NetBotz® Rack Monitor 250 with NMC3 (NBRK0250A)

Trademark Statement

What's in This Document

Affected Revision Levels

Component	Version	Details
APC Operating System	v3.0.1.4	APC Operating System
NetBotz 250A Application	v3.0.1.5	NetBotz 250A Application
PowerNet® Application	powernet452.mib	PowerNet SNMP Management Information Base (MIB)

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Device IP Configuration Wizard

The Device IP Configuration Wizard is a Windows® application designed specifically to remotely configure the basic TCP/IP settings of Network Management Cards. The Wizard runs on Windows Server 2012, 2016, and 2019, Windows 8.1 and Windows 10. This utility is for IPv4 only.

NOTES

- Assigning IP addresses to Network Management Cards using the Wizard is not supported in NMC3 AOS v1.4 and newer.
- You cannot search for assigned devices already on the network using an IP range unless you enable SNMPv1 and set the Community Name to *public*. For more information on SNMPv1, see the User Guide.
- When the NMC IP address settings are configured, to access the NMC Web UI in a browser, you must update the URL from http to https.

The Wizard is available as a free download from the APC website at www.apc.com:

1. Go to https://www.apc.com/shop/us/en/tools/software-firmware and type *Device IP Configuration Wizard* in the search field.
2. Click the **Download** button to download the Device IP Configuration Wizard.

Supported Browsers

The Web UI supports the latest versions of the following Web browsers. Other commonly available browsers and versions may work, but have not been tested.

- Google® Chrome®
- Microsoft® Edge®
- Mozilla® Firefox®

New Features

APC Operating System v3.0.1.4

1. You can now configure SNMPv1 and SNMPv3 trap port numbers.
2. Remote authentication via TACACS+ is now supported.
3. Control actions and configuration changes are now recorded in the Event Log.

Security Updates

1. Updated password security: Strong Password is now enabled by default and requires a minimum of 8 characters.

NetBotz 250A Application v3.0.1.5

1. The character limit for the NetBotz Module Name was increased to 30.

Fixed Issues

NetBotz 250A Application v3.0.1.5

1. **Wireless sensors removed from the system**
   Deleted wireless sensors are now removed from the commission list as expected. A reboot is no longer required.

Known Issues

APC Operating System v3.0.1.4

None

NetBotz 250 Application v3.0.1.5

Updates and upgrades

1. **Upgrade the NetBotz Rack Monitor 250A firmware before first use.** Download the most recent version of the NetBotz Rack Monitor 250A firmware from www.apc.com. See for basic instructions, or see the *User Guide* on www.apc.com for detailed instructions to upgrade the firmware.
2. **Upgrade the NetBotz Wireless Sensor firmware before first use.** Download the NetBotz Wireless Firmware Update Utility from www.apc.com or help.ecostruxureit.com. Install the Utility as an administrator and see Update the Wireless Sensor Network , page 8 or the *User Guide* on www.apc.com for information on how to upgrade the wireless sensors on your Rack Monitor 250A wireless network.

   NOTE: You must upgrade the wireless sensors on one Rack Monitor 250A at a time, using the coordinator and sensor(s) from its wireless network.
3. **Update the NetBotz 250 Data Center Expert (DCE) Scanner Device Definition File (DDF) to a version more recent than 6:** Verify the DDF used by DCE under **Device > SNMP Device Communication Settings > Device Definition Files**. The most recent scanner DDF version is 17. Contact your local technical support for an up-to-date scanner DDF.
4. **Rack access devices are temporarily removed from the user interface during the firmware update.** The firmware update for the Rack Monitor 250A happens first, then the update for the rack access devices follows. Once the Rack Monitor 250A firmware update completes, it takes about ten minutes for the rack access devices to reappear in the list. All configured settings remain as expected.
5. **Do not reboot the appliance while a Sensor Pod 150 firmware upgrade is in progress.** When a Sensor Pod 150 is connected to the appliance, an informational alarm occurs and error messages are reported on the home page for connected sensors while the Sensor Pod's firmware upgrades. The errors clear and accurate status messages are displayed after the upgrade. The status of the upgrade process can be viewed from **Configuration > Device > NetBotz** in the Web UI.

EcoStruxure IT™Data Center Expert (DCE) and EcoStruxure IT™Gateway

1. **Unplugged sensors in DCE can be deleted**. NetBotz Rack Monitor 250A alarm generation enabled/disabled sensors reporting as unplugged in DCE can safely be deleted. Humidity sensors reporting as unplugged on temperature-only sensors can also safely be deleted. These sensors were erroneously included in the device definition file (DDF), and have been removed in version 16 and newer.
2. DCE and EcoStruxure IT Gateway do not include support for the NetBotz 250A outputs (beacon, switched outlet, output relay). Support for these features is planned for future updates of DCE and the Gateway.
3. EcoStruxure IT Gateway does not automatically update user-configured values (sensor names, for example). To update these values in the Gateway, click the menu icon, select **Discovery**, then select **RUN** to rediscover the updated Rack Monitor 250A.

