



Apc switched rack pdu ap7900 manual



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You can manage a Switched Rack PDU through its Web interface, its control console, the InfraStruXure® Manager, or SNMP: • The Web interface supports using HTTPS access with Secure CoPy and User, and Outlet User • Event and data logging—the event log is accessible by Telnet, Secure CoPy (SCP), File Transfer Protocol (FTP), serial connection, or Web browser (using HTTPS access). Access Procedures Overview For more information about the interface. The SNMP interface also allows you to use an SNMP browser with the PowerNet® Management Information Base (MIB) to manage the Rack PDU. Switched Rack PDU USER'S GUIDE The Switched Rack PDU has two internal interfaces (control console and Web interface) that allow you to manage the Rack PDU. Types of user accounts The Rack PDU has four levels of access (Administrator, Device Manager, Read-Only User, and Outlet User), all of which are protected by password and user name requirements. • A Device Manager can use only the following menus: - The Device Manager menu and its sub-menus in the top section of the navigation panel of the Web Interface (Switched Rack PDU and Outlets). - The Log option in the Events menu in the Web interface. Switched Rack PDU USER'S GUIDE You must use the Web interface to configure values for the Read-Only User, and you must use the control console to configure values for an Outlet User. How to Recover From a Lost Password You can use a local computer, a computer that connects to the Rack PDU or other device through the serial port to access the control console. 2. Connect the serial cable (990-0144) to the selected port at the Rack PDU USER'S GUIDE 1.7. From the Control Console menu, select System, then User Manager. 8. Select Administrator, and change the User Name and Password settings, both of which are now defined as apc. Switched Rack PDU USER'S GUIDE 9. Press CTRL-C, log off, reconnect any serial cable you disconnected, and restart any service you disabled. Upgrading Firmware through a Serial Connection You can use a local computer that connects to the Rack PDU through the serial port on the front panel of the unit. 1. Select a serial port at the local computer, and disable any service which uses that port. 2. Use the supplied serial cable (940-0144) to connect the selected port to the serial port on the front panel of the Rack PDU.9. In the terminal program, send the file using the XMODEM protocol. When the transfer finishes, the console will prompt you to restore the baud rate to normal. Do not interrupt the download. The Rack PDU will restart when the download is complete. Upgrading the firmware will not interfere with the operation of the outlets. Front Panel Switched Rack PDU USER'S GUIDE Single-phase Three-phase Three-phase Switched Rack PDUs have one of the following two front panels: ® 10Switched Rack PDU USER'S GUIDE Item Function Load Indicator LED Identifies overload and warning conditions for the displayed phase or bank. See Load indicator LED. Input Selector to monitor the current of the next phase or bank. See Load indicator LED. display the IP address of the Rack PDU or to invert the display at ten seconds, the IP address is displayed; at ten seconds the displayed; at ten seconds the phase or bank indicated by the illuminated Load Indicator LED. On 3-phase units, the Digital Display will cycle through the phases or banks, displaying the current for each for 3 seconds. If an internal communication failure or power supply failure occurs (for either a 1- or 3-phase model), the Digital Display displays Er, which you can clear by pressing the input selector. Status LED Condition Description Off The Rack PDU has no power. Solid Green The Rack PDU has valid TCP/IP settings. Flashing Green The Rack PDU does not have valid TCP/IP settings.† Solid Orange A hardware failure has been detected in the Rack PDU. Contact APC Worldwide Customer Support. Flashing Orange The Rack PDU is making BOOTP requests. Flashing Orange and Green (alternating) The Rack PDU is making DHCP requests. Watchdog mechanisms to protect itself from becoming inaccessible over the network. For example, if the Rack PDU does not receive any network traffic for 9.5 minutes (either direct traffic, such as SNMP, or broadcast traffic, such as an Address Resolution Protocol [ARP] request), it assumes that there is a problem with its network interface and restarts itself. Control Console How to Log On You can use either a local (serial) connection, or a remote (Telnet or SSH) connection to access the control console. Use case-sensitive User Name and Password entries to log on (by default, apc and apc for an Administrator, or device and apc for a Device Manager). A Read-Only User has no access to the control console. If you cannot remember your user name or password, see How to Recover From a Lost Password, But not the high-security benefits of encryption. To use Telnet to access the control console from any computer on the same subnet: 1. At a command prompt, type telnet and the System IP address for the Rack PDU (when the PDU uses the default Telnet port of 23), and then press ENTER. For example: telnet 139.225.6.Local access to the control console You can use a local computer that connects to the Rack PDU through the serial port on the front panel of the unit. 2. Use the supplied serial cable (940-0144) to connect the selected port to the serial port on the front panel of the Rack PDU. 3. Run a terminal program (such as HyperTerminal) and configure the selected port for 9600 bps, 8 data bits, no parity, 1 stop bit, and no flow control. Save the changes. 