

AX3800S/AX3600S Software Upgrade Guide

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December 2011 (Edition 5)

■ Preface

This manual describes how to upgrade the software functionality from L3 Light Software to L3 Advanced Software and from L3S Light Software to L3S Advanced Software. Read this manual carefully before upgrading the software.

■ Trademarks

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■ Editions history

December 2005 (Edition 1)

January 2006 (Edition 2)

November 2007 (Edition 3)

August 2011 (Edition 4)

December 2011 (Edition 5)

■ Conventions: The terms "Switch" and "switch"

The term Switch (upper-case "S") is an abbreviation for any or all of the following models:

- AX3800S series switch
- AX3600S series switch

The term switch (lower-case "s") might refer to a Switch, another type of switch from the current vendor, or a switch from another vendor. The context decides the meaning.

■ Copyright

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■ Notes

Information in this document is subject to change without notice.

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1. Overview

1.1. Overview of upgrade

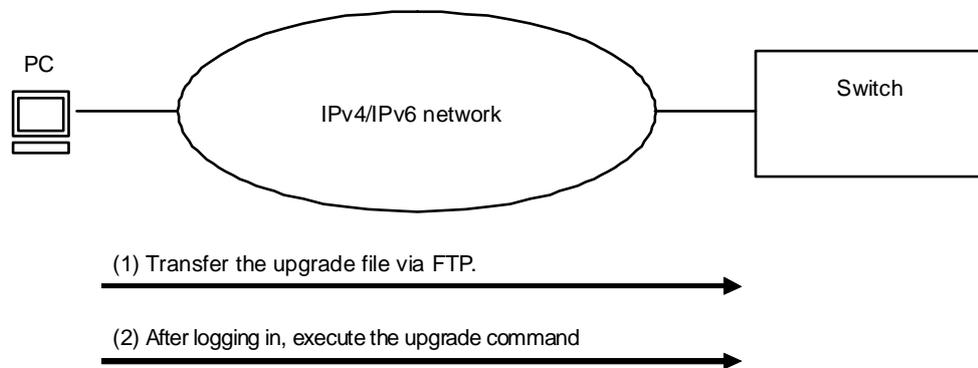
Software can be upgraded from a remote terminal or from an SD card.

After the upgrade, configuration information, user information, such as login accounts and passwords, and optional license information are inherited.

See Chapter 3 for the upgrade procedure when the VLAN tunneling functionality is used.

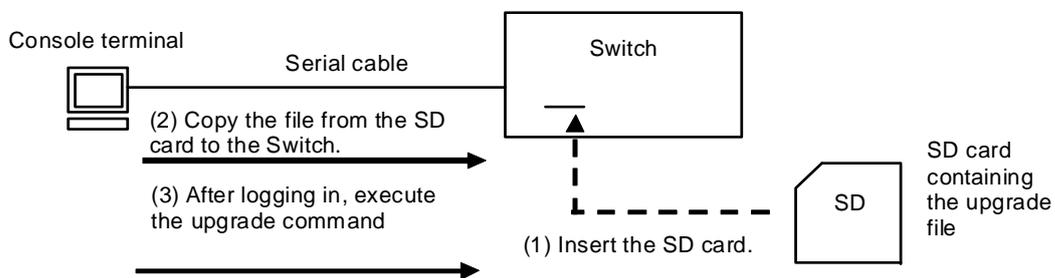
(1) Upgrading software from a remote terminal

From a remote terminal, such as a PC, transfer the upgrade file to the Switch (see (1) below and 2.2), and then execute the upgrade command (see (2) below and 2.4).



(2) Upgrading software from an SD card

After inserting the SD card containing the upgrade file into the Switch ((1) in the figure below), copy the upgrade file from the card to the Switch (see (2) below and 2.3), and then execute the upgrade command (see (3) below and 2.4).



Use this upgrade procedure if IP communication is not available due to, for example, VLAN tunneling.

1.2. Preparing to upgrade

The conditions explained in Table 1-2 must be met before transferring the upgrade file to the Switch and executing the upgrade command. Make sure these conditions are met before upgrading the software.

