



# SUPERSTACK® 3 SWITCH 4400 SERIES SOFTWARE VERSION 3.12 RELEASE NOTES

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## Related Documentation

Please use these notes in conjunction with the following documents:

- "SuperStack 3 Switch Implementation Guide"  
Part number: DUA1720-3BAA04  
(PDF format supplied on the Switch CD-ROM)
- "SuperStack 3 Switch 4400 Getting Started Guide"  
Part number: DUA1720-3AAA05  
(supplied with your Switch)
- "SuperStack 3 Switch 4400 Series Management Quick Reference Guide"  
Part number: DQA1720-3AAA04 rev 01  
(supplied with your Switch)
- "SuperStack 3 Switch Management Interface Reference Guide"  
Part number: DHA1720-3AAA04  
(HTML format supplied on the Switch CD-ROM)

You can obtain the latest technical information for the Switch 4400, including a list of known problems and solutions, from the 3Com Knowledgebase:

<http://knowledgebase.3com.com>

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## Software License Agreement

Before you use the SuperStack 3 Switch 4400 Series software, please ensure that you read the license agreement text. You can find the license.txt file on the CD-ROM that accompanies your product, or in the self-extracting exe that you have downloaded from the 3Com Web site.

If you intend to use a Switch 4400 with version 3.12 software in a stack, ensure that all other units in the stack are upgraded to version 3.12 as well. 3Com cannot guarantee correct operation if different software versions are used within a stack. Please note that under the terms and conditions of the 3Com End User Software License Agreement, you will need to purchase a service contract for each existing Switch 4400 before upgrading to version 3.12 software.

If you do not wish to purchase the required support contracts please downgrade all units in the stack to version 2 software which is freely available for download from <http://www.3com.com/downloads>.



*The Switch 4400 PWR requires software version 3.12 or higher to operate. If you add a Switch 4400 PWR to a stack, 3Com recommends that you upgrade the other units to software version 3.12.*

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## About This Software Version

The version 3.12 agent feature set is a compatible superset of that provided by all previous versions of this agent. This agent provides support for the following:

- SuperStack 3 Switch 4400 24 port (3C17203)
- SuperStack 3 Switch 4400 48 port (3C17204)
- SuperStack 3 Switch 4400 PWR 24 port (3C17205)
- SuperStack 3 Switch 4400 SE 24 port (3C17206)

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## Upgrading to Software Version 3.12

3Com strongly recommends that you upgrade all Switch 4400 units which are running a previous software agent to version 3.12 software agent.

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## Enhancements and Fixes for Known Faults

The following features and enhancements are supported in version 3.12. For more detailed information, refer to the Switch 4400 Series Implementation Guide (DUA1720-3BAA04) supplied on the CD-ROM that accompanies your Switch.

- Power over Ethernet Functionality \*

\* This feature is only available on the SuperStack 3 Switch 4400 PWR (3C17205).

The following known faults have been fixed in version 3.12:

- A Switch 4400 in a stack would, in certain circumstances, reset after a period of 49 days of continuous operation. This has been fixed.
- If a port forming part of an aggregated link changed its link state the VLAN membership for that port would become corrupted. This has been fixed. A port can now change its link state and maintain its VLAN membership.
- If the link state of any port was changed, traffic on aggregated links would be briefly stopped. This has been fixed. The traffic will only be stopped if a port that forms part of an aggregated link changes its link state.

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## Points to Note when using the Switch 4400

### Supported Expansion Modules

- 3C17220 - 1000BASE-T Module
- 3C17221 - 1000BASE-SX Module
- 3C17222 - 100BASE-FX Module
- 3C17223 - 1000BASE-LX Module
- 3C17227 - Stacking Kit
- 3C17228 - Stack Extender Kit

### TFTP Upgrades

Note that when initiating a TFTP upgrade using the Web interface or CLI, if an incorrect TFTP server IP

address or software upgrade filename is entered you will not be able to correct the IP address or filename until the TFTP upgrade operation has timed out. The default time out period is 5 minutes.