4.Main Screen Example main screen User Name : apc Password : *** American Power Conversion Network Management Card AOS v2.6.4 (c) Copyright 2002 All Rights Reserved Rack PDU APP v2.6.4 v2.6.6 • Three fields identify the system Name, Contact, and Location values. Name : MS3 Test Unit Contact : Bill Cooper Location : Testing Lab To set the Name, Contact, and Location values, see System Menu. Switched Rack PDU USER'S GUIDE Main screen information fields. • Two fields identify the APC operating system (AOS) and application (APP) firmware versions. Main screen status fields. • A Stat field reports the Rack PDU status. Switched Rack PDU USER'S GUIDE Stat : P + N + A + P + The APC operating system (AOS) is functioning properly. N + The network is functioning properly. N + The network is functioning properly. N + The network is functioning properly. N + The N+ A + P + The APC operating system (AOS) is functioning properly. N + The network is functioning properly. N + The netwo A+ The application is functioning properly. A- The application has a bad checksum. A? The application is initializing. Control Console Menus that allow you to change a setting, you must use the Accept Changes option to save the changes you made. While in a menu, you can also do the following: • Type ? and press ENTER to access brief menu option descriptions (if the menu has help available). • Press ENTER to refresh the menu. • Press ESC to go back to the main (control console) menu. Main menu The main control console menu has options that provide access to the management features of the control console: 1- Device Manager or as an Outlet User, you will not have access to the Network or System menus. Device Manager or as an Outlet User, you will not have access to the Network or System menus. of the following tasks, see Network Menu: • Configure the Settings for the Rack PDU or, when the Rack PDU or, when the Rack PDU will obtain its TCP/IP settings for the type of server (DHCP or BOOTP) to be used. • Define settings for the type of server, configure the settings for the type of server (DHCP or BOOTP) to be used. the Rack PDU.Web Interface How to Log On You can use the DNS name or System IP address of the Switched Rack PDU for the URL address of the Web interface. If you are using HTTPS (SSL/TSL) as your access protocol, your login credentials are compared with information in a server certificate. If the certificate was created with the APC Security Wizard, when you log on you must use the same identifier for the Rack PDU as you specified for the control console) to select, enable, and disable the protocols that control access to the Web interface and to define the Web-server ports for the protocols. Supported Web browsers As your browsers, you can use Microsoft® Internet Explorer (IE) 5.0 (and higher, except Netscape @ 4.0.8 (and higher, except Netscape @ 4.0.8 (and higher) or Netscape @ 4.0.8 (a tested by APC.URL address formats If the error "You are not authorized to view this page" occurs, Web access may be disabled, or the Rack PDU may use a nondefault Webserver port that you did not specify correctly in the address. Summary Page When you log on to the Web interface at the right side of the screen, the quick status tab is at the upper right, and the navigation menu is at the left. The Status view has three sections: • The Device Status section reports any active alarm or warning conditions and displays the load for each phase or bank, including a graphic representation of the load thresholds. Quick status tab The quick status tab is displayed at the upper right on every page in the Web interface. The tab shows active alarms and warnings are displayed. Click the green "device operating normally" icon to return to the status screen where the current for each phase or bank is displayed. Put the mouse cursor on the icon to view details of the warning.Navigation Menu On the Web interface, the navigation menu (left frame) has the following elements: • IP address of the Rack PDU • Menus to manage the Rack PDU and its components: - Switched Rack PDU and its components: • IP address of the Rack PDU and its components: - Switched Menus to manage the event log, data log, network connection, and system parameters: - Events menu WhenSelecting a menu to perform a task • To do the following, see Switched Rack PDU USER'S GUIDE Overview - Data menu - Network menu phase or bank. - Configure the Overload Outlet Restriction for each phase or bank.

