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Release Notes for the Nortel Networks Wireless LAN Series 2200

Access Point 2220

Mobile Client 2201



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Introduction

These release notes for the Nortel Networks* Wireless LAN Series 2200 products provide information about software and operational issues not included in the Nortel Networks Wireless LAN Series 2200 documentation. For a list of Wireless LAN Series 2200 documentation, refer to [“Related publications” on page 18](#).

The Nortel Networks Wireless LAN Access Point 2220 (Access Point 2220) and the Nortel Networks Wireless LAN Mobile Adapter 2201 (Mobile Adapter 2201) are a part of the Nortel Networks Wireless LAN Series 2200 product line.

These release notes cover the following topics:

- [“Features,” next](#)
- [“Setting static encryption keys” on page 4](#)
- [“New CLI commands” on page 5](#)
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- [“Additional information about PPPoE” on page 14](#)
- [“Turbo Mode availability” on page 14](#)
- [“Known issues” on page 14](#)
- [“Related publications” on page 18](#)
- [“How to get help” on page 19](#)

Features

This section contains new features and enhancements that were not documented in the Nortel Networks Wireless LAN Series 2200 documentation.

- **Command Line Interface (CLI) enhancements and additions**—Several CLI commands have been added or enhanced on the Access Point 2220. Refer to [“New CLI commands” on page 5](#) for more information about the added and enhanced CLI commands.

Setting static encryption keys

When setting static encryption keys, ensure that the same keys are set in the corresponding positions for the 802.11a and 802.11b radios on the Access Point 2220 and on the Mobile Adapter 2201. [Table 1](#) shows the proper key settings.



Note: If using WEP, you must change the default Transmit Key setting for the 802.11a radio on the Access Point 2220. By default, the default Transmit Key is set to Key 1 which is reserved for the dynamic key. Refer to [\(Table 1\)](#). (CR NTA-Q00662252)



Note: To support roaming between 802.11a and 802.11b radios in an enterprise environment, Nortel Networks recommends using Keys 2 & 3 for static encryption on the Access Point 2220 and the Mobile Adapter 2201.

Table 1 Static encryption key settings

Access Point 2220			Mobile Adapter 2201	
	802.11a radio	802.11b radio		
Unique	N/A	N/A	Unique:	XXXXXX
Key 1:	reserved for dynamic key	AAAAA	First:	AAAAA
Key 2:	BBBBB	BBBBB	Second:	BBBBB
Key 3:	CCCCC	CCCCC	Third:	CCCCC
Key 4:	DDDDD	reserved for dynamic key	Fourth:	DDDDD

For information on how to set static encryption keys on the Access Point 2220, refer to *Using the Nortel Networks Wireless LAN Access Point 2220* (part number 214853-A) and *Run Time Console Specifications for the Nortel Networks Wireless LAN Access Point 2220* (part number 215113-A). For information on how to set static encryption keys on the Mobile Adapter 2201, refer to *Installing and Using the Nortel Networks Wireless LAN Mobile Adapter 2201* (part number 214695-A).

New CLI commands

This section contains new and enhanced CLI commands for the Nortel Networks Wireless LAN Access Point 2220.

fragmentation length command

The `fragmentation length` command configures the maximum size of a wireless packet transmitted from the 802.11a radio. If the packet size is larger than the fragmentation size, the packet will be segmented into smaller packets. The `fragmentation length` command is not supported on the 802.11b radio. The syntax of the `fragmentation length` command is:

```
fragmentation length <256-2346>
```

The `fragmentation length` command is in the interface config mode.

[Table 2](#) describes the parameters and variables for the `fragmentation length` command.

Table 2 fragmentation length command parameters and variables

Parameters and variables	Description
<256-2346>	Sets the maximum packet size. Default is 2346.

show system command

The `show system` command displays the current system characteristics. It has been enhanced to include the Access Point 2220 serial number and the hardware revision number. The syntax for the `show system` command is:

```
show system
```

The `show system` command is in the exec mode.