You can avoid the 5 minute time out period by aborting the upgrade, either using the Abort button in the Web interface or the Esc character in the Command Line Interface.

If you start a TFTP upgrade using the CLI or a Web browser, the switch will report the status of each unit as it finishes its upgrade. If you are upgrading a stack and use the Web, or connect to the CLI using Telnet, and your computer is directly connected to a port on the stack, the connection will break when the unit with that port completes its upgrade and restarts. If there are other units still to upgrade at this point, you will not get status reports about them, but the upgrade should continue normally. You can check this by using the system summary command on each unit and verifying that the Operational Version shows the correct version of software. Note that this problem will not occur if your computer is connected indirectly via a hub, a router, or another switch which is not part of the stack.

## Configuring Link Aggregations

When creating a manual aggregation between two systems the ports in the aggregation must not be physically connected together until the aggregation has been correctly configured at both ends of the link. Failure to configure the aggregation at both ends before physically connecting the ports can result in a

number of serious network issues such as lost packets and network loops.

## LACP Protocol



**CAUTION:** *The LACP protocol is disabled by default in version 3.12 agent. Some legacy devices do not support LACP and 3Com strongly recommends LACP remains disabled on ports connected to these devices (in rare cases, if LACP is enabled on ports connected to these devices, it can result in incorrect network configurations).*

## Stacking Units

Up to eight Switch 4400 units can be stacked together and then treated as a single manageable unit with one IP address. Any combination of 24-port and 48-port units is allowed in a single stack, as long as the total number of front panel ports does not exceed the limit of 192 ports.



**CAUTION:** *The Switch 4400 SE cannot be stacked together with non-4400 SE units. The Switch 4400 SE will disable its cascade ability if stacked with non-4400 SE units.*

## Redundant Power System

This note applies only to the Switch 4400 PWR (3C17205).

When using a Switch 4400 PWR with the SuperStack 3 Advanced Redundant Power System (3C16071B), 3Com recommends the following:

When you power cycle the Redundant Power System (RPS) you should wait ten seconds between switching the power off and back on again. If you do not wait for ten seconds, the Switch may not detect the presence of the RPS. If this occurs then the Switch will not use the RPS in the event of a Power Supply failure.

## Mains Power

This note applies only to the Switch 4400 PWR (3C17205).

When you power cycle the Switch 4400 PWR you should wait ten seconds between switching the power off and back on again. If you do not wait for ten seconds, the Switch may not power up correctly and the Power/Self Test LED will light yellow instead of green.

## Roving Analysis

Roving analysis is supported in:

- a standalone Switch 4400 (24-port) unit
- a single Switch 4400 (24-port) unit within a stack of Switch 4400 units
- a standalone Switch 4400 (48-port) unit

Roving analysis is not supported:

- across a stack of Switch 4400 units
- in a single Switch 4400 (48-port) unit within a stack of Switch 4400 units

## Replacing Expansion Modules

When an expansion module is replaced by another module of a different type, the configuration of the expansion module will not be completely reset to factory defaults. Specifically the following module associated parameters will not be reset:

- Static addresses
- Resilient links
- IGMP router ports
- Spanning Tree port data
- Half-duplex flow control

3Com recommends that all module configuration parameters should be reviewed after an expansion module has been replaced.

## Adding Units to the Stack

3Com recommends that you initialize a Switch 4400 unit that has previously been used elsewhere in your network before you add it to an existing stack. If you do not initialize the unit, problems may be caused by conflicting Switch configurations.

## CD-ROM

When using the setup.exe that displays the splash screen on the CD-ROM you may experience a prob-

lem if you have an early version of virus checker installed on your PC. If you experience this problem the following error is displayed when the setup.exe is activated:

```
Application Error
Exception EResNotFound in
Module 0DSCD.EXE at 0016:0B37
Resource TMainForm not found.
```

You can either:

- Turn off your virus checking software whilst using the CD-ROM

or

- Upgrade your virus checking software to the latest version.