• To do the following, see Outlet Settings for Outlets and Outlet Groups: - Apply power to and remove power from the outlets. - Set Power On Delay, Power Off Delay, and Reboot Duration for the outlets. - Set the names and associated links for the outlets. • To do the following, see Network Menu: - Identify the Domain Name System (DNS) Server, test its network connection, and enable or disable DNS Reverse Lookup Event Logging (which logs the domain name of the device associated with each event). - Define settings for FTP, Telnet, SSH, the Web interface, SNMP, e-mail, and SSL/TLS.

- Configure the Rack PDU's Syslog message feature. • To do the following, see System Menu: - Control Administrator and Device Manager access. In the control console, the About System option, which is a System menu option, has the Flash Type value. Provides three user-definable URL link options. By default, these links access the following APC Web pages: • APC's Web Site accesses the APC home page. • Testdrive Demo accesses a demonstration page where you can use samples of APC Web-enabled products.

• APC Monitoring accesses the "APC Remote Monitoring Service" page about pay-for-monitoring services available from APC.Device and Outlet Groups An outlet group consists of outlets that are logically linked together on the same Switched Rack PDU. Outlets that are in an outlet group turn on, turn off, and reboot in a synchronized manner, i.e., within a one-second interval under normal conditions: • A local outlet group consists of two or more outlets on a Switched Rack PDU.

Only the outlets in that group are synchronized. Purpose and benefits of outlet groups • Synchronized shutdown and startup of the power supply failures during a planned system shutdown or reboot. • Synchronizing outlets by using outlet groups provides more precise shutdown and restart timing than relying on the delay periods of individual outlets.

• A global outlet is visible to the user interfaces of the Switched Rack PDUs to which it is linked. System requirements for outlet groups are to be synchronized across multiple Switched Rack PDUs, those Switched Rack PDUs must meet the following requirements: - They must be on the same subnet.

- They must use firmware that has the same version number, which must be 2.6.1 or higher for both the APC Operating System (AOS) module and the Application module.Rules for configuring outlet groups, the following rules apply: • A Switched Rack PDU can have more than one outlet group, but an outlet can belong to only one outlet group. • You can synchronize a global outlet group on one Switched Rack PDU with a global outlet group on each of three other Switched Rack PDUs.How to enable outlet groups, configure the following parameters, and click Apply. Parameter Description Device Level Outlet Group To create an outlet group, you must enable this parameter. It is disabled by default. Enable support for global outlet groups. How to create multiple global outlet groups (Web interface) To set up multiple global outlet groups that link to outlet groups on other Switched Rack PDUs: 1. From the Outlets menu in the Web interface, select Outlet Groups. 3. Click Create Global Outlet Groups. 4.

For each global outlet group you want to create, select an outlet by clicking on its check-box. Then click Apply. The following configuration shows two Switched Rack PDUs, each with eight outlet groups. Each outlet group synchronizes of a single global outlet. Each outlet group on the first Switched Rack PDU is linked to the outlet group in the same location on the second Switched Rack PDU. These four global outlet groups synchronize a total of 19 outlets. These two global outlet groups synchronizes 3 outlets on the same Switched Rack PDU. Switched Rack PDU USER'S GUIDE The following configuration shows three sets of synchronized outlets. Global outlet groups are enclosed in red rectangles. Verify your setup and configuration for global outlet groups To ensure that your setup meets all system requirements for outlet group and that you have configured the outlet groups correctly, select Outlet Groups from the Outlets menu in the Web interface to view the groups and their connections: – All configured outlet groups on the current Switched Rack PDU. – The outlets in each group by outlet number.

- Any outlet groups on other Switched Rack PDUs with which a global outlet group is synchronized. Outlet Settings for Outlets and Outlet Groups How to initiate a control action • For an individual outlet (not in an outlet group), the action uses the delay periods and reboot duration configured for that outlet. • For a global outlet group, the action uses the delay periods and reboot duration configured for the global outlet.

• For a local outlet group, the action uses the delay periods configured for the lowest-numbered outlet in the group. Web interface. Control actions you can select. Switched Rack PDU USER'S GUIDE t Option Description No Action (Web interface only) Do nothing. On Immediate Apply power to the selected outlets. On Delayed Apply power to each selected outlet according to its value for Power On Delay.[†] Off Immediate Remove power from each selected outlets. Off Delayed Remove power from each selected outlet. How to configure outlet settings and outlet name Setting Description Power On Delay.[†] Reboot Immediate Remove power from each selected outlet. How to configure outlet settings and outlet name Setting Description Power On Delay Set the number of seconds that the Rack PDU waits after a command is issued before applying power to an outlet. NOTE: To configure a value of –1 for Power On Delay in the control console. Web Interface. To configure button in the Outlet Settings section or in the Outlet Settings section or in the Outlet Settings section or in the Outlet Settings in the top section of the next screen: – Enter values for Power On Delay, Power Off Delay, or Reboot Duration, and click the Apply button immediately below the list. Switched Rack PDU Settings Configure Load Thresholds Web interface. 1. Select Switched Rack PDU from the navigation menu. 3. Set Overload Alarm Threshold, Near Overload Warning Threshold, and Overload Outlet Restrictions for each phase or bank. 4. Click Apply in that section to set the selected values. Control console. 1.