The `show system` command has no parameters or variables.

[Figure 1](#) displays sample output from the `show system` command. Your output may differ slightly from the sample output.

Figure 1 show system command output

```
Nortel Enterprise AP#show system
System Information
=====
Serial Number       : SACC12000X
HW Revision Number  : 02
System Up time      : 0 days, 20 hours, 35 minutes, 44 seconds
System Name         : Pubs AP
System Location     :
System Contact      :
System Country Code : US - UNITED STATES
MAC Address         : 00-20-D8-03-80-68
IP Address          : 134.177.150.92
Subnet Mask         : 255.255.255.0
Default Gateway     : 134.177.150.1
IAPP State          : ENABLED
DHCP Client         : ENABLED
HTTP Server         : ENABLED
HTTP Server Port    : 80
Slot Status         : Dual band(a/b)
Software Version    : v1.1.16
=====
```

show hardware command

The `show hardware` command displays the hardware revision number of the Access Point 2220. The syntax for the `show hardware` command is:

```
show hardware
```

The `show hardware` command is in the exec mode.

The `show hardware` command has no parameters or variables.

[Figure 2](#) displays sample output from the `show hardware` command.

Figure 2 show hardware command output

```
Nortel Enterprise AP#show hardware
Hardware version 02
```

show bootfile command

The `show bootfile` command displays the name of the current bootfile of the Access Point 2220. The syntax for the `show bootfile` command is:

```
show bootfile
```

The `show bootfile` command is in the exec mode.

The `show bootfile` command has no parameters or variables.

[Figure 3](#) displays sample output from the `show bootfile` command.

Figure 3 show bootfile command output

```
Nortel Enterprise AP#show bootfile
Bootfile : ntl-img.bin
```

Documentation changes

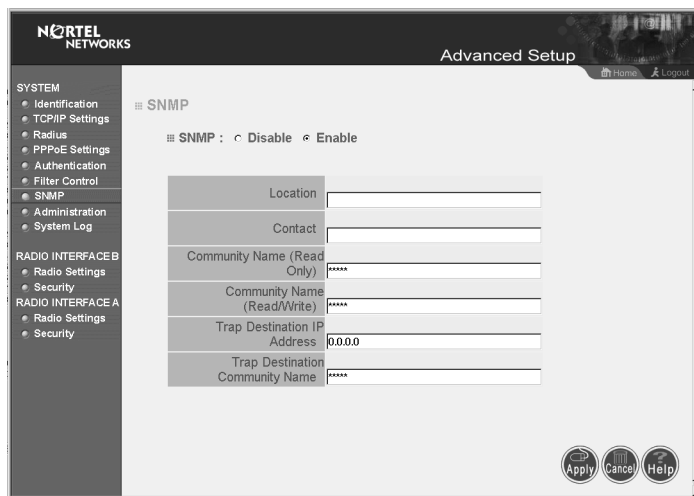
This section contains changes and corrections to the Nortel Networks Wireless LAN Series 2200 documentation.

Access Point 2220 documentation changes

Changes to web interface SNMP screen

The Advanced Setup>SNMP screen has been enhanced to allow SNMP to be enabled or disabled (Figure 4). Select Enable to enable the SNMP agent, and Disable to disable the SNMP agent. Refer to *Using the Nortel Networks Wireless LAN Access Point 2220* (part number 214853-A) for more information on configuring SNMP on the Access Point 2220.

Figure 4 SNMP screen



The screenshot shows the Nortel Networks web interface for the Advanced Setup of the SNMP screen. The interface includes a navigation menu on the left with categories like SYSTEM, RADIO INTERFACE B, and RADIO INTERFACE A. The main content area is titled "SNMP" and features a radio button selection for "SNMP : Disable Enable". Below this, there are several input fields: "Location", "Contact", "Community Name (Read Only)" (masked with asterisks), "Community Name (Read/Write)" (masked with asterisks), "Trap Destination IP Address" (with the value "0.0.0.0"), and "Trap Destination Community Name" (masked with asterisks). At the bottom right, there are three buttons: "Apply", "Cancel", and "Help".

Accessing the CLI

The manual *Using the Nortel Networks Wireless LAN Access Point 2220* (part number 214853-A) incorrectly specifies that a null modem cable is used for a direct serial connection to the Access Point 2220.

The CLI may be accessed from a remote telnet session or a direct serial connection using the console port on the back of the Access Point 2220. A computer, VT100 compatible terminal-emulation program, and a straight-through DB9 male to DB9 female serial cable are required.

Changes to the web interface System Log screen

The Advanced Setup>System Log screen has been enhanced to allow the time to be entered manually. If the SNTP Server option is disabled, fields appear that allow manual entry of the year, month, day, hour, and minute (Figure 5).

Figure 5 SNTP Server disabled

The screenshot shows the 'Advanced Setup' web interface for Nortel Networks. The left sidebar contains a navigation menu with categories: SYSTEM, RADIO INTERFACE B, RADIO INTERFACE A, and Security. The 'SYSTEM' category is expanded, showing options like Identification, TCP/IP Settings, Radius, PPPoE Settings, Authentication, Filter Control, SNMP, Administration, and System Log. The main content area is titled 'System Log' and contains the following settings:

- System Log Setup:** Disable Enable
 - Logging Host: Disable Enable
 - Server Name / IP:
 - Logging Console: Disable Enable
 - Logging Level:
- SNTP Server:** Disable Enable
- Set Time:** Year Month Day Hour Min
- Set Time Zone:** Enter Time Zone:
- Enable Daylight Saving
- From: To:

At the bottom right of the form are three buttons: 'Apply', 'Cancel', and 'Help'.

When the SNTP Server option is enabled, the fields for manual entry of the time are replaced by fields to enter SNTP server information (Figure 6).

Figure 6 SNTP Server enabled

Logging levels

The Access Point 2220 supports eight levels of system event logging. [Table 3](#) lists the available levels.



Note: When logging is set to a particular level, all events above that set level will also be logged.

Table 3 System event logging levels

Level	Description
Emergency	Emergency messages. Urgent conditions that require immediate attention. The Access Point 2220 is no longer functioning and must be reset. If logging is enabled, Emergency events will always be logged no matter what level is selected.
Alert	Alert messages when immediate attention is required. A particular service may be in an unusable state. Example: <11a or 11b> Wireless Interface Failed.
Critical	Reserved for future use.
Error	Error or abnormal condition messages.

Table 3 System event logging levels (continued)

Level	Description
Warning	Messages when the system is still operational, but in a warning condition. Example: Station Failed to associate (internal error) <MAC Address>.
Notice	Normal but significant condition messages. Example: Updating broadcast key for all 802.11b clients.
Informational	Informational messages, used to log normal operations. Example: SSID updated <SSID> and Transmit Power set <LEVEL>.
Debug	Messages that contain information normally of use only when debugging. Example: No Radius Servers have been configured, failing authorization.

CLI documentation change

Although the documentation shows the CLI prompt as EnterpriseAP, it really shows as Nortel Enterprise AP.

Mobile Adapter 2201 documentation changes

The Power Save Mode in the Mobile Adapter 2201 utility is off by default. Nortel Networks recommends that you do not change the Power Save Mode.

Nortel Networks recommends that you do not change the Mobile Adapter 2201 driver settings for Map Registers or Network Address.

Maximum Station Data Rate

Setting the Maximum Station Data Rate using the web interface or the corresponding CLI interface `speed` command produces different results when applied to the 802.11a and 802.11b radios. The parameter sets the Basic Rate Set for the 802.11b radio, and the Supported Rate Set for the 802.11a radio.

Basic Rate Set—The Basic Rate Set is the required set of data rates that must be supported by any clients attempting to join the network.

Supported Rate Set—The Supported Rate Set is the allowable set of data rates for the clients.