Table 1-2 Required conditions before upgrading

#	Upgrade operation	Condition	Procedure
1	Upgrade from a remote terminal	The Switch that will be upgraded must be accessible over an IPv4 or IPv6 network from a remote terminal, such as PC.	Connect a remote terminal to the network so that IP communication between the terminal and the Switch is possible.
2		FTP client software must be running on the remote terminal, and files must be able to be written to the Switch by the <code>put</code> statement.	Obtain FTP client software and install it on the remote terminal. In Windows, the FTP software provided with the OS can be used.
3		The Switch must be configured in the configuration information to communicate with remote terminals via FTP.	Define <code>ftp-server</code> in the configuration information. If an access list definition exists in <code>line vty</code> mode, the Switch must be set to allow access from remote terminals.
4		A user ID and password for the Switch must be set.	Set a password for the user ID.
5		Login to the Switch that will be upgraded must be possible from a remote terminal or a console.	For login from a remote terminal via Telnet, the Switch must be set to support the Telnet functionality. (Use the <code>line vty</code> command to make this in the configuration.)
6	Upgrade from an SD card	Login to the Switch must be possible from a console terminal.	<ul style="list-style-type: none"> • Use a cross serial cable to connect a console terminal and the Switch. • Provide a terminal emulator software program on the console terminal.
7	Common	Available capacity on the flash memory must be sufficient to receive the transferred upgrade file. The required amount is equal to or larger than the difference between the file size of the new version and that of the old version. Use the <code>ls -l <file name></code> command to check the file size.	If the upgrade file cannot be transferred because the flash memory capacity is insufficient, see <i>1.4 If the flash memory capacity is insufficient</i> .
8		The user must have administrator-level permissions (<code>enable</code>).	To execute the upgrade command, use the <code>enable</code> command to become an administrator.

1.3. Notes on upgrading the software

(1) Notes on transferring the file

- A file must be transferred via FTP in binary mode. Otherwise, execution of the upgrade command will fail.
- Transfer the upgrade file named `upgrade.dat` to the Switch. If the file already exists, overwrite it. If the file is transferred to the wrong location or with an incorrect name, delete the file, and then transfer the file correctly.

(2) Notes on copying the file from an SD card

- Use an SD card from ALAXALA.
- Use a PC to store the upgrade file on the SD card in advance.

(3) Notes on executing the upgrade command

- More than one user cannot execute the upgrade command concurrently.
- The upgrade command cannot be executed in Edit mode.
- Back up the configuration information before upgrading the software.
- Do not delete the `k.img` file. If the file is deleted, any abnormal end prevents the restoration of files.
- Do not turn the power off and then on while upgrading the software. If the power is turned off, restart the system, and then perform the procedure again from the beginning.
- After editing the configuration online, if the file has not been saved, use the `save` configuration command to save the file to the embedded flash memory before upgrading the software. If you do not execute the `save` command, when the Switch is restarted, the Switch returns to the state existing before the configuration information was changed.
- Use upgrade software that corresponds to the model of the switch you want to upgrade. Upgrade software for a specific model can only be used to upgrade that model.
- If the upgrade CD-ROM does not include the file `ppupgrade_command_password.txt`, refer to the file `upgrade.pdf` in the CD-ROM.

1.4. If the flash memory capacity is insufficient

- Use the `rm` command to delete all files in `/usr/var/core/`.
- Execute the `erase protocol-dump unicast all` command.
- Execute the `squeeze` command.
- Reduce the number of user files saved in the user area.

2. Upgrading the Software

2.1. Introduction

Use the procedure described in 2.2 or 2.3 to transfer the upgrade file to the Switch, and then use the procedure described in 2.4 to upgrade the software.

2.2. Transferring the file from a remote terminal

See the *Appendix* for the procedure for transferring the upgrade file to the home directory in the Switch. This operation must be performed in binary mode.

2.3. Copying the file from an SD card

To copy the file from the SD card to the Switch:

- (1) Insert the SD card containing the upgrade file into the Switch.
- (2) Log in to the Switch.
- (3) Execute the `ls mc-dir` command to make sure the upgrade file is on the SD card.
- (4) Enter the `cd` command to move to the home directory.
- (5) Execute the `cp mc-file` command to copy the upgrade file from the SD card to the Switch.
- (6) Use the `ls -l` command to make sure the size of the file copied to the Switch is the same as the file size on the SD card.

```
> ls mc-dir (3)
Name      Size
upgrade.dat 33 ← (Check the file name and the size.)
>cd (4)
>cp mc-file upgrade.dat upgrade.dat (5)
>
>ls -l (6)
total 14872
-rwxrwxrwx 1 root wheel 33 Dec 19 14:26 upgrade.dat ← (Check the file size.)
```

2.4. Upgrade procedure

The upgrade procedure upgrades the software functionality from L3 Light Software to L3 Advanced Software, or from L3S Light Software to L3S Advanced Software. After the upgrade, the Switch automatically restarts. Note that communication is disconnected temporarily when the Switch restarts. In addition, the upgrade file must be transferred to the Switch (see 2.2) or copied from the SD card to the Switch (see 2.3) before the upgrade can start.