Sensors, pods, and rack access devices

1. The MIFARE Classic 7-byte card format is vulnerable to cloning. If you use this format, maintain the physical security of your equipment and access cards. Schneider Electric recommends configuring individual keys for each card and updating to the MIFARE Plus or MIFARE DESFire format.
2. The NetBotz Sensor Pod 180 (NBPD0180) is not supported by the NetBotz 250A appliance.
3. Attempting to filter discrete state wired sensors (leak, vibration, smoke, door, or contact sensors) via the "Create Filter" button in the Web UI may result in an error that prevents the filter from being created.
4. Some events, including "Sensor disconnected" and "Sensor configuration updated", may not be generated for the voltage sensor.
5. If sensors are connected to all six ports on the Rack Monitor 250A, the NB Module page may not display all six sensors. You can view all connected sensors on the Home page. You can also view connected sensors by selecting **Configuration > Device > Wired Sensor**. To find the NB Module page, go to **Configuration > Device > NetBotz** and select the **Module Name**.
6. After replacing a sensor with a different type of sensor, you must reboot the Rack Monitor 250A to display the new sensor correctly.
7. After replacing a sensor with a different sensor, the name of the previously connected sensor is displayed. This is not resolved by rebooting the Rack Monitor 250A. The sensor will report accurate values as expected.
8. Sensors connected to a Sensor Pod 150 can be mapped for the beacon only, and not for the switched outlet or output relay. Door switch sensors connected to Door 1 or Door 2 ports can be mapped for the beacon only, and not for switched outlet or output relay. Alarm mapping is not available for any wireless sensors.
9. State sensors do not appear in the data log. Wireless sensors and Sensor Pod 150 devices without at least one numeric sensor do not appear in the data log filtering list.
10. When a rack access handle and door switch are left open for longer than the time specified in the Door Open Alarm Threshold, the auto relock alarm occurs rather than the door open alarm.

Miscellaneous

1. A full config.ini file may take up to 20 minutes to load. A config.ini file with a 200-user [AccessPXUser] section may take up to 10 minutes to load.
2. **Unable to communicate with the appliance using the USB console port**. You may need to install a serial-to-USB driver to communicate with the Rack Monitor 250A. The driver is available for download from the USB vendor FTDI. For more information, see the FAQ article *NetBotz 250 | Serial Connection (Driver + Serial Parameters)* (FA381275). You can search for FAQ articles on apc.com/support. Select **FAQ's** under **Resources and Tools**, then enter the article title or ID in the Search bar.
3. The management interface may reboot when receiving a config.ini file with 200 rack users if over 20 alarms are active. To avoid this, upload the [AccessPXUser] section separately: first upload config.ini without the [AccessPXUser] section, then upload config.ini with only the [AccessPXUser] section.
4. The wirelessSensorConfigName OID allows values with more than 20 characters. Sensor names will be truncated in interfaces that enforce the 20-character limit.
5. The message "NB: Communication established" is not received by SNMP traps or syslog.
6. Disabling an individual event for email notification may cause an unexpected network interface restart.
7. Modifying RADIUS settings via config.ini may cause an unexpected network interface restart.
8. The NMC may experience an unexpected network interface restart while editing a firewall policy.
9. Modifying large groups of event actions by severity may cause an unexpected network interface restart.
10. IPv6 connectivity outside of local subnet does not work in all environments.
11. SNMPv3 communication and monitoring on some third party SNMP management tools such as ManageEngine OpManager does not work properly.
12. SNMP traps do not work for some AOS events.
13. File transfers using SCP do not work properly with WinSCP client
14. Certain privileges in the CLI are not consistent with the user privileges in the Web UI.
15. The Trap receiver NMS settings incorrectly allow for a NULL entry.
16. SNMP Trap Recipients are activated only after a previous Trap recipient can send Traps.
17. Firewall rules configured through the Web UI are active even when the firewall is not enabled. A fix to this issue is planned for an upcoming release.

Miscellaneous

Recovering from a Lost Password

Resetting the Rack Monitor 250A will reset the unit to its default configuration. Export the .ini file after configuring your Rack Monitor 250A and keep it in a safe place. If you have this file saved, you will be able to retrieve your configuration after a lost password event.

You can use any secure interface to complete the recovery process. This includes the local CLI by serial connection, remote CLI by SSH, or Web by HTTPS. See the User Guide.

1. Hold down the **Reset** button for 20–25 seconds, ensuring the Status LED is flashing green during this time. When the Status LED changes to orange, release the **Reset** button to allow the Rack Monitor 250A to complete its reboot process.
2. Access the Rack Monitor 250A through one of the secure interfaces to set your custom password and configure the device. After resetting the device to defaults, the log in with the default user name **apc** and password **apc**.

Update the Appliance

It is recommended that you update the Rack Monitor 250A firmware to the most recent version before first use.

1. Download the latest firmware version free from www.apc.com/tools/download.

   If you have a Windows computer, you can use the firmware executable to upgrade the firmware. If you have any other type of computer, you must use FTP, SCP, or XMODEM to manually upload the firmware upgrade file to the Rack Monitor 250A.

   For more information about using FTP, SCP, or XMODEM to manually update the Rack Monitor 250A firmware files, see the User Guide.

2. When the upgrade has completed, log in to the Rack Monitor 250A and go to **Configuration > Device > NetBotz**. Once the status of all connected devices has changed from **FW Upgrade** to **Normal** (or **Warning** or **Critical** if there is an active alarm), and the rack access devices are displayed as expected, the Rack Monitor 250A is ready for use.

Update the Wireless Sensor Network

It is recommended that you update the Wireless Temperature Sensor firmware before first use.

1. Download the NetBotz Wireless Sensor Update Utility. Go to www.apc.com, and select **Support > Resources & Tools > Software/Firmware**. Under **Filter by Software/Firmware**, select **Software Upgrades - Software for NetBotz appliances**.

   NOTE: The Wireless Sensor Upgrade Utility is only available for Windows.
2. Install the Utility as an administrator.
3. Remove the plastic cover over the Wireless port. Remove the coordinator and connect it to a USB port on the computer where you installed the Utility.
4. Record the MAC address of the Wireless Temperature Sensor that came with the Rack Monitor 250A. Turn on the Wireless Temperature Sensor.
5. In the Windows Start menu, type the following: `NetBotz Wireless Update Utility`. Right-click the Utility, and select **Run as Administrator.**

   NOTE: The Utility may not execute correctly if you do not select **Run as Administrator**.

   NOTE: If you are unable to launch the Utility, you may need to install a serial-to-USB virtual COM port driver on your computer. The required driver is available in the “drivers” folder of the Utility.
6. Enter the MAC address of the sensor in the commission list field. If you have more than one wireless sensor, make sure they are all turned on, and add their MAC addresses also. Click **OK** to start the Utility.
7. Browse to the wireless firmware .zip file installed with the Utility.
8. Click **Apply** to upgrade the wireless sensor firmware.
9. When the firmware upgrade is complete, reconnect the coordinator to the Rack Monitor 250A Wireless port and replace the plastic cover. DO NOT connect the coordinator to any other USB port on the appliance.

For more information about updating the wireless sensor firmware, see the documentation included with the Wireless Sensor Update Utility.

See the *User Guide* on www.apc.com for instructions to update the wireless sensor network.

You can update the wireless sensor network from the **Wireless** tab.

Firmware updates for the wireless sensor network are included with updates for your appliance. When you update the firmware on your appliance, any new firmware for wireless devices appears in the **Target** field. Update the firmware on the wireless devices when the **Target** firmware version does not match the **Current** firmware version.

1. On the **Wireless** tab, select **UPDATE**, then click **YES**. The target firmware is loaded to your wireless devices, but not implemented.
2. When the update has completed, click **APPLY**. This instructs your wireless devices to implement the new firmware.

   NOTE: The **APPLY** button will not activate until every sensor is updated. Allow about 20 minutes per wireless sensor for the update to complete.

NOTE: Wireless updates can be interrupted. If the update does not complete, repeat the update process.

See the *User Guide* on www.apc.com for more information about the wireless sensor network.

Event Support List

To obtain the event names and event codes for all events supported by a currently connected APC by Schneider Electric device, first use FTP to retrieve the config.ini file from the Network Management Card:

1. Open a connection to the NMC, using its IP Address:

   `ftp > open <ip_address>`

2. Log on using the Administrator user name and password.
3. Retrieve the config.ini file containing the settings of the Network Management Card:

   `ftp > get config.ini`

The file is written to the folder from which you launched FTP.

In the config.ini file, find the section heading `[EventActionConfig]`. In the list of events under that section heading, substitute 0x for the initial E in the code for any event to obtain the hexadecimal event code shown in the user interface and in the documentation. For example, the hexadecimal code for the code E0033 in the config.ini file (for the event "System: Configuration change") is 0x0033.

PowerNet MIB Reference Guide

The MIB Reference Guide, available on www.apc.com, explains the structure of the MIB, types of OIDs, and the procedure for defining SNMP trap receivers. For information on specific OIDs, use an MIB browser to view their definitions and available values directly from the MIB itself. You can view the definitions of traps at the end of the MIB itself (the file powernet450.mib is downloadable from www.apc.com).

Hash Signatures

apc_hw21_nb250_3-0-1-5.exe

MD5	78dc8cd643bbe3f3159e59fefc06d21b
SHA-1	36fc88dddeb5102d1f2fa905e90a3abc6c81b7f1
SHA-256	c7f5b8e02ceb41f74121df0fbe584d5fa2292c6ebdc132a19133c3769b8a081c