## Serial Cable

When using a serial cable you must ensure that it is wired correctly as described in Appendix B of the Getting Started Guide.

## Telnet and HyperTerminal

Accessing the Command Line Interface via Telnet or Windows HyperTerminal using TCP/IP may not work correctly on some platforms unless it has been configured to send line feeds with carriage returns. To set this for Telnet enter **set crlf** when in command mode. To set this for HyperTerminal click on the *Settings* tab in the *Properties* screen, click *ASCII Setup* and ensure that *Send line ends with line feeds* is checked within the *ASCII Sending* section.

You should not configure HyperTerminal in the above way if you are using a console cable to make a direct connection to the Switch.

Accessing the Command Line Interface is not possible using the default Telnet program supplied with Windows XP. Use another Telnet program, such as Hyperterminal. See the 3Com Knowledgebase for updates and a solution, when available:

<http://knowledgebase.3com.com>

## Software Update Utility

The Software Update Utility (SUU) is a Windows application used to serially update the software to the Switch via the console port. The preferred method for updating the software on the Switch is via a TFTP upgrade. The SUU should only be used if a TFTP upgrade has failed. This utility is available on the CD-ROM that accompanies your Switch.

## Installing Upgrade Licenses in a Switch 4400 SE Stack

Follow the installation instructions provided with the Switch 4400 SE Enhanced Software Upgrade (3C17207) for each unit in the stack. Reset the stack only when Activation Keys have been entered for all the units.

This will avoid having one or more units with a licence enabled, while one or more other units do not. If the licences in the stack are in different states, units which do not have a licence, or where the licence is disabled, will isolate themselves from the stack.

## IGMP Querying

IGMP querying is disabled by default due to potential interoperability issues with core products that do not follow the lowest IP address election method. Refer to Chapter 3 "Using Multicast Filtering" of the Implementation Guide for more information about this method.

If you wish to run multicast sessions in a network that does not contain any IGMP routers (or queriers), you can configure the Switch 4400 to automatically negotiate with compatible devices on VLAN 1 to become the querier. Use the **bridge multicastFilter igmp queryMode** CLI command. The Switch 4400 is compatible with any device that conforms to the IGMP v2 protocol.

If IGMP Snooping is enabled then IP multicasts will only be forwarded within a VLAN if an IGMP Querier is present in that VLAN.

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## Known Problems

- The Switch 4400 PWR requires software version 3.12 or higher to operate. If you add a Switch 4400 PWR to a stack, 3Com recommends that you upgrade the other units to software version 3.12.
- If you should decide to downgrade to an older version of the agent software, you may notice inaccurate information displayed within the Web browser interface. This is typically seen as inactive hotspots in the interface. If this should occur, 3Com recommends that you exit the browser, clear the browser cache, and begin another session.

- Large stacks (5 or more units) may take a considerable time to recover if the stack is split and re-merged under heavy traffic load. Recovery can be accelerated if the traffic is stopped and the stack rebooted manually.
- 3Com recommends that aggregations should not be configured with a mixture of automatic and manual member ports. In addition, 3Com recommends that LACP is disabled on ports that are added manually to aggregations. Otherwise:
  - If the port is initially unconnected when it is manually added to an aggregation - LACP may unexpectedly move the port to another aggregation when the port is subsequently connected to a partner device.
  - If the port is initially connected to another LACP enabled partner device - The LACP partnerId of the device may conflict with that of the manual aggregation and cause a CLI error message to be generated.



*If an automatic aggregated link (created by LACP) contains ports with different VLAN membership, the aggregated link will inherit the VLAN membership of the first port that comes up in the aggregated link. It will override any pre-defined VLAN membership for the aggregated link.*

- 3Com recommends that you set individual ports that are to be members of an aggregated link to the same VLAN membership. This ensures communication between all VLANs at all times.
- To ensure maximum security after connecting units in a stack, and the units have reconfigured them-

selves, 3Com recommends that you reconfigure the user names and passwords defined in the local database using the *Security > User Web* operation or the **system management password** CLI command. This recommendation is not necessary if you are using a RADIUS authentication server on your network to validate management access to the units.

- The default set-up for Netscape 4.76 on Solaris 2.6 may cause problems when using *System > Telnet > Connect*. By changing the application that Netscape launches from 'xterm' to 'dtterm' the problem is overcome. This is accomplished as follows:

- 1 From the *Edit* menu in Communicator, select *Preferences*.
- 2 Click the arrow next to Navigator to expand its sub-menu and select *Applications*.
- 3 In the *Applications* list in the right-hand pane, click on the row that has telnet in the Description column and click the *Edit* button.
- 4 In the *Edit* window, the text in the *Application:* box should be changed from  

```
xterm -e telnet %h %p
```

to  

```
dtterm -e telnet %h %p
```
- 5 Click *OK* to close the Edit window and click *OK* to close the *Preferences* window. *System > Telnet > Connect* should now connect correctly with the device.

- On downgrade to an earlier agent version (e.g. 2.20) any QoS configuration created before the

downgrade will be lost. However, if a QoS configuration was created originally on 2.20, and no additional QoS configuration have been made with the 3.x agent, then on downgrade the original QoS configuration will still exist on 2.20.

- When downgrading a stack with a stack-wide manual aggregation from version 3.x to an earlier software version, member ports may temporarily be left "inactive". This can result in the stack failing to downgrade if the aggregation is being used to access the tftp server. Units would then need to be downgraded individually.
- The Software Upgrade feature will not automatically re-establish connection to the 3Com tftp server if the connection is lost temporarily for more than 15 seconds. In these circumstances the tftp connection will timeout approximately 3.5 minutes before the upgrade can be restarted manually.
- In a Layer-2 only network (i.e. with no Multicast Routers) multicast traffic destinations may not be learnt for up to 5 minutes after a switch is powered on, or is reset.

The switch does not display an error message if inappropriate, but otherwise legal, IP addresses are used for certain configurations.

- For example, the IP address of the switch can be supplied as the tftp server address for software upgrade. No error is displayed to warn of the mistake. The solution is to supply a more appropriate IP address.

- Netscape 4.7x browsers may crash if the browser window is maximised or re-sized whilst loading switch management screens.
  - If while using Netscape with the Web management interface, you attempt to access an area which is restricted due to your current access level, you may be prompted repeatedly for a username and password. To get out of this situation, click *OK* when you are asked if you want to reauthenticate, then click *Cancel* on the username and password entry box. A message stating "401 Unauthorized" will be displayed. You may now log in to the Web management interface again. To avoid this, log in using a higher access level, or do not attempt to access areas of the Web interface which are restricted for your access level.
  - When using Netscape 4.7 it is recommended not to open multiple browsers and then visit other Web sites before returning to the 3Com Web management page. Scripts loaded by other Web sites can overwrite the settings required by the 3Com Web management.
  - If Netscape is being used to log into the device via the Web interface, and all attempts to the RADIUS server time out, the next authentication attempt may fail immediately. To avoid this, wait several seconds before retrying the authentication attempt.
  - The **system management password** CLI command should not be used when logged in as a user authenticated via RADIUS. To change a password in the local (non-RADIUS) database, use the security device user modify CLI command.
- The spanning tree mode is not synchronised between units following a stack merge. This should not cause any problems for the network since rapid spanning tree is fully backward compatible with legacy spanning tree. Unfortunately, where units within the stack are operating in different spanning tree modes, the user interfaces are not capable of reflecting this - they will choose one setting or the other when asked to show the current spanning tree mode. When a new spanning tree mode is written to the stack (via any of the user interfaces), this will be set on all units within the stack regardless of whether the spanning tree mode previously differed from unit to unit.
  - Half-duplex flow control (backjamming) cannot be enabled or disabled on a per port basis. If any port on a specific unit is reconfigured, all half-duplex ports on that unit will be changed to the new configuration.
  - Auto-MDIX mode is not available if auto-negotiation is disabled on a port. That port will only operate in MDI mode.
  - When setting up a SLIP IP address and an IP address for the unit you must ensure that the assigned IP addresses are different.
  - If you use Netscape to manage your Switch you may experience problems when trying to change the user password. 3Com recommends that if you use Netscape and you need to change the password you do so via the CLI command. To do this from the Web interface Device View, use the *System > Telnet > Connect* operation to start a