From the Device Manager menu, select Phase/Bank Monitor/ Configuration. Switched Rack PDU USER'S GUIDE 2. Click Configure in the Load Management section. Switched Rack PDU USER'S GUIDE Setting Description Low Load Warning Threshold Set the low threshold, in amps, for the current drawn from this phase or bank during normal operation. A load at or below this level generates a warning. Overload Outlet Restriction Prevent users from applying power to outlets during an overload condition.

You can set the following restrictions for each outlet: • None: You can apply power to outlets regardless of an Overload Alarm or Near Overload Warning.Description Name Set the name of the Rack PDU. Location Set the location of the Rack PDU. Coldstart Delay The time that the Switched Rack PDU delays applying power to the outlets after AC power has been applied to the Rack PDU. To change the Contact field (the name of the person to contact about the Rack PDU) in addition to the Name and Location fields in the control console, see Identification.Scheduling Outlet Actions (Web Interface Only) Actions you can schedule To configure values for Power On Delay, Power Off Delay, and Reboot Duration for each outlet, see How to configure outlet settings and outlet name. Although you must use the Web interface to schedule outlet actions, you can set these values in either the Web or control console interfaces. For an action to be applied to an outlet group, you must have outlet groups enabled at the beginning of the scheduled action.Description Off Delay.† Reboot PDU Immediate Remove power from each selected outlet according to its value for Power Off Delay.† Reboot PDU Immediate Remove power from each selected outlet according to its value for Reboot Duration.† Reboot PDU Delayed Remove power from each selected outlet according to its value for Power Off Delay.† New to schedule an outlet event 1. From the menus of the Web interface, select Switched Rack PDU and then Scheduling. If you select Weekly, you can choose to have the event occur once every two, four, or eight weeks. 3. On the scheduling page, in the Name of event text box, replace the default name, Outlet Event, with a name that will identify your new event.

4. Use the drop-down lists to select the type of event and when it will occur. How to edit, disable, enable, or delete an outlet event 1. From the menus of the Web interface, select Switched Rack PDU and then Scheduled Event Details page, you can do any of the following: - Change details of the event, such as the name of the event, when it is scheduled to occur, and which outlets are affected. - Under Status of event at the bottom of the page: • Disable the event, leaving all its details configured so that it can be re-enabled later. Event Nema it is scheduled Event Details page, you can do any of the following: - Change details of the event, such as the name of the event, when it is scheduled to occur, and which outlets are affected. - Under Status of event at the bottom of the gage: • Disable the event, leaving all its details configured so that it can be re-enabled later. Event-Related Menus Introduction The Events menu provides access to the options. Subted Rack PDU USER'S GUIDE Overview - SNMP trap notification - E-mail notification You can use only the Web interface of events, as described in Events Log and How to Configure IndivIn the control console, access the available events-related options as follows: • Use the Email option in the Network menu to define the SNMP trap notification of the SNMP option in the Network menu to define the SNMP trap notification of the system (embedded management card) events some system (embedded management card) events some system (embedded management card) events for a care as a severity level. Even if you disable the event use as a SNMP trap notification on the available event. SNMP authentication failures. How to select the type of security appropriate for your needs. If you have Administrator or Device Manager access, you can use SCP or FTP to retrieve a tab-delineated event log file (data.txt) that you can import into a spreadsheet application. Secure CoPy (SCP). To use SCP to retrieve the event.txt for use SCP to retrieve the event.txt or data.txt file, use the foll

