

53-1000114-02
December 2008



Brocade Fabric OS

Password Recovery Notes

Supporting Fabric OS v2.6.x, v3.x, v4.x, v5.x, v6.x

BROCADE

Copyright © 2007-2008 Brocade Communications Systems, Inc. All Rights Reserved.

Brocade, Fabric OS, File Lifecycle Manager, MyView, and StorageX are registered trademarks and the Brocade B-wing symbol, DCX, and SAN Health are trademarks of Brocade Communications Systems, Inc., in the United States and/or in other countries. All other brands, products, or service names are or may be trademarks or service marks of, and are used to identify, products or services of their respective owners.

Notice: This document is for informational purposes only and does not set forth any warranty, expressed or implied, concerning any equipment, equipment feature, or service offered or to be offered by Brocade. Brocade reserves the right to make changes to this document at any time, without notice, and assumes no responsibility for its use. This informational document describes features that may not be currently available. Contact a Brocade sales office for information on feature and product availability. Export of technical data contained in this document may require an export license from the United States government.

The authors and Brocade Communications Systems, Inc. shall have no liability or responsibility to any person or entity with respect to any loss, cost, liability, or damages arising from the information contained in this book or the computer programs that accompany it.

The product described by this document may contain "open source" software covered by the GNU General Public License or other open source license agreements. To find-out which open source software is included in Brocade products, view the licensing terms applicable to the open source software, and obtain a copy of the programming source code, please visit <http://www.brocade.com/support/oscd>.

Brocade Communications Systems, Incorporated

Corporate and Latin American 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

Asia-Pacific Headquarters
Brocade Communications Singapore Pte. Ltd.
30 Cecil Street
#19-01 Prudential Tower
Singapore 049712
Singapore
Tel: +65-6538-4700
Fax: +65-6538-0302
Email: apac-info@brocade.com

European Headquarters
Brocade Communications Switzerland Sàrl
Centre Swissair
Tour B - 4ème étage
29, Route de l'Aéroport
Case Postale 105
CH-1215 Genève 15
Switzerland
Tel: +41 22 799 5640
Fax: +41 22 799 5641
Email: emea-info@brocade.com

Document History

Title	Publication number	Summary of changes	Date
Brocade Fabric OS Password Recovery Notes	53-1000114-01	New document.	March 2006
Brocade Fabric OS Password Recovery Notes	53-1000114-02	Updated for next release`	December 2008

Fabric OS Password Recovery Notes

In this chapter

- Password recovery. 1
- Password recovery on Fabric v4.x, v5.x, and v6.x. 1
- Password recovery using root account. 2
- Password recovery using the boot PROM interface 2
- Obtaining the boot PROM recovery password 8
- Password recovery for Fabric OS v4.4.0 9
- Password recovery on Fabric OS 2.6.x, and 3.x 10
- Password recovery for Fabric OS v2.x and v3.x. 11

Password recovery

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

- Password Recovery on Fabric v4.x, v5.x, and v6.x
- Password Recovery on Fabric OS 2.6.x, and 3.x

Password recovery on Fabric v4.x, v5.x, and v6.x

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

- Password Recovery Using Root Account
- Password Recovery Using the Boot PROM interface
- Obtaining the Boot PROM Recovery Password
- Password Recovery for Fabric OS v4.4.0

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 2 .

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 earlier, and you must have the Boot PROM password (unless no Boot PROM password was set). See [“Password recovery using the boot PROM interface”](#) on page 2

1 Password recovery on Fabric v4.x, v5.x, and v6.x

If you do not have the root or Boot PROM password, or your system is loaded with an earlier version 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 8

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).

Password recovery using root account

If you have access to the root account, you can reset the passwords on the switch to default. This feature is available for all currently supported versions of the Fabric OS.

Follow the below steps 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 `passwddefault` command as shown below:

```
switch:root> passwddefault
```

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

```
switch:root> passwddefault
All account passwords have been successfully set to factory default.
```

Once the passwords have been reset, log into the switch as admin, and change your default passwords. Make sure to keep a hardcopy of your switch passwords in a secure location. The default passwords for Fabric OS switches are:

```
root = fibranne
admin = password
user = password
```

Password recovery using the boot PROM interface

NOTE

There are two boot ROM environments, the original “440” processor types and the newer Freescale processor type (uses U-Boot). In addition to this, the Linux kernel was originally maintained on separate hardware chips (uses the references to `MEM()0xF0000000` and was used on earlier products). Latest products place the kernel on the compact flash and this is a reference to `ATA()0xb689f` type structures. We also moved to a new boot environment with the latest products.

