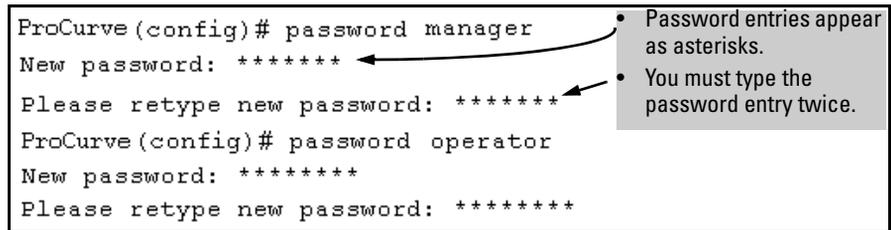


Figure 2-2. Example of Configuring Manager and Operator Passwords

To Remove Password Protection. Removing password protection means to eliminate password security. This command prompts you to verify that you want to remove one or both passwords, then clears the indicated password(s). (This command also clears the username associated with a password you are removing.) For example, to remove the Operator password (and username, if assigned) from the switch, you would do the following:

```
ProCurve(config)# no password
Password protection will be deleted, do you want to continue [y/n]? y
ProCurve(config)#
```

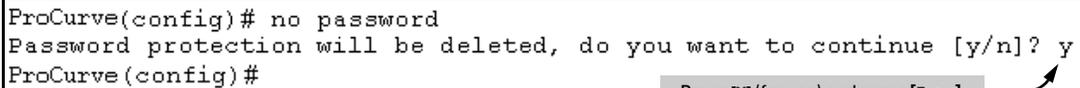


Figure 2-3. Removing a Password and Associated Username from the Switch

The effect of executing the command in figure 2-3 is to remove password protection from the Operator level. (This means that anyone who can access the switch console can gain Operator access without having to enter a username or password.)

Web: Setting Passwords and Usernames

In the web browser interface you can enter passwords and (optional) usernames.

To Configure (or Remove) Usernames and Passwords in the web browser interface.

1. Click on the **Security** tab.

Click on **[Device Passwords]**.

2. Do one of the following:
 - To set username and password protection, enter the usernames and passwords you want in the appropriate fields.
 - To remove username and password protection, leave the fields blank.
3. Implement the usernames and passwords by clicking on **[Apply Changes]**.

Front-Panel Security

The front-panel security features provide the ability to independently enable or disable some of the functions of the two buttons located on the front of the switch for clearing the password (Clear button) or restoring the switch to its factory default configuration (Reset+Clear buttons together). The ability to disable Password Recovery is also provided for situations which require a higher level of switch security.

The front-panel Security features are designed to prevent malicious users from:

- Resetting the password(s) by pressing the Clear button
- Restoring the factory default configuration by using the Reset+Clear button combination.
- Gaining management access to the switch by having physical access to the switch itself

When Security Is Important

Some customers require a high level of security for information. Also, the Health Insurance Portability and Accountability Act (HIPAA) of 1996 requires that systems handling and transmitting confidential medical records must be secure.

It used to be assumed that only system and network administrators would be able to get access to a network switch because switches were typically placed in secure locations under lock and key. For some customers this is no longer true. Others simply want the added assurance that even if someone did manage to get to the switch that data would still remain secure.

If you do not invoke front-panel security on the switch, user-defined passwords can be deleted by pushing the Clear button on the front panel. This function exists so that if customers forget the defined passwords they can still get back into the switch and reset the passwords. This does, however, leave the switch vulnerable when it is located in an area where non-authorized people have access to it. Passwords could easily be cleared by pressing the Clear button. Someone who has physical access to the switch may be able to erase the passwords (and possibly configure new passwords) and take control of the switch.

As a result of increased security concerns, customers now have the ability to stop someone from removing passwords by disabling the Clear and/or Reset buttons on the front of the switch.

Front-Panel Button Functions

The front panel of the switch includes the Reset button and the Clear button.