Telnet connection and then use the **security device user modify** CLI command.

- If the error, *The previous command window is still active is displayed* when using the Web interface, you must close that window before you can select another operation. You should then press Reload (Netscape) or Refresh (Internet Explorer) in your Web browser.
- When performing a software upgrade via the *System > Control > Software Upgrade* Web interface, the *OK* and *Cancel* buttons may be partially obscured by the edge of the window. This issue only occurs when all of the following conditions exist:
  - Windows 95
  - IE5.0 or IE5.5
  - Screen resolution set to 800x600.
  - Java plugin version earlier than 1.3.1

This problem can be fixed by upgrading to Java plugin version 1.3.1 or later via the following link.

**<http://java.sun.com/getjava/download.html>**

- The Switch 4400 Web interface can be accessed by any of the following Web browsers:
  - Microsoft Internet Explorer v5.0
  - Microsoft Internet Explorer v5.5
  - Microsoft Internet Explorer v6.0
  - Netscape Communicator v4.76
  - Netscape Communicator v6.2

- The Switch 4400 Web interface can be accessed on any of the following PC operating systems:
  - Microsoft Windows 95
  - Microsoft Windows 98
  - Microsoft Windows NT v4.0
  - Microsoft Windows 2000
  - Microsoft Windows XP
  - Solaris 2.6

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## Known Interoperability Issues

An incompatibility exists in the default settings for Link Aggregation between the Switch 4400 and the following 3Com products:

- Switch 4007
- Switch 3900
- Switch 9300
- CoreBuilder 9000 family
- CoreBuilder 9400
- CoreBuilder 3500

The products listed above disable auto-negotiation when a port is added to an aggregated link (trunk).

In order for link aggregation (trunking) to work, ports at either end of an aggregated link (trunk) must be identically configured. To resolve the incompatibility, you must complete the following steps:

- 1 On any of the switches listed, you must disable TCMP on a trunk (aggregated link) that connects to a Switch

4400 Series, as TCMP is not supported on the Switch 4400 Series.

- 2 You must disable auto-negotiation on all ports on the Switch 4400 Series that you want to place in an aggregated link before you place them in the aggregated link. This will result in 10/100 Mbps ports being set to half duplex mode. Gigabit and 100BASE-FX ports will be set to full duplex mode.
- 3 You must ensure that all 10/100 ports that you want to aggregate are configured to full duplex mode on both link partners. The Switch 4400 does not support the aggregation of half duplex links.

Refer to the Management Interface Reference Guide on the CD-ROM that accompanies the Switch 4400 Series for more information about configuring aggregated links.

Although it is possible to set up a slip connection from a PC running Windows 2000 to the console port of the switch using the "Communications Cable between 2 computers" modem type, the resulting setup only works intermittently.

The Switch 4400 PWR is designed to power devices compliant to the 802.3af draft standard. Devices not compliant with 802.3af (draft) may not be supplied power by the Switch 4400 PWR. Refer to the documentation supplied with your Ethernet powered device.

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## Software Upgrades

To upgrade the software on the Switch do the following:

- 1 Locate the upgrade software for the Switch and run the (`filename.exe`) executable file.
- 2 If necessary, download the TFTP server applications into the management station.
- 3 Install the TFTP server (file name 3ts01\_04.exe) on a Microsoft Windows 95, 98, NT or 2000 machine.
- 4 Launch the TFTP server application.
- 5 Point the Upload/Download default directory on the TFTP server to the directory where the upgrade file is located.
- 6 Make sure the Switch being upgraded has an IP address assigned to it.
- 7 Telnet to the Switch.
  - a To Telnet to the Switch, click *Start* in Microsoft Windows 95, 98, NT or 2000 machine.
  - b Click *Run*.
  - c In the text area, type **telnet IP address**.
  - d Click *OK*.
- 8 Press *Enter* to receive a login prompt.
- 9 Log into the Switch management.
  - a The default user login is `admin`.
  - b There is no default password for admin (press *Enter*).

- 10 From the main menu, select *System*, then select *Control*.
- 11 Select *SoftwareUpgrade*.
- 12 Enter the IP address of the TFTP server connected to the Switch.
- 13 Enter the upgrade file name.
  - a This message will appear "Software upgrade in progress..."
  - b The entire time the upgrade is in process, the Power/Self test LED will flash ON/OFF Green, and a series of dots will indicate that the upgrade is progressing successfully
  - c When the software upgrade is complete, the Switch will reboot itself.

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## 3Com Network Supervisor

The CD-ROM contains 3Com Network Supervisor.

3Com Network Supervisor provides powerful yet easy-to-use network management. Focused on the needs of small to medium enterprises, it enables you to manage your network more efficiently. For larger networks (up to 2,500 nodes) and extra functionality you can purchase the 3Com Network Supervisor Advanced Package.

To download the latest 3Com Network Supervisor and Service Pack please visit:

<http://www.3com.com/3ns/>

After installation, click *LiveUpdate* to add support for the latest 3Com products.

For HP OpenView users the Superstack 3 Switch 4400 Series (and all other 3Com managed products) are fully supported by the 3Com Integration Kit for HP OpenView (3C15300).

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## Documentation Errors and Omissions

### Switch Implementation Guide (DUA1720-3BAA04)

Page 23 contains the following statement:

You can reset the Switch using the **protocol ip initializeConfig** CLI command or the *System > Control > Initialize* Web interface operation.

This is incorrect. It should read:

You can reset the Switch using the **system control initialize** CLI command or the *System > Control > Initialize* Web interface operation.

### Switch 4400 Series Getting Started Guide (DUA1720-3BAA05)

Page 32 contains the following statement:

The 4400 PWR (3C17302) supports Power over Ethernet on all front ports.

This is incorrect. It should read:

The 4400 PWR (3C17205) supports Power over Ethernet on all front ports.

### **Switch 4400 Series Getting Started Guide (DUA1720-3BAA05)**

Page 63 omits the following Safety information:

Power Cord Set — Japan

電源コードを接続する場合は、アース接続がされていることを確認してから行ってください。  
アース線をはずす場合は、電源コードが接続されていないことを確認してから行ってください。

### **Switch 4400 Series Getting Started Guide (DUA1720-3BAA05)**

Page 65 contains the following statement:

The 4400 PWR (3C17302) supports Power over Ethernet on all front ports.

This is incorrect. It should read:

The 4400 PWR (3C17205) supports Power over Ethernet on all front ports.

### **Switch 4400 Series Getting Started Guide (DUA1720-3BAA05)**

Page 65 contains the following statement:

Le 4400 PWR (3C17302) prend en charge la mise sous tension par Ethernet au niveau de tous les ports frontaux.

This is incorrect. It should read:

Le 4400 PWR (3C17205) prend en charge la mise sous tension par Ethernet au niveau de tous les ports frontaux.

### **Switch 4400 Series Getting Started Guide (DUA1720-3BAA05)**

Page 68 contains the following statement:

Das 4400 PWR (3C17302) unterstützt die Stromversorgung per Ethernet an allen vorderen Ports.

This is incorrect. It should read:

Das 4400 PWR (3C17205) unterstützt die Stromversorgung per Ethernet an allen vorderen Ports.

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