



# Fabric OS

## Password Recovery Notes

**Supporting Fabric OS v2.6.x, v3.1.x, v4.x, v5.x**

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## Brocade Communications Systems, Incorporated

### Corporate Headquarters

Brocade Communications Systems, Inc.  
1745 Technology Drive  
San Jose, CA 95110  
Tel: 1-408-333-8000  
Fax: 1-408-333-8101  
Email: [info@brocade.com](mailto:info@brocade.com)

### Asia-Pacific Headquarters

Brocade Communications Singapore Pte. Ltd.  
9 Raffles Place  
#59-02 Republic Plaza 1  
Singapore 048619  
Tel: +65-6538-4700  
Fax: +65-6538-0302  
Email: [apac-info@brocade.com](mailto:apac-info@brocade.com)

### European and Latin American Headquarters

Brocade Communications Switzerland Sàrl  
Centre Swissair  
Tour A - 2ème étage  
29, Route de l'Aéroport  
Case Postale 105  
CH-1215 Genève 15  
Switzerland  
Tel: +41 22 799 56 40  
Fax: +41 22 799 56 41  
Email: [emea-info@brocade.com](mailto:emea-info@brocade.com)

## Document History

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<i>Fabric OS Password Recovery Notes</i>	53-1000114-01	New document.	March 2006

# Password Recovery

This document provides procedures for recovering the passwords on SilkWorm switches or directors. The following topics are explained:

- [“Password Recovery on Linux-Based Switches”](#) on page 3
- [“Password Recovery on VXWorks-Based Switches”](#) on page 9

## Password Recovery on Linux-Based Switches

There are several ways to recover the passwords on a SilkWorm switch or director:

- [“Password Recovery Using Root Account”](#) on page 3
- [“Password Recovery Using the Boot PROM”](#) on page 4
- [“Obtaining the Boot PROM Recovery Password”](#) on page 7
- [“Password Recovery for Fabric OS v4.4.0”](#) on page 8

If you have access to the root account you can reset the passwords for all other accounts on the system including: the factory, admin, and user accounts. The root account can reset the root, factory, and admin accounts; admin can reset the user login. See [“Password Recovery Using Root Account”](#) on page 3.

If you do not have access to the root account, you can use the Boot PROM password to reset the system passwords to default values. This option is only available on Fabric OS v4.1 or greater, and you must have the Boot PROM password (unless no Boot PROM password was set). See [“Password Recovery Using the Boot PROM”](#) on page 4.

If you do not have either the root or Boot PROM password, or your system is loaded with a version older than Fabric OS v4.1, contact your switch service provider for a Boot PROM recovery string to regain access to the switch. See [“Obtaining the Boot PROM Recovery Password”](#) on page 7.



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### Note

When connected through a serial cable to the console, always save the output using the *capture* functionality under windows (or script functionality for UNIX or Linux).

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## Password Recovery Using Root Account

If you have access to the root account, you can reset the password for any admin, factory, and user accounts without knowing the account’s current password.



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### Note

In a fabric with Secure Fabric OS enabled, you must log in to the primary FCS to perform these tasks.

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To reset any account password from the root account:

1. Open a CLI session (serial or telnet for an unsecured system and sectelnet for a secure system) to the switch.
2. Log in as root.
3. At the prompt, enter the **passwd** command, followed by the account name as shown below:

```
switch:root> passwd account
```

4. Follow the prompts to reset the password for the selected account. For example:

```
switch:root> passwd admin
Changing password for admin
Enter new password: xxxxxxxx
Re-type new password: xxxxxxxx
passwd: all authentication tokens updated successfully
Saving password to stable storage.
Password saved to stable storage successfully.
```

## Password Recovery Using the Boot PROM

If you know the Boot PROM password or none was set on your system, use this procedure to reset the passwords to default values on the switch or director. The current Fabric OS level of the switch or director must be v4.1 or greater.



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### Note

This procedure is disruptive to traffic on the SilkWorm 200E, 3250, 3850, 3900, 4100, 4900 and 7500 switches, because it requires you to reboot the switch; traffic resumes after the switch is rebooted. On a SilkWorm 12000, 24000, or 48000 director, you can reset the passwords without disruption by performing this procedure on the standby CP.

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### Note

If you are attempting to recover passwords for Fabric OS v4.4.0, you must review [“Password Recovery for Fabric OS v4.4.0”](#) on page 8 prior to beginning this procedure.

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To reset the root password to default using the Boot PROM password:

1. Connect to the serial console port of the switch (SilkWorm 200E, 3250, 3850, 3900, 4100, 4900 or 7500 switch) or the standby CP of a director (SilkWorm 12000, 24000, or 48000). Use the **hshow** command to see which CP is active and which is standby.
2. Enter the **reboot** command.
3. Press ESC at the message “Press escape within 4 seconds...” The Boot PROM menu is displayed with the following options:
  - 1) Start system  
Used to reboot the system.
  - 2) Recover password.  
Used to generate a character string for your support provider to recover the Boot PROM password.
  - 3) Enter command shell.  
Used to enter the command shell, to reset all passwords on the system.

```

The system is coming up, please wait...
Checking system RAM - press any key to stop test
01a00000
System RAM check terminated by keyboard
System RAM check complete
Press escape within 4 seconds to enter boot interface.

1) Start system.
2) Recover password.
3) Enter command shell.

Option? 3

```

4. Type **3** at the prompt to open the command shell.
5. Type the Boot PROM password, if prompted, then press **Enter**. The Boot PROM has a password only if one was defined earlier.
6. Run the **printenv** command, then save the output to a file. You will need to refer to this output later in the procedure.
7. Locate the first memory address; it is the string after **OSLoader=** in the **printenv** output.
8. Run the **boot** command with the first memory address and the **-s** option. For example:

```

1) Start system.
2) Recover password.
3) Enter command shell.

Option? 3

Boot PROM password has not been set.
> printenv
AutoLoad=yes
ENET_MAC=0060696019B4
InitTest=MEM()
LoadIdentifiers=Fabric Operating System;Fabric Operating System
OSBooted=MEM()0xF0000000
OSLoadOptions=quiet;quiet
OSLoader=MEM()0xF0000000;MEM()0xF0800000
OSRootPartition=hda1;hda2
SkipWatchdog=yes
>
> boot MEM()0xF0000000 -s
Booting "Manually selected OS" image.
Entry point at 0x00800000 ...

```

9. For a SilkWorm 200E, 3250, 3850, 3900, 4100, 4900, or 7500 switch, perform the following steps:
  - a. Enter the **mount** command with the following parameters:

```
> mount -o remount,rw,noatime /
```

This will remount the root partition as read/write.
  - b. Enter the **mount** command with the following parameters where **hda** is followed by the second partition value (such as 1 or 2) from **OSRootPartition** in the **printenv** output:

```
> mount /dev/hda2 /mnt
```

- c. Enter the **passwddefault** command, as follows:

```
> /sbin/passwddefault
```

This resets all account passwords to the default values. If there were additional user accounts created, they are deleted and only the default accounts and passwords remain.

- d. Reboot the switch using the **reboot -f** command.

```
> reboot -f
```

Traffic flow resumes when the switch completes rebooting. If you do not use the **-f** you will have to manually reboot the switch.

- e. Log in as root to the switch by serial or telnet and set new passwords for all accounts.

The process is now complete.

10. For a SilkWorm 12000, 24000, or 48000 director, perform the following steps

- a. From the serial connection to the standby CP, determine the hostname of the CPs. This can be done using the **# /bin/cat /etc/hosts** command:

```
# /bin/cat /etc/hosts
127.0.0.1 localhost
10.64.148.23 swd77 #sw0 255.255.240.0
10.64.148.24 swd76 #sw1 255.255.240.0
10.64.148.25 mycp0 #cp0 255.255.240.0 < CP0 SLOT 5
10.64.148.26 cp1 #cp1 255.255.240.0 < CP1 SLOT 6
0.0.0.0 fc0 #fc0 0.0.0.0
0.0.0.0 fc1 #fc1 0.0.0.0
10.0.0.5 cp_0_inteth #cp_0_internaeth
10.0.0.6 cp_1_inteth #cp_1_internaeth
```



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**Note**

The hostname for CP0 or CP1 are user definable, and may be different for each installation.

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- b. From the serial connection to the standby CP, set the appropriate hostname to the CP. Use the hostname displayed in the previous step. In the above example *mycp0* is the standby CP.

```
hostname <mycp0>
```

- c. Start networking on the standby CP:

```
> /etc/init.d/network start
```

- d. Perform one of the following according to which slot the CP card is in:

- If the standby CP card is in slot 5 (CP0), enter:

```
> rsh 10.0.0.6 /sbin/passwddefault
```

- If the standby CP card is in slot 6 (CP1), enter:

```
> rsh 10.0.0.5 /sbin/passwddefault
```

- e. Reboot the standby CP using the **reboot -f** command.

```
> reboot -f
```

If you do not use the **-f** option you will have to manually reset the CP by moving the slider switch to the off and then on position.

- f. Log in to the active CP as admin from a telnet or serial connection, and enter **Ctrl + C** to bypass the request to modify passwords.
- g. Log in to either logical switch by serial or telnet as admin and set new passwords for all accounts. The password recovery procedure is now complete.

## Obtaining the Boot PROM Recovery Password

This section explains how to gather the information you need to send to your switch support provider in order to get a Boot PROM recovery password. Once you have received the Boot PROM recovery password, and gained access to the Boot PROM, you reset the passwords using [“Password Recovery Using the Boot PROM” on page 4](#).

To obtain the Boot PROM recovery password from your switch support provider:

1. Connect to the serial port interface of the switch or standby CP.
2. Reboot the switch or standby CP.
3. Press ESC within four seconds after the message “Press escape within 4 seconds...”.
4. Enter **2** at the prompt. A character string is displayed.
5. Send the character string to your switch support provider to obtain a Boot PROM recovery password.

```
1) Start system.
2) Recover password.
3) Enter command shell.

Option? 2
Send the following string to Customer Support for password recovery:
/uasLR1raCqT3FTogy0ZjA==
```

6. Perform the appropriate steps to set the Boot PROM password if it was not set, as prompted:  
Recovery password is NOT set. Please set it now.
7. Enter the *Recovery Password* that is generated from your support provider when prompted.
8. When prompted with “New password:”, enter the new Boot PROM password and re-enter when prompted.
9. Record the new password for future reference.
10. Enter the **saveenv** command.

```
Enter the supplied recovery password.
Recovery Password: YnfG9DDr1FMDVkJNM0RkPtg== < Supplied by your support provider
Re-enter Recovery Password: YnfG9DDr1FMDVkJNM0RkPtg==
New password: xxx
Re-enter new password: xxx
> saveenv
```

# Password Recovery for Fabric OS v4.4.0

In Fabric OS v4.4.0, you must take additional steps prior to and after performing the “[Password Recovery Using the Boot PROM](#)” on [page 4](#). Otherwise, the switch is left in single-user mode.

## ***Password Recovery Steps Before Root Command***

1. Connect to the serial port of the switch or the standby CP.
2. Reboot the switch and press **ESC** within 4 seconds after the message "Press escape within 4 seconds...".
3. Enter the Boot PROM password.
4. Enter **3** at the prompt to enter the command shell.
5. Enter the **printenv** command and save the output. For example:

```
The system is coming up, please wait...
Checking system RAM - press any key to stop test

Checking memory address: 01300000
System RAM check terminated by keyboard
System RAM check complete
Press escape within 4 seconds to enter boot interface.

1) Start system.
2) Recover password.
3) Enter command shell.

Option? 3
Password:
> printenv
AutoLoad=yes
ENET_MAC=006069602BD6
InitTest=MEM()
LoadIdentifiers=Fabric Operating System;Fabric Operating System
OSLoader=MEM()0xF0000000;MEM()0xF0800000
OSLoadOptions=quiet;quiet
OSRootPartition=hda1;hda2
SkipWatchdog=yes
```

6. From the output of the printenv, record the value for OSLoader.

OSLoader \_\_\_\_\_

## ***Password Recovery Steps After Root Command***

After you have recovered the passwords:

1. Connect to the serial port interface of the switch or standby CP.
2. Reboot the switch and press **ESC** within 4 seconds after the message "Press escape within 4 seconds..." displays. "Enter Boot PROM interface:"
3. Enter the Boot PROM password.
4. Enter **3** at the prompt to enter the command shell.

5. Enter the following command strings, one at a time, to reset the passwords:



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**Note**

The value of the OSLoader= string should be set to the exact value from [step 6](#) on page 8.

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```
unsetenv OSBooted
setenv LoadIdentifiers=Fabric Operating System;Fabric Operating System
setenv OSLoadOptions=quiet;quiet
setenv OSLoader=MEM()0xF0000000;MEM()0xF0800000
saveenv
printenv
reset
```

## Password Recovery on VXWorks-Based Switches

This procedure requires Password Recovery firmware, available from your switch support provider. The Password Recovery firmware is effective only for the first time it is launched. You cannot use the Password Recovery firmware to perform any other switch functions.

These procedures require switch downtime. Brocade recommends removing the switch from the fabric and rejoining it after the recovery process is complete.

In order to complete the steps in this section you need the following:

- Password Recovery firmware: Send the switch WWN to your switch support provider with a request for the Password Recovery firmware. This firmware can be launched once, and it recovers the password for the specific switch only.
- Ethernet connection between host and switch. It can be either a network connection from a host to the switch or a direct connection with an Ethernet crossover cable.
- Serial connection to the switch

## Reset Passwords for Fabric OS v2.6.1+, and v3.1+

To reset the passwords on a Fabric OS v2.6.x and greater, or v3.1.x and greater switch using the Password Recovery firmware:

1. Copy the Password Recovery firmware to a secure location that is accessible to the switch; that is, an FTP server accessible to the switch. You must use either FTP or RSHD to copy the firmware. If FTP is used, the password cannot be blank.
2. Connect to the console port.
3. Power the switch off and back on.
4. Set the boot parameters on your switch to perform a netboot:
  - a. At the “[VxWorks Boot]” prompt for the switch, enter **c**.

- b. Type the requested information at the prompts. To accept the default value for a parameter, press **Enter**.

The parameters are defined as follows.

<i>host name</i>	Name of machine on which Password Recovery firmware is located
<i>file name</i>	Full pathname where Password Recovery firmware is located
<i>inet on ethernet</i>	Switch IP address
<i>host inet</i>	Host IP address
<i>gateway inet</i>	Gateway address
<i>user</i>	Login name of user account on host machine

Press any key to stop auto-boot...

```
[VxWorks Boot]: c
 '.' = clear field; '-' = go to previous field; ^D = quit
boot device : fei
processor number : 0
host name : host
file name : /usr/switch/firmware resetPasswd303f6f
inet on ethernet (e) : 192.168.132.217:fffff000
inet on backplane (b):
host inet (h) : 192.168.132.133
gateway inet (g) : 192.168.132.133
user (u) : user
ftp password (pw) (blank = use rsh):
flags (f) : 0x0
target name (tn) : sw2800
startup script (s) :
other (o) :
```

5. Type @ at the [VxWorks Boot] prompt to begin booting the Password Recovery version of the firmware from the network.

```
[VxWorks Boot]: @
boot device : fei
processor number : 0
host name : host
file name : resetPasswd303f6f
inet on ethernet (e) : 192.168.132.217:fffff000
host inet (h) : 192.168.132.133
gateway inet (g) : 192.168.132.133
user (u) : user
flags (f) : 0x0
target name (tn) : sw2800
Attaching network interface fei0... done.
Attaching network interface lo0... done.
host is alive <-----CONNECTION TO HOST PROVIDING FIRMWARE IMAGE
Loading... 4407608 + 329564 + 1153796
Starting at 0x10400000...
Attaching network interface fei0... done.
Attached TCP/IP interface to fei unit 0
Attaching network interface lo0... done.
telnetInit: telnetd initialized.
NFS client support not included.
efwHookAdd: Added Ethernet Hook
Adding 9407 symbols for standalone.
Model: 4
flash time 0, creation time 1048818644
Committing configuration...done.
setting passwd to defaults <-----FIRMWARE IMAGE RESETS PASSWORD TO BROCADE
DEFAULTS
Time Bomb has been set
RESTRICTED ONE TIME USE
Passwords have been reset. Please power cycle the switch.
```

The user, admin, factory, and root passwords are reset to the default values.

6. Power the switch off and back on.
7. Press any key when you see the message “Press any key to stop autoboot...” This provides access to the boot prompt.
8. Set the switch to boot from the flash again:
  - a. At the [VxWorks Boot] prompt, type **c** to begin resetting the boot parameters to the default settings.
  - b. Remove the values that you added by typing a period (.) after each parameter, then pressing **Enter**. The boot parameters are returned to the default settings.
9. Power the switch off and back on to reload the original firmware from flash. The switch resumes normal operation.
10. Log in to the switch by telnet or serial as root, and set new passwords for all accounts.