Follow the procedure shown below to upgrade the software:

The procedure shown below is an example of upgrading L3 Light Software to L3 Advanced Software. When upgrading L3S Light Software to L3S Advanced Software, change the expression L3L to L3SL, and L3A to L3SA.

- (1) Log in to the Switch, using the user-defined ID (for example, `operator`).
- (2) Enter the `enable` command. The command prompt changes to `#`.
- (3) Execute the `ls -l` command.
- (4) Make sure the size of the transferred file is the same as the size of the original file on the terminal.
- (5) Enter the `ppupgrade upgrade.dat` command.
- (6) When asked to enter a password, enter a password which is provided with the file `ppupgrade_command_password.txt` on the upgrade CD-ROM.
- (7) When the upgrade finishes, the Switch restarts automatically. After the restart, log in to the Switch again.
- (8) Execute the `show version` command to make sure the prompt shows `OS-L3A-A(upgrade)`. The procedure is complete.

```

BOOT 00.02.00
Loading from dev0 100%

login: operator (1)

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> enable
# ← (Make sure that # is displayed.) (2)
#
# show version
Date 20XX/12/19 11:21:01 UTC
Model: AX3630S-24T
S/W: OS-L3L-A Ver. 10.0
H/W: AX-3630S-24T-ZX [TA036L24P000S03015AD004:80320101:1183:2B504]
#
# ls -l
total 1
-rw-r--r-- 1 operator users 33 Dec 19 11:22 upgrade.dat ←(Check for file size.)(4)
#
# ppupgrade upgrade.dat
Upgrade password: xxxxxxxxxx ← (Enter your password.) (6)
Automatic reboot process will be run after upgrade process.
Do you wish to continue? (y/n) y

Software upgrade ... done
Rebooting ...
#
ROM 00.02.24
.....

BOOT 00.02.00
Loading from dev0 100%

login: operator ← (Login after restarting.) (7)

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>
> show version
Date 20XX/12/19 11:24:50 UTC
Model: AX3630S-24T
S/W: OS-L3A-A(upgrade) Ver. 10.0 ← (Check the version.) (8)
H/W: AX-3630S-24T-ZX [TA036L24P000S03015AD004:80320101:1183:2B504]
>

```

3. Upgrade Procedure When VLAN Tunneling Is Used

In versions earlier than 10.2, an IP address cannot be assigned to an interface (VLAN) when VLAN tunneling is used.

Therefore, we recommend purchasing and using an SD card from ALAXALA when you upgrade a Switch with VLAN tunneling enabled.