802.11b radio

The Maximum Station Data Rate (web) or `speed` (CLI) parameter configures the Basic Rate Set for the 802.11b radio. The Supported Rate Set for the 802.11b radio is fixed and cannot be modified (Table 4).

Table 4 802.11b Basic and Supported Rate Sets

Maximum Station Data Rate configured (Mbps)	Basic Rate Set (Mbps)	Supported Rate Set (Mbps)
11	11, 5.5, 2, 1	11, 5.5, 2, 1
5.5	5.5, 2, 1	11, 5.5, 2, 1
2	2, 1	11, 5.5, 2, 1
1	1	11, 5.5, 2, 1

Broadcast and Multicast data frames

In order to ensure all clients associated with the Access Point 2220 receive all Broadcast and Multicast data frames, the frames are sent at the minimum speed supported by the Basic Rate Set.

Because of this feature, you must ensure that Broadcast and Multicast traffic does not consume all the available bandwidth on the Access Point 2220.

For example, this means you must limit Broadcast and Multicast traffic on your 802.11b network to less than 1 Mbps.

802.11a radio

The Maximum Station Data Rate (web) or `speed` (CLI) parameter configures the Supported Rate Set for the 802.11a radio. The Basic Rate Set for the 802.11a radio cannot be modified directly and only changes when the Maximum Station Data Rate is set below 24 Mbps ([Table 5](#)).

Table 5 802.11a Basic and Supported Rate Sets

Maximum Station Data Rate configured (Mbps)	Basic Rate Set (Mbps)	Supported Rate Set (Mbps)
54	24, 12, 6	54, 48, 36, 24, 18, 12, 9, 6
48	24, 12, 6	48, 36, 24, 18, 12, 9, 6
36	24, 12, 6	36, 24, 18, 12, 9, 6
24	24, 12, 6	24, 18, 12, 9, 6
18	12, 6	18, 12, 9, 6
12	12, 6	12, 9, 6
9	6	9, 6
6	6	6

Broadcast and Multicast data frames

Broadcast and Multicast data frames are sent at 6 Mbps, regardless of the Maximum Station Data Rate set.

Additional information about PPPoE

The PPPoE implementation on the Access Point 2220 is meant for management traffic between the Access Point 2220 and a remote PPPoE server (typically at an ISP).

It is important to note that the only traffic carried over this PPPoE tunnel is management traffic initiated by the Access Point 2220. Examples of this management traffic include:

- RADIUS traffic—in support of 802.1x from the wireless clients
- syslog traffic—generated by the Access Point 2220
- DHCP traffic—generated by the Access Point 2220

Once the a wireless client has been successfully authenticated using 802.1x, it would be up to the client to set up its own PPPoE tunnel on the WAN side, if required. The Access Point 2220 is just bridging traffic from the wireless client, and it does not matter whether the traffic coming from the wireless client is tunneled or not.

Turbo Mode availability

As of this release, Turbo Mode is allowed in the following regions:

- United States
- Mexico
- The Philippines
- China
- Colombia
- Panama

Before enabling Turbo Mode, verify that Turbo Mode is allowed under your current local regulations. For information on enabling Turbo Mode, refer to *Using the Nortel Networks Wireless LAN Access Point 2220* (part number 214853-A).

Known issues

This section discusses the known issues with the Nortel Networks Wireless LAN Series 2200 products. The following topics are discussed in this section:

- [“Known issues with the Access Point 2220,”](#) next
- [“Known issues with the Mobile Adapter 2201”](#) on page 17

Known issues with the Access Point 2220

The following paragraphs discuss the known issues with the Access Point 2220:

- Although the Web interface Help page states the range for RTS threshold size is 256 - 2346, the RTS threshold size range is actually 0 - 2347. (NA0026)
- You can only use up to 115 characters each for the SNMP host name, location, and server contact. (NA0038)
- When you power-cycle or perform a warm boot on the Access Point 2220, the Access Point 2220 does not send trap messages. (NA0045)
- The SNMP object ifDescr returns the values listed in [Table 6](#) when queried. (NA0047)

Table 6 Values returned from ifDescr object

Returned value	Corresponding Interface
lo0	Loopback interface
dp0	Ethernet interface
ndc1	Wireless Interface B
ar2	Wireless Interface A

- Although it appears that you can change the value for SNMP object IpDefaultTTL, the system retains the default setting. (NA0057)
- The SNMP object IpInReceives always returns the value 0. (NA0058)
- The SNMP counter objects in the IP table MIB (such as IpInReceive and IpInHderror) always return the value 0. (NA0089)
- During periods of heavy traffic, 802.1x authentication may fail. The workaround is to reauthenticate. (NA0096)

- Setting Ethernet Type Filtering to deny NetBEUI does not disable the NetBEUI protocol. (NA0110)
- The Access Point 2220 may display the incorrect key type for associated 802.1x clients. (NA0178)
- The Access Point 2220 does not support 802.1x reauthentication when the reauthentication time has expired during a roaming event when IAPP is enabled. (NA0188)
- The value of port index is not consistent between Public and Private MIBs. (NA0195, NTA-0044)
- The SNMP object Privacy returns the incorrect value of 2 when queried. (NA0196)
- Using the web interface, you cannot configure a password with two characters or less. The workaround is to use a password with at least three characters. (NA0203)
- When you power-cycle the Access Point 2220, you must reset the clock using either the CLI or the Web interface when not using an SNTP server.
- The SNMP object portSpeedDpxStatus always returns the value "Half Duplex" no matter what the setting of Ethernet port. (NTA-0041)
- When the Ethernet interface is disabled and reenabled, the DHCP lease is not renewed.

Workaround is to reboot the Access Point 2220 after reenabling the Ethernet interface. (NTA-0052)

- When the Ethernet interface is disabled and reenabled, the ARP cache entries are not properly deleted. (NTA-0051)
- The SSID can be set from either radio interface in the CLI. The SSID is global and any SSID change made on one radio interface will change the SSID for the other radio as well. (NTA-Q00623481)
- The Access Point 2220 only allows the configuration of three static keys for WEP for each radio. Refer to [Table 1 on page 4](#). (NTA-Q00626098)
- Under heavy traffic conditions, you may experience some delay while using the web interface to manage the Access Point 2220. (NTA-Q00627369 and NTA-Q00635538)
- You must reset the Access Point 2220 after making any changes to 802.1x configuration. (NTA-Q00631600, NTA-Q00633922)
- Nortel Networks recommends using Internet Explorer version 5.5 or higher. Other versions may not properly display the AP Status page. (NTA0046, NTA-Q00668945)

- The Simple Network Time Protocol (SNTP) implementation allows incorrect time stamps in the syslog for events that occur after reset, but before the device has received the SNTP update. (NTA-Q00635669)
- The Station Configuration table on the Status>Stations Status page of the web interface may incorrectly show an unallowed WEP client as “forwarding allowed.” The display is incorrect, the client is correctly not allowed to associate, authenticate, or pass traffic through the Access Point 2220. (NTA-Q00635672)
- When using Turbo Mode, the data rate displayed on the Access Point 2220 does not reflect the total data rate. The actual data rate is double the displayed rate. (NTA-Q00642755)
- When Auto Channel Select (available only on the 802.11a radio) is enabled, you must reboot the Access Point 2220 in order for the parameter to function. The 802.11a radio will only autoselect an operating channel during the bootup process. (NTA-Q00643794)
- Syslog entries do not correctly document events when changing the 802.11b radio preamble from short to long and back to short. (NTA-Q00646916)
- When configuring the country code for the Access Point 2220, the code may not take effect after the unit is reset. When this occurs, it is necessary to set the country code again and reset the unit again. (NTA-Q00651603)
- If a MIB walk is done with some SNMP-based tools, you may see an error message after reaching the last MIB object. (NTA-Q00660424)
- `logging facility-type` command allows you to set facilities 16-23 locally. You may assign a particular facility number to your Access Point 2220. Your syslog server, if it conforms to IETF RFC 3164, can then forward syslog messages based on this facility number. (NTA-Q00662204)
- When using the web interface to configure WEP on the Access Point 2220, you must use the Advanced Setup pages for each radio. You cannot use the Setup Wizard to configure WEP keys on the Access Point 2220. (NTA-Q00662323)
- You cannot set the 802.11a radio to Auto Channel Select using the CLI. You must use the web interface to set the 802.11a radio to Auto Channel Select. (NTA-Q00663245)
- Nortel Networks recommends disabling the radio (802.11a or 802.11b) before making any changes to that radio’s configuration. (NTA-Q00668060)
- When the 802.11a or 802.11b radio is disabled on the Access Point 2220, the LED corresponding to the disabled radio stays on.
- The Closed System command is not supported in this release.

Known issues with the Mobile Adapter 2201

The following paragraphs discuss the known issues with the Mobile Adapter 2201:

- The Mobile Adapter 2201 does not work with Windows XP Tablet PC Edition.
- Protocol or network analyzer software installed on your PC may conflict with the Mobile Adapter 2201 utility and driver.
- Using 802.1x TLS authentication with Windows XP SP1 requires enabling Windows XP Zero Configuration.
- When using 802.1x authentication within Windows 2000, you require the latest service pack from Microsoft.
- If the Access Point 2220 is under very heavy traffic, a client may not be able to receive an IP address from the DHCP server.

The workaround is to try again by disabling the mobile adapter card and removing and reinserting it, which re-initiates the DHCP sequence. (NTA-Q00627367)

- When launching the Mobile Adapter 2201 utility under Windows 98SE or Windows Me, you may see the message “The Wireless mode in this configuration is not valid in your current location. Do you want to modify it?” If this message appears, click the ‘No’ button in the dialog box. (NB0028)
- After the Access Point 2220 resets, a mobile client that has previously associated with the 802.11a radio will only associate with the 802.11b radio.

The workaround is to click the Refresh & Roam button on the Site Survey tab of the Mobile Adapter 2201 utility. (NTB-Q00628273)

- The Unique Key feature is not supported in this release. (NTB-Q00661058)
- When roaming from an 802.11a radio to an 802.11b radio or from an 802.11b radio to an 802.11a radio, you may experience a connectivity delay of up to three minutes. (NTB-Q00662313)
- When using the uninstall program to remove the Mobile Adapter 2201 utility, the program will improperly display the message ‘The InstallShield Wizard has successfully installed Nortel Networks WLAN - Mobile Adapter 2201 utilities’ when it has finished uninstalling the utility. Despite this message, the utility has been uninstalled. (NTB-Q00668326)

- When connecting to a Lucent Technologies* or Proxim* access point with WEP enabled, the Mobile Adapter 2201 will not associate unless the access point setting 'Deny Non-Encryption Data' is selected.
- The Activate button on the Site Survey tab of the Mobile Adapter 2201 utility will be grayed out if you select an entry with the same SSID as your current station configuration. It will become active if you select an entry in the site survey with a different SSID.

Related publications

For more information about the Nortel Networks Wireless LAN Series 2200 products, refer to:

- *Using the Nortel Networks Wireless LAN Access Point 2220* (part number 214853-A)
- *Installing and Using the Nortel Networks Wireless LAN Mobile Adapter 2201* (part number 214695-A)
- *Run Time Console Specifications for the Nortel Networks Wireless LAN Access Point 2220* (part number 215113-A)
- *Country-specific Configuration for the Nortel Networks Wireless LAN Access Point 2220* (part number 215293-A)

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From the Technical Support page, you can open a Customer Service Request online or find the telephone number for the nearest Technical Solutions Center. If you are not connected to the Internet, you can call 1-800-4NORTEL (1-800-466-7835) to learn the telephone number for the nearest Technical Solutions Center.

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