

NetShelter™ Advanced and High Density Rack Power Distribution Units with NMC3



APDU11... and APDU10... Rack PDU (upgraded with NMC3)

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Affected Revision Levels

Component	Version	Details
Network Management Card 3 (NMC3) Operating System and NetShelter Rack PDU Application	App 3.3.1.20 / APC Operating System 3.3.1.1	Not available for download
Secure NMC System (SNS) Tool for Rack PDU and NMC3 v3.1 Firmware Updates	App 3.3.1.20 / SNS Tool 2.1.0.1	Not available for download
PowerNet® SNMP Management Information Base (MIB)	4.5.9	powernet459.mib
Network Management Device IP Configuration Utility	4.0.5	DevIPSetup.exe

IMPORTANT: You must have a valid Secure NMC System (SNS) subscription (SWNMC3PDU-● Y-DIGI) for Rack Power Distribution Unit (PDU) devices to update the firmware to version 3.x.x.x or later.

You must use the SNS tool for Rack PDUs to upgrade to firmware version 3.x.x.x or later. This is the only supported upgrade method. See *Additional Software and Documentation*, page 5 for instructions to download the SNS Tool and its *User Guide*.

New Features

APC Operating System

- Command Line Interface (CLI) access added to the Web UI under Control > Network > Web CLI.
- IPv6 functionality improvements.

All Rack PDU Applications

Support for APDU11... and APDU10... products upgraded with NMC3 display modules.

Fixed Issues

APC Operating System

- The Rack PDU device no longer reboots after issuing outlet commands in the web-based Command Line Interface.
- The LDAP TLS connection now works as expected when connecting to an IP address and server certificate using SAN type "iPAddress".
- DHCPv6 no longer intermittently reboots when the network interface starts or when the Ethernet cable is reseated.
- Improved logging for account disabled events.
- The expiration date of self-signed certificates has been updated.
- You can now send emails as expected if the SMTP server uses an IPv6 address.
- The severity of Syslog-related events in the configuration file has been corrected.
- Some cybersecurity improvements.

APDU11... and APDU10... Rack PDU (upgraded with NMC3) Applications

- The Rack PDU LCD displays the "Alarm Status" to view the details of all the alarms present in the device.
- Support added for Power Sharing in advanced PDUs with Network Port Sharing (NPS). This enables continuous network connectivity and management functions across cascaded units even during individual PDU power loss, preventing the loss of monitoring, alerts, and remote control for the affected PDU.
- Support added for the Redfish protocol.
- Support added for line frequency data.
- Fixed factory commands issues.
- Mitigated outlet drop issues.

Known Issues

APC Operating System

Certain characters, such as ™ or ©, will not be generated correctly when downloading a config.ini file via genini.htm. If a file with invalid content generated by this issue is uploaded back to the NMC, the lines with invalid content will be rejected and appropriate events will be logged.

All Rack PDU Applications

1. Synchronized outlet groups do not function when enabled over the network. They do function when enabled locally or when enabled through the **In/Out** ports.
2. The **Reset RPDU to Defaults** action also resets the system settings.
3. The data log may be cleared after updating firmware. The data log may be cleared when devices are added to or removed from the NPS group.

Known Issues (continued)

APDU11*** and APDU10*** Rack PDU (upgraded with NMC3) Applications

1. The Network Port Sharing (NPS) system does not update connected units if one of the following occurred:
 - The upgrade file was uploaded via SCP without the original filename.
 - The host device was reset to factory defaults.
2. It is possible to configure a Rack PDU as an NPS host without a network connection if the Rack PDU has been configured with a static IP address. If one or more members of an NPS group have static IP addresses and you want to manually change the NPS host, the new host must have a network connection before changing the host.
3. When certain tools, including MIB browsers, are used as an SNMP interface to set string configurations on the device, the strings starting with the # character may be reserved for special syntax by the interface tool and interpreted as colon-separated decimal representations of ASCII character codes. These interpreted values are stored by the NMC. For example, configuring #80:68:85 results in the string "PDU being configured on the NMC.". If the resulting value is not a valid string (for example, #1), the OID for that value may stop responding to SNMP get and set requests. Normal OID behavior can be restored by overwriting the invalid configuration with a valid string using a non-SNMP interface.
4. The Rack PDU does not warn the user when too many guest devices are connected to an NPS group. Up to 31 guest devices can be connected to an NPS group.
5. It may take 30 minutes or more to apply a comprehensive **config.ini** file to an NPS group.
6. If the clearing method for an outlet alarm action is set to **Auto**, outlets are automatically set to the non-action state when the alarm clears, regardless of their state before the alarm. For example, if the alarm action is **Off**, the outlets are turned on when the alarm clears, even if they were off before the alarm occurred.
7. Outlet actions can be canceled only while they are queued in the user-interfacing software layer. Once an action has been issued to the switching controller, it is queued separately until the next available execution slot and cannot be canceled.
8. Reported device energy for metered-by-outlet devices is calculated as the sum of all outlet energy values. Resetting either the device energy or the outlet energy resets both values.
9. The two sensor ports should not be connected to devices other than Schneider Electric sensor accessories. Refer to the user guide for a list of supported accessories. Connecting unsupported devices to these ports may damage the Rack PDU and/or the connected device.
10. There is a label on the device providing values for **MAC1** and **MAC2**. **MAC1** is used for outgoing network connections and may appear on various interfaces. **MAC2** is reserved for the NPS feature and may not be provided by any application interfaces.
11. If a Rack PDU in an NPS group loses power, its user-interfacing behavior can be maintained by receiving power from neighboring devices of the same type. If power is restored after this condition occurs, the display module reboots immediately. Outlet switch states are restored to their last known values after the reboot.
12. After a device energy reset is performed, a large invalid value (~4,294,967.2 kWh) may be displayed for device energy. Refreshing the page allows the device energy value to stabilize. A similar invalid value may also appear during initial startup. It can be resolved by refreshing the page or performing a device energy reset.
13. During a display module live swap on the demonstration model **APDU10199SM**, outlet switch states may change unexpectedly. The actual outlet states are reported correctly after the swap, and all outlets remain responsive to switching commands.
14. It is possible to configure outlet power thresholds that do not respect the outlets' current ratings. The user is responsible for considering the practical implications of the configurations written to the device.

Miscellaneous

Additional Software and Documentation

You can download additional software and documentation from the Schneider Electric download center, www.se.com/ww/en/download.

1. Go to www.se.com/ww/en/download.
2. Click **Select Location**, then select your location from the provided list. You cannot download software or documentation until you specify your location.
3. Use the Search bar and the filter fields to find the needed file.

To find a document, enter the name or part number for your equipment in the Search bar. Then select **Installation & User Guides** under **Document Category**.

To find a firmware file, enter the name or part number for the firmware in the Search bar. Then select **Software & Firmware** under **Document Category**.

Software

- The Secure NMC System (SNS) tool for Rack PDUs (SFNMC3FMTRPDU) upgrades the firmware on your Rack PDU. This is the only supported upgrade method for firmware version 3.x.x.x or later.
- The PowerNet MIB allows your SNMP manager to process messages from your Rack PDU.
- The Network Management Device IP Configuration Utility (the Utility) is a Windows® application designed specifically to remotely configure the basic TCP/IP settings of Network Management Cards (NMCs). The Utility runs on Windows Vista®, Windows XP®, Windows 2000, Windows 2003, Windows 7, Windows 8, Windows Server® 2008, and Windows Server 2012. The Utility is for IPv4 only.

To install the Utility, download the latest version of the utility from the Schneider Electric download center. Extract the zip file, then double-click DevIPSetup.exe to install the Utility. You can find instructions to use the Utility in the Utility interface under **Help**.

Documentation

- The Secure NMC System (SNS) Tool User Guide provides instructions on how to use the SNS tool to upgrade your firmware.
- The MIB Reference Guide explains the structure of the MIB, types of OIDs, and the procedure to define SNMP trap receivers. You can download the *PowerNet MIB Reference Guide* from www.se.com.

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 *powernet458.mib*).

- The *User Guide* for your Rack PDU provides comprehensive user instructions, including instructions to recover from a lost password.

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.

Hash Signatures

Not available for download

MD5 Hash:	8a7432ce9431371878218b3ba2f71fef
SHA-1 Hash:	6fd8df71a7322dc86616ba59ab5f69563be6d64e
SHA-256 Hash:	64c3f71a68ed532713154a500b8d8773f98752add0e4ff3beced7b0dedeb793