3.1. Upgrading from an SD card

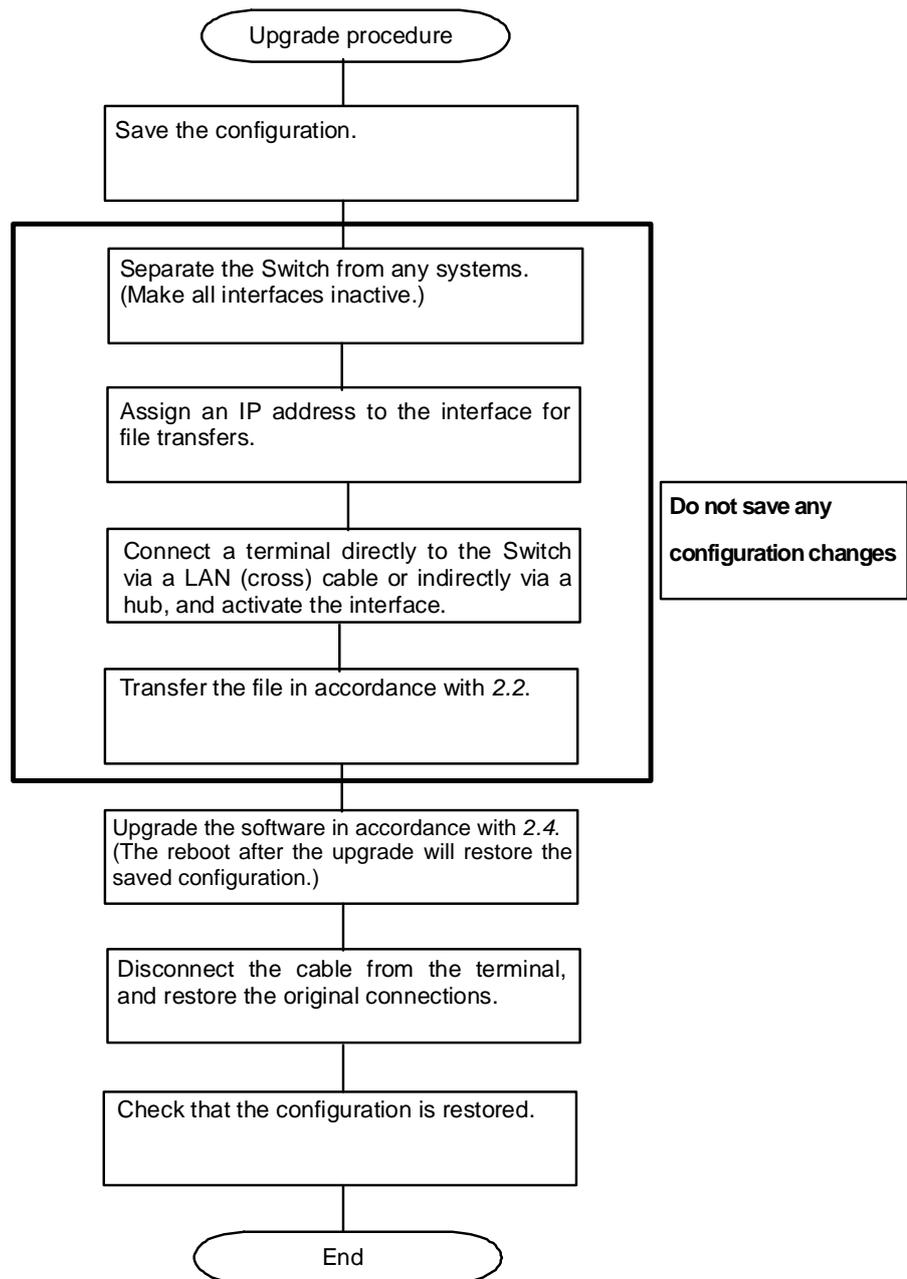
Upgrade the software according to the procedure described in 2.3 and 2.4.

3.2. Upgrading from a remote terminal (when you have no SD card)

In versions earlier than 10.2, because an IP address cannot be assigned to the Switch while VLAN tunneling is being used, you must delete the VLAN tunneling functionality to define an IP address (enable IP communication). Therefore, while considering the impact on the system, we recommend carrying out the following steps before upgrading:

- (1) Make all interfaces inactive to separate the Switch from the system.
- (2) Connect a terminal storing the upgrade file directly to the Switch via a LAN cable (cross-cable) or indirectly via a hub to which only the terminal and the Switch are connected.

To upgrade the software:



Appendix

To transfer files:

- (1) Insert the upgrade CD-ROM into the CD-ROM drive.
- (2) Open the command prompt window on your PC.
- (3) Move to `soft` directory on the CD-ROM drive.
- (4) Execute the `dir` command to check the file name (`upgrade.dat`) and the file size.
- (5) Execute the `ftp` command to connect to the Switch.
- (6) When asked to enter a user name, enter your login name for the Switch.
- (7) When asked to enter a password, enter your password.
- (8) Enter `bin` to transfer the software in binary mode.
- (9) Transfer the software to the home directory in the Switch.
- (10) Enter `bye`.

```
C:\WINDOWS> e: (When the CD-ROM drive is drive E)
E:\>cd soft
E:\soft>dir

20XX/11/24 22:44 33 upgrade.dat ← (Check the file name and size.) (4)
E:\> ftp 192.168.1.1 ← (When the IP address of the Switch is 192.168.1.1)
User (192.168.1.1:(none)): operator ← (Specify the login name for the Switch.) (6)
Password:***** ← (Specify the password.) (7)
ftp> bin
ftp> put upgrade.dat
ftp> bye
```