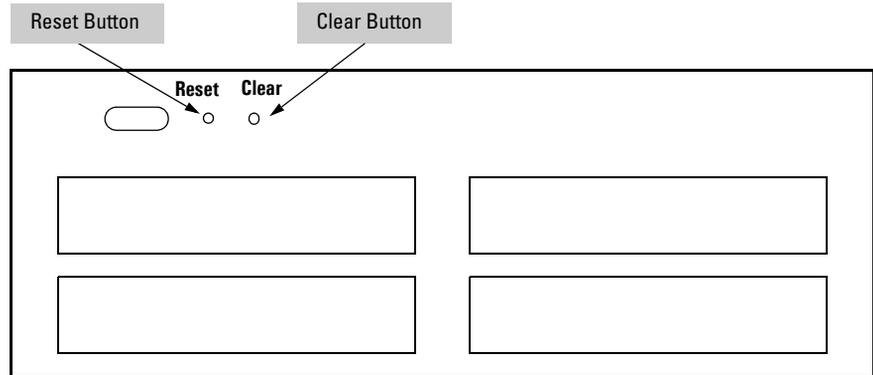


Figure 2-4. Front-Panel Button Locations on a ProCurve 5300xl Switch and 4200vl Switch

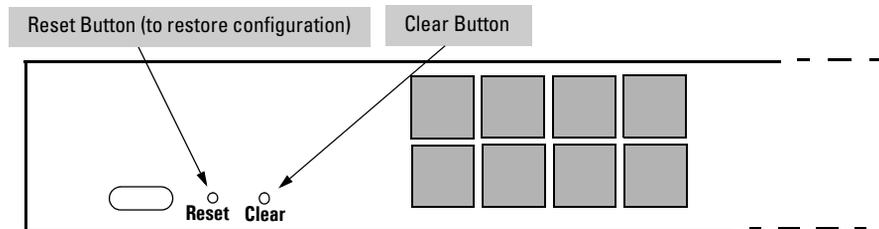


Figure 2-5. Front-Panel Button Locations on the ProCurve 3400cl Switches

Clear Button

Pressing the Clear button alone for one second resets the password(s) configured on the switch.

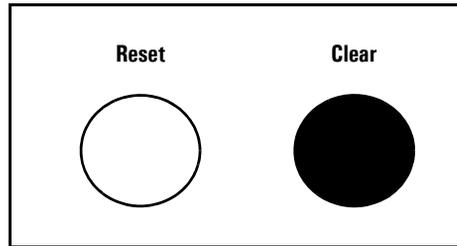


Figure 2-6. Press the Clear Button for One Second To Reset the Password(s)

Reset Button

Pressing the Reset button alone for one second causes the switch to reboot.

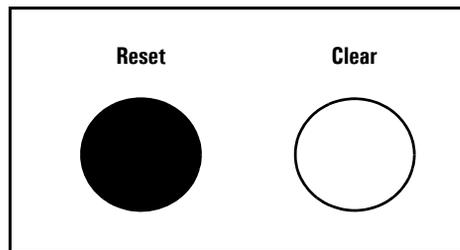


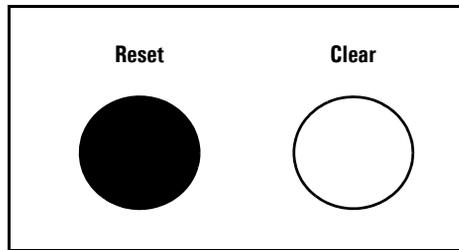
Figure 2-7. Press and hold the Reset Button for One Second To Reboot the Switch

Restoring the Factory Default Configuration

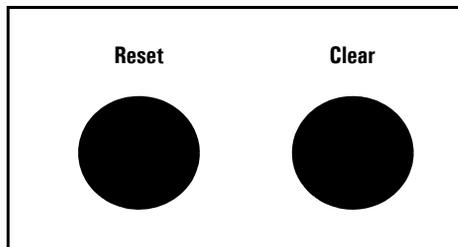
You can also use the Reset button *together* with the Clear button (Reset+Clear) to **restore the factory default configuration** for the switch. To do this:

1. Press and hold the Reset button.

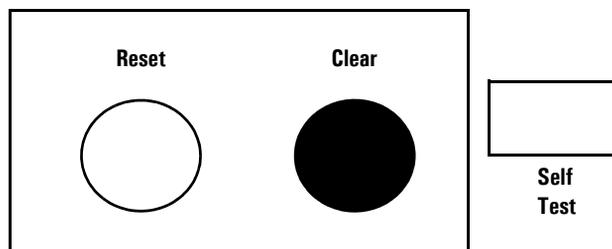
Configuring Username and Password Security
Front-Panel Security



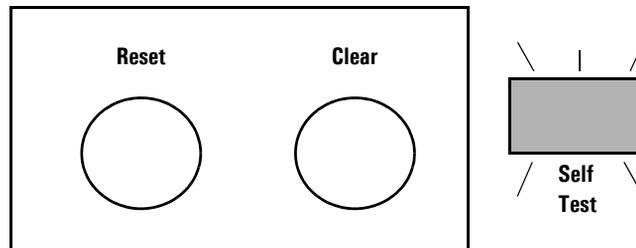
2. While holding the Reset button, press and hold the Clear button.



3. Release the Reset button and wait for about one second for the Self-Test LED to start flashing.



4. When the Self-Test LED begins flashing, release the Clear button



This process restores the switch configuration to the factory default settings.

Configuring Front-Panel Security

Using the **front-panel-security** command from the global configuration context in the CLI you can:

- Disable or re-enable the password-clearing function of the Clear button. Disabling the Clear button means that pressing it does not remove local password protection from the switch. (This action affects the Clear button when used alone, but does not affect the operation of the Reset+Clear combination described under “Restoring the Factory Default Configuration” on page 2-11.)
- Configure the Clear button to reboot the switch after clearing any local usernames and passwords. This provides an immediate, visual means (plus an Event Log message) for verifying that any usernames and passwords in the switch have been cleared.
- Modify the operation of the Reset+Clear combination (page 2-11) so that the switch still reboots, but does *not* restore the switch’s factory default configuration settings. (Use of the Reset button alone, to simply reboot the switch, is not affected.)
- Disable or re-enable Password Recovery.

Syntax: show front-panel-security

Displays the current front-panel-security settings:

Clear Password: Shows the status of the Clear button on the front panel of the switch. **Enabled** means that pressing the Clear button erases the local usernames and passwords configured on the switch (and thus removes local password protection from the switch). **Disabled** means that pressing the Clear button does not remove the local usernames and passwords configured on the switch. (Default: **Enabled**.)

Reset-on-clear: Shows the status of the reset-on-clear option (**Enabled or Disabled**). When reset-on-clear is disabled and Clear Password is enabled, then pressing the Clear button erases the local usernames and passwords from the switch. When reset-on-clear is enabled, pressing the Clear button erases the local usernames and passwords from the switch and reboots the switch. (Enabling reset-on-clear automatically enables clear-password.) (Default: **Disabled**.)

Factory Reset: Shows the status of the Reset button on the front panel of the switch. Enabled means that pressing the Reset button reboots the switch and also enables the Reset button to be used with the Clear button (page 2-11) to reset the switch to its factory-default configuration. (Default: **Enabled**.)

Password Recovery: Shows whether the switch is configured with the ability to recover a lost password. (Refer to “Password Recovery Process” on page 2-20.) (Default: **Enabled**.)

***CAUTION:** Disabling this option removes the ability to recover a password on the switch. Disabling this option is an extreme measure and is not recommended unless you have the most urgent need for high security. If you disable password-recovery and then lose the password, you will have to use the Reset and Clear buttons (page 2-11) to reset the switch to its factory-default configuration and create a new password.*

For example, **show front-panel-security** produces the following output when the switch is configured with the default front-panel security settings.

```
ProCurve(config)# show front-panel-security
Clear Password           - Enabled
  Reset-on-clear         - Disabled
Factory Reset            - Enabled
Password Recovery        - Enabled
```

Figure 2-8. The Default Front-Panel Security Settings

Disabling the Clear Password Function of the Clear Button on the Switch's Front Panel

Syntax: no front-panel-security password-clear

*In the factory-default configuration, pressing the Clear button on the switch's front panel erases any local usernames and passwords configured on the switch. This command disables the password clear function of the Clear button, so that pressing it has no effect on any local usernames and passwords. (Default: **Enabled**.)*

Note: Although the Clear button does not erase passwords when disabled, you can still use it with the Reset button (Reset+Clear) to restore the switch to its factory default configuration, as described under “Restoring the Factory Default Configuration” on page 2-11.

This command displays a Caution message in the CLI. If you want to proceed with disabling the Clear button, type **[Y]**; otherwise type **[N]**. For example:

```
ProCurve(config)# no front-panel-security password-clear
                    **** CAUTION ****
Disabling the clear button prevents switch passwords from being easily reset or
recovered. Ensure that you are familiar with the front panel security options
before proceeding.

Continue with disabling the clear button [y/n]? y
ProCurve(config)# show front-panel-security
Clear Password      - Disabled
Factory Reset       - Enabled
Password Recovery   - Enabled
```

Indicates the command has disabled the Clear button on the switch's front panel. In this case the Show command does not include the **reset-on-clear** status because it is inoperable while the Clear Password functionality is disabled, and must be reconfigured whenever Clear Password is re-enabled.

Figure 2-9. Example of Disabling the Clear Button and Displaying the New Configuration

Re-Enabling the Clear Button on the Switch's Front Panel and Setting or Changing the "Reset-On-Clear" Operation

Syntax: [no] front-panel-security password-clear reset-on-clear

This command does both of the following:

- *Re-enables the password-clearing function of the Clear button on the switch's front panel.*
- *Specifies whether the switch reboots if the Clear button is pressed.*

*To re-enable password-clear, you must also specify whether to enable or disable the **reset-on-clear** option.*

Defaults:

- password-clear: **Enabled**.
- reset-on-clear: **Disabled**.

Thus:

- *To enable password-clear with reset-on-clear disabled, use this syntax:*

no front-panel-security password-clear reset-on-clear

- *To enable password-clear with reset-on-clear also enabled, use this syntax:*

front-panel-security password-clear reset-on-clear

(Either form of the command enables password-clear.)

Note: *If you disable **password-clear** and also disable the **password-recovery** option, you can still recover from a lost password by using the Reset+Clear button combination at reboot as described on page 2-11. Although the Clear button does not erase passwords when disabled, you can still use it with the Reset button (Reset+Clear) to restore the switch to its factory default configuration. You can then get access to the switch to set a new password.*

For example, suppose that **password-clear** is disabled and you want to restore it to its default configuration (enabled, with **reset-on-clear** disabled).

```

ProCurve(config)# show front-panel-security
Clear Password      - Disabled
Factory Reset       - Enabled
Password Recovery   - Enabled

ProCurve(config)# no front-panel-security password-clear reset-on-clear
ProCurve(config)# show front-panel-security
Clear Password      - Enabled
Reset-on-clear      - Disabled
Factory Reset       - Enabled
Password Recovery   - Enabled

```

Shows password-clear disabled.

Enables password-clear, with reset-on-clear disabled by the “no” statement at the beginning of the command.

Shows password-clear enabled, with reset-on-clear disabled.

Figure 2-10. Example of Re-Enabling the Clear Button’s Default Operation

Changing the Operation of the Reset+Clear Combination

In their default configuration, using the Reset+Clear buttons in the combination described under “Restoring the Factory Default Configuration” on page 2-11 replaces the switch’s current startup-config file with the factory-default startup-config file, then reboots the switch, and removes local password protection. *This means that anyone who has physical access to the switch could use this button combination to replace the switch’s current configuration with the factory-default configuration, and render the switch accessible without the need to input a username or password.* You can use the **factory-reset** command to prevent the Reset+Clear combination from being used for this purpose.

Syntax: [no] front-panel-security factory-reset

Disables or re-enables the following functions associated with using the Reset+Clear buttons in the combination described under “Restoring the Factory Default Configuration” on page 2-11:

- *Replacing the current startup-config file with the factory-default startup-config file*
- *Clearing any local usernames and passwords configured on the switch*

(Default: Both functions enabled.)

Notes: *The Reset+Clear button combination always reboots the switch, regardless of whether the “no” form of the command has been used to disable the above two functions. Also, if you disable **factory-reset**, you cannot disable the **password-recovery** option, and the reverse.*

```
ProCurve(config)# no front-panel-security factory-reset
***** CAUTION *****
Disabling the factory reset option prevents switch configuration and passwords
from being easily reset or recovered. Ensure that you are familiar with the
front panel security options before proceeding.
Continue with disabling the factory reset option[y/n]? y
ProCurve(config)# show front-panel-security
Clear Password          - Enabled
Reset-on-clear          - Disabled
Factory Reset           - Disabled
Password Recovery       - Enabled
```

The command to disable the factory-reset operation produces this caution. To complete the command, press [Y]. To abort the command, press [N].

Completes the command to disable the factory reset option.

Displays the current front-panel-security configuration, with Factory Reset disabled.

Figure 2-11. Example of Disabling the Factory Reset Option

Password Recovery

The password recovery feature is enabled by default and provides a method for regaining management access to the switch (without resetting the switch to its factory default configuration) in the event that the system administrator loses the local manager username (if configured) or password. Using Password Recovery requires:

- **password-recovery** enabled (the default) on the switch prior to an attempt to recover from a lost username/password situation
- Contacting your ProCurve Customer Care Center to acquire a one-time-use password

Disabling or Re-Enabling the Password Recovery Process

Disabling the password recovery process means that the only method for recovering from a lost manager username (if configured) and password is to reset the switch to its factory-default configuration, which removes any non-default configuration settings.

Caution

Disabling **password-recovery** requires that **factory-reset** be enabled, and locks out the ability to recover a lost manager username (if configured) and password on the switch. In this event, there is no way to recover from a lost manager username/password situation without resetting the switch to its factory-default configuration. This can disrupt network operation and make it necessary to temporarily disconnect the switch from the network to prevent unauthorized access and other problems while it is being reconfigured. Also, with **factory-reset** enabled, unauthorized users can use the Reset+Clear button combination to reset the switch to factory-default configuration and gain management access to the switch.

Syntax: [no] front-panel-security password-recovery

Enables or (using the “no” form of the command) disables the ability to recover a lost password.

When this feature is enabled, the switch allows management access through the password recovery process described below. This provides a method for recovering from a lost manager username (if configured) and password. When this feature is disabled, the password recovery process is disabled and the only way to regain management access to the switch is to use the Reset+Clear button combination (page 2-11) to restore the switch to its factory default configuration.

Note: To disable **password-recovery**:

- You must have physical access to the front panel of the switch.
- The **factory-reset** parameter must be enabled (the default).

(Default: Enabled.)

Steps for Disabling Password-Recovery.

1. Set the CLI to the global interface context.
2. Use **show front-panel-security** to determine whether the factory-reset parameter is enabled. If it is disabled, use the **front-panel-security factory-reset** command to enable it.
3. Press and release the Clear button on the front panel of the switch.
4. Within 60-seconds of pressing the Clear button, enter the following command:
no front-panel-security password-recovery
5. Do one of the following after the “**CAUTION**” message appears:
 - If you want to complete the command, press **[Y]** (for “Yes”).
 - If you want to abort the command, press **[N]** (for “No”).

Figure 2-12 shows an example of disabling the **password-recovery** parameter.

```
ProCurve(config)# no front-panel-security password-recovery
**** CAUTION ****
Disabling the clear button without password recovery prevents switch passwords
from being reset. If the switch password is lost, restoring the default factory
configuration will be required to regain access!

Continue with disabling password recovery [y/n]? y

ProCurve(config)# _
```

Figure 2-12. Example of the Steps for Disabling Password-Recovery

Password Recovery Process

If you have lost the switch's manager username/password, but **password-recovery** is enabled, then you can use the Password Recovery Process to gain management access to the switch with an alternate password supplied by ProCurve.

Note

If you have disabled **password-recovery**, which locks out the ability to recover a manager username/password pair on the switch, then the only way to recover from a lost manager username/password pair is to use the Reset+Clear button combination described under "Restoring the Factory Default Configuration" on page 2-11. This can disrupt network operation and make it necessary to temporarily disconnect the switch from the network to prevent unauthorized access and other problems while it is being reconfigured.

To use the **password-recovery** option to recover a lost password:

1. Note the switch's base MAC address. It is shown on the label located on the upper right front corner of the switch.
2. Contact your ProCurve Customer Care Center for further assistance. Using the switch's MAC address, the ProCurve Customer Care Center will generate and provide a "one-time use" alternate password you can use with the to gain management access to the switch. Once you gain access, you can configure a new, known password.

Note

The alternate password provided by the ProCurve Customer Care Center is valid only for a single login attempt.

You cannot use the *same* “one-time-use” password if you lose the password a second time. Because the password algorithm is randomized based upon your switch's MAC address, the password will change as soon as you use the “one-time-use” password provided to you by the ProCurve Customer Care Center.

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