- If you clear the event log, a new event.Event Actions (Web Interface Only) The Actions option is available only on the Web interface's Events menu. This option allows you to select which actions will occur for events that have a specified severity level: • Event Log selects which severity levels cause an event to be recorded in the event log. See Event log action. • Syslog selects which severity levels cause messages to be sent to Syslog servers to log events. Switched Rack PDU USER'S GUIDE Overview See Syslog action.Modifying events on the Configure Event Action by Severity Level page overrides any changes you made to individual events on the Details page. Except for some System (embedded management card) events that do not have a severity level, events are assigned a default severity level based on their seriousness: • Informational: Indicates an event that requires no action, such as a notification of a return from an abnormal condition.Syslog action By default, the Syslog messages when events occur, you must configure it. SNMP traps action By default, the SNMP traps action By default, the SNMP traps action see Event Actions (Web Interface Only). Trap Receiver settings To access the Trap Receiver settings that allow you to define which NMSs will receive traps: Switched Rack PDU USER'S GUIDE The Web interface and control console both have options that allow you to define up to four reap receivers and up to four e-mail addresses to be used when an event occurs that has SNMP traps or e-mail enabled. • In the Web interface, use the Recipients option in the Events menu.E-mail Feature Overview You can use the Simple Mail Transfer Protocol (SMTP) to complete the console both have options that occurs for event set occurs.

• The IP addresses of the primary and secondary Domain Name System (DNS) servers. • The DNS name of the SMTP server and the From Address setting for SMTP Switched Rack PDU USER'S GUIDE To use the e-mail feature, you must define the following settings: See SMTP settings. • The e-mail addresses for a maximum of four recipients.

See Email Recipients.DNS servers The Rack PDU cannot send any e-mail messages unless the IP address of the primary DNS server is defined. The Rack PDU will wait a maximum of 15 seconds for a response from the primary or (if specified) the secondary DNS server. If the Rack PDU does not receive a response within that time, e-mail cannot be sent. Therefore, use DNS servers that are on the same segment as the Rack PDU or on a nearby segment (but not across a WAN). In the Web interface, use the Recipients link in the "Email Configuration" page to identify up to four e-mail recipients. Use the Email Test option to send a test message to a configured recipient. Switched Rack PDU USER'S GUIDE In the control console, use the Email option in the Network menu to access the e-mail recipient settings.

Setting Description To Address Defines the user and domain names of the recipient. Switched Rack PDU USER'S GUIDE Setting Description SMTP Server Selects one of the following methods for routing e-mail: • Through the SMTP server provided with the Rack PDU, and, if necessary, is retried several times. Also do one of the following: • Enable forwarding at the SMTP server provided with the Rack PDU so that it can route e-mail to external SMTP servers. How to Configure Individual Events Event List page Modifying events on the Configure Event Action by Severity Level page will override any changes you have made to individual events on the Details page.

Each event is identified by its unique code, its description, and its assigned severity level. For example: Switched Rack PDU USER'S GUIDE The Action Configuration" page on the Web interface.Data Menu (Web Interface Only) Log Option • Iout: The power being output by the Rack PDU. • Ioutmax: The maximum power output by the Rack PDU since its output power was last recorded. • Ioutmin: The minimum power output by the Rack PDU since its output power was last recorded. Use the Data menu's Configuration option to define how frequently data is sampled and stored in the data log.

Each entry is listed by the date and time the data was recorded, and provides the data in a column format.Configuration Option The minimum interval is 60 seconds; the maximum interval is 18 hours, 12 minutes, 15 seconds. Switched Rack PDU USER'S GUIDE Every less the Data Log, DECOP server set used to provide the cog Interval setting, which defines how often data will be sampled and recorded in the new setting. Network Menu Introduction Use the Network menu LAM out DEN'S GUIDE Every work only an Administrator has access to the Network menu. Menu options Unless noted, the following options are available in the control console only by FTP Server * Telept(SSH * SNMP, E-mail * Syslog, and the Web interface * TCP/IP settings. - The IP address of the Rack PDU - The subtert mask value – The IP address of the Rack PDU are * Telept(SSH * SNMP + E-mail * Syslog * Web/SSL (Web/SSL/TLS in the control console only 0 * TOP Server setting for information about the watchdog role) watched Rack PDU STOP in Server setting settings are setting to access the following settings. - The IP address of the Rack PDU - The subtent mask value – The subtent setting or information about the watchdog role) watched Rack PDU stop Settings whenever the Rack PDU the settings (System IP, Subnet Mask, and Default Gateway, Set on formation about the watchdog role appendix durat host name entry – for a particular host name entry – for IP, leadings event (DS) servers used by the Subtend Rack PDU when Kanal is the Rack PDU when Kanal is the second setting to the setting the setting the transport of the setting to the setting the setting to the setting the setting to the setting th