We have the following types of combinations:

1. Password recovery using the `MEM()0xF0000000` (and original boot ROM)
 - Brocade 3250, 3850, 3900, 4100, 12000, 24000, 48000
2. Password recovery using the `ATA()0xa64g` (and original boot ROM)
 - Brocade 200E, 4900, 5000, 7500, 7600
3. Password recovery using the `ATA()0xa64g` (and new U-Boot ROM)

- Brocade 300, 5100, 5300, DCX, DCX-4S, BES

NOTE

This procedure is disruptive to traffic on the 3250, 3850, 3900 and 4100 switches, because it requires you to reboot the switch; traffic resumes after the switch is rebooted. On a Brocade 12000, 24000, 48000 director, DCX, or DCX-4S platforms you can reset the passwords without disruption by performing this procedure on the standby CP.

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 9 prior to beginning this procedure.

Password recovery procedure: quick reference

1. hit escape during reboot
 2. choose option: 3
 3. printenv
 4. boot ATA()0x77588 -s
-

NOTE

For step 4, choose the first parameter shown for OSLoader.

5. mount -o remount,rw,noatime /
 6. mount /dev/hda1 /mnt
-

NOTE

For step 6, choose the 2nd parameter shown for OSRootPartition.

7. /sbin/passwddefault
 8. reboot -f
-

Detailed procedure

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.

1. Connect to the serial console port of the switch (3250, 3850, 3900 or 4100) or the standby CP of a director (12000, 24000, 48000, DCX, or DCX-4S). Use the active LED to identify the active and standby CP. Use the hashow command, if you have the passwords, to see which CP is active and which is standby. When you connect to a standby CP you receive a login prompt. Depending on the situation select any one of the command from the following.
 - execute fastboot or reboot cli command
 - execute /sbin/reboot
-

NOTE

Using the hashow command is not possible when you have lost all passwords.

1 Password recovery on Fabric v4.x, v5.x, and v6.x

2. Enter the reboot command. All pizza boxes require that the power be turned off and then back on to effect a complete reset.
3. Press ESC at the message "Press escape within 4 seconds..." The Boot PROM menu is displayed with the following options:

- Start system
Used to reboot the system.
- Recover password.
Used to generate a character string for your support provider to recover the Boot PROM password. Use this feature only when directed to by technical support personnel.
- 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.

---

## NOTE

If you are prompted to enter a new BOOT PROM password, make sure it is at least 8 characters in length. Do not select this option unless specifically instructed by support personnel.

---

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.

---

## NOTE

For booting in single user mode for Brocade 300, 5100, 5300, DCX, DCX-4S, BES, you need to create a temporary boot environment variable as follows: a) Run this boot ROM command: `setenv OSLoadOptions single` or `OSLoadOptions=init=/bin/sh. init=/bin/sh` option will succeed in cases where the single options fail. b) Run this boot ROM command: `boot`. There is no "-s" per and the first partition indicated in `OSLoader` is assumed to be used for loading purposes.

---

8. Run the boot command with the first memory address and the `-s` option.

For example:

For Brocade 3250, 3850, 3900, 4100, 12000, 24000, 48000 using the `MEM()0xF0000000` (and original boot ROM):

- ```
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 ...

```

For Brocade 200E, 4900, 5000, 7500, 7600 using the ATA()0xa64g (and original boot ROM):

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

Option? 3

```

Boot PROM password has not been set.
> printenv
AutoLoad=yes
ENET_MAC=00051E905AF0
InitTest=MEM()
LoadIdentifiers=Fabric Operating System;Fabric Operating System.
OSLoadOptions=quiet
OSLoader=ATA()0xb009f;ATA()0x141480
OSRootPartition=hda1;hda2
SkipWatchdog=yes
> boot ATA()0xb009f -s
Booting "Manually selected OS" image.
Entry point at 0x00800000 ...

```

For Brocade 300, 5100, 5300, DCX, DCX-4S, BES using the ATA()0xa64g (and new U-Boot ROM):

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

Option? 3

```

Boot PROM password has not been set.
=> printenv
AutoLoad=yes
BootromVerbose=no
InitTest=MEM()
LoadIdentifiers=Fabric Operating System;Fabric Operating System
OSLoadOptions=quiet
OSLoader=ATA()0xac03f;ATA()0x1771a0

```

1 Password recovery on Fabric v4.x, v5.x, and v6.x

```
OSRootPartition=hda1;hda2
SkipWatchdog=yes
baudrate=9600
bootargs=ip=off
bootcmd=setenv bootargs mem=${mem} ${OSLoadOptions};ataboot;bootm 0x400000
bootdelay=20
ethact=ENET0
ethaddr=00:05:1E:07:77:54
gatewayip=10.32.208.1
hostname=sequoia
initrd_high=0x20000000
ipaddr=10.32.220.95
mem=520192k
netmask=255.255.240.0
preboot=echo;echo Type "run flash_nfs" to mount root filesystem over NFS;echo
netdev=eth0
consoledev=ttyS1
ramdiskaddr=400000
ramdiskfile=your.ramdisk.u-boot
serverip=10.32.2.40
stderr=serial
stdin=serial
stdout=serial
ver=U-Boot 1.1.3 (Oct 15 2008 - 16:54:37)
```

```
Environment size: 744/4080 bytes
=> setenv OSLoadOptions=init=/bin/sh
=> boot
```

```
ATA device vendor STI Flash 8.0.0, product STI1M7b207320001803, revision
01/17/07
Map file at LBA sector 0xac03f
Number of fragments is 0x2
End dest point is 0x00685000.
## Booting image at 00400000 ...
```

[deleted]

```
Freeing unused kernel memory: 116k init
INIT: version 2.78 booting
sh-2.04#
```

9. 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 hda1 or hda2) from OSRootpartition value in the printenv output:

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

NOTE

OSRootPartition has not changed in any of the releases. It either points to the first partition (hda1) or 2nd partition (hda2). You simply swap order within the parm, like `OSRootPartition=hda1;hda2` or `OSRootPartition=hda2;hda1`. The first entry will be assigned as the root or bootable partition. Normally, either partition is bootable unless there was a firmwaredownload in progress that went wrong or there is corruption in the partition.

- 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 Brocade 12000, 24000, 48000, DCX, or DCX-4S 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
```

NOTE

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

- 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:

For 48K

- 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:

1 Password recovery on Fabric v4.x, v5.x, and v6.x

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

For DCX

- If the standby CP card is in slot 6 (CP0), enter:

```
> rsh 127.1.1.7 /sbin/passwddefault
```

- If the standby CP card is in slot 7 (CP1), enter:

```
> rsh 127.1.1.8 /sbin/passwddefault
```

For DCX-4S

- If the standby CP card is in slot 4 (CP0), enter:

```
> rsh 127.1.1.5 /sbin/passwddefault
```

- If the standby CP card is in slot 5 (CP1), enter:

```
> rsh 127.1.1.6 /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 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

NOTE

This procedure is for obtaining a BOOT PROM recovery password. This does not reset the Fabric OS passwords on the switch. Once the Boot PROM password has been recovered, you must go through the boot prom command shell to reset the Fabric OS passwords on the switch.

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 interface”](#) on page 2.

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:

```
/uasLRlraCqT3FTToqy0ZjA==
```

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.

Follow the steps to recover a complete recovery entry. The output is related to the steps above as well.

- Enter resetpw command (to clear boot ROM password usage)
- Then run saveenv command. Passwords will no longer be required for boot ROM access.

```
Enter the supplied recovery password.
Recovery Password: Ynfg9DDr1FMDVknM0RkPtg== < Supplied by your support
provider
Re-enter Recovery Password: Ynfg9DDr1FMDVknM0RkPtg==
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 interface"](#) on page 2. 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
```

1 Password recovery on Fabric OS 2.6.x, and 3.x

```
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:

NOTE

The value of the OSLoader= string should be set to the exact value from [step 6 on page 10](#)

```
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 Fabric OS 2.6.x, and 3.x

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: Provide the exact Fabric OS version and the WWN of the switch to your 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 a network connection from a host to the switch or a direct connection with an Ethernet crossover cable.
- Serial connection to the switch

NOTE

The SilkWorm 2800 does not have a serial port on the switch. Password recovery on a SilkWorm 2800 is not supported.

Password recovery for Fabric OS v2.x and v3.x

To reset the passwords on a Fabric OS v2..x and v3.x switch using the Password Recovery firmware:

1. Copy the Password Recovery firmware to a host that is accessible to the switch; either an FTP server or a laptop (running an FTP server) directly connected to the ethernet port. 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.

host name	Name of machine on which Password Recovery firmware is located
file name	Full pathname where Password Recovery firmware is located
inet on ethernet	Switch IP address
host inet	The IP address for the FTP or RSHd host
gateway inet	Gateway address
user	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) : 192.168.132.217:255.255.240.0
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) :
```

1 Password recovery on Fabric OS 2.6.x, and 3.x

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. Turn off the switch and turn on again.
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. Turn off the switch and turn on again 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.