The default is 23. You can change the Port setting to the number of any unused port between 5000 and 32768 to enhance the protection provided by User Name and Password settings. Then, according to the requirements of your Telnet client program, you must use either a colon (:) or a space in the command line to specify the non-default port number. Option Description SSH Server Configuration Enables or disables DES, and displays the status (always enabled) of Blowfish, two encryption algorithms (block ciphers) compatible with SSH, version 1, clients. • DES: The key length is 56 bits. • Blowfish: The key length is 56 bits. been transferred to the Rack PDU, or a host key has been transferred improperly. NOTE: A host key must be installed to the /sec directory of the Rack PDU.Option Description SSH v1: Displays the SSH version 1 fingerprint for the host key. The fingerprint is a unique identifier to further authenticate the host key. In the control console, choose Advanced SSH Configuration and then Host Key Information to display the fingerprint. SSH v2: Displays the SSH version 2 fingerprint for the host key. Switched Rack PDU USER'S GUIDE Setting Definition NMS IP/ Domain Name Limits access to the NMS specified by a domain name or to the NMSs specified by the format used for the IP address: • A domain name allows only the NMS on the 159.215.12.1 allows access for any NMS on the 159.215.12.255 allows access for any NMS on the 159.215.12.255 allows access for any NMS on the 159.215.12.255 allows access for any NMS on the 159.215.12.1 allows only the NMS with that IP address to have access. ient. • 159.255.255.An Access option (the Settings option in the control console) enables (by default) or disables SNMP. When SNMP is enabled, the Access Control settings allow you to control how each of the four available SNMP channels is used. By default, the Rack PDU can send messages to up to four Syslog (embedded management card) and Switched Rack PDU (Device) events occur.Setting Definition Syslog Server Settings Server IP/ Domain Name Uses specific IP addresses or domain names to identify which of up to four servers will receive Syslog messages sent by the Rack PDU. Port Identifies the user datagram protocol (UDP) port that the Rack PDU will use to send Syslog messages. The default is 514, the number of the UDP port assigned to Syslog. 1. For Priority, select the priority to assign to the test message. 3. Click Apply to have the Rack PDU send a Syslog message format — for example, APC: Test message. 3. Click Apply to have the Rack PDU send a Syslog message. message that uses the defined Priority and Test Message settings. • The priority (PRI) part identifies the Syslog priority assigned to the message's event and the facility code assigned to message sent by the Rack PDU. See Creating and Installing Digital certificates to choose among the several methods for using digital certificates. server certificate is installed on the Rack PDU. If a certificate file and upload it to the Rack PDU. Option Description Access Enables or disables the access method selected in Protocol Mode. Protocol Mode Choose one of the following: HTTP: User names, passwords, and data are transmitted in encryption. • HTTPS (SSL/TLS): User names, passwords, and data are transmitted in encrypted form, and digital certificates are used for authentication. NOTE: To enable HTTPS (SSL/TLS): User names, passwords, and data are transmitted in encrypted form, and digital certificates are used for authentication. the control console.Option Description HTTP/HTTPS Port Configuration Identifies the TCP/IP port used for communications by HTTP with the Rack PDU. The default is 80. You can change the Port settings. You must then use a colon (:) in the command line to specify the nondefault port number. For example, for a port number of 5000 and a Rack PDU IP address of 159.215.12. Option Description SSL/TSL Server Configuration Enables or disables the following SSL encryption ciphers and hash algorithms. (To access these options in the control console, choose Web/SSL, then Advanced SSL/TLS Configuration.) NOTE: All of these encryption ciphers and hash algorithms use the RSA public key algorithm. • DES (SSL RSA WITH DES CBC SHA): a block cipher with a key length of 56 bits. The Secure Hash Algorithm (SHA) is used for authentication. Option Description SSL/TLS Server Certificate The Status field indicates whether a server certificate is installed. (To display the status in the control console, choose Web/SSL/TLS, then Advanced SSL/TLS configuration.) • Not installed on the Rack PDU. NOTE: If you install a certificate by using FTP or SCP, you must specify the correct location (/sec) on the Rack PDU. Generating: The Rack PDU is generating a certificate because no valid certificate was installed. Parameter Description Current Certificate was installed. Parameter D For a default server certificate, the Common Name (CN) field displays the Rack PDU's serial number. Parameter Description Fingerprints Each fingerprint is a unique identifier that you can use to further authenticate the server. Record the fingerprints to compare with the fingerprints contained in the certificate, as displayed in the browser. MD5 Fingerprint: This fingerprint is created by a Message Digest 5 (MD5) algorithm. WAP Use this option to disable (the default) or enable the Wireless Application Protocol (WAP).System Menu Introduction Use the System menu to do the following tasks: • Configure system identification, date and time settings, and Administrator, Read-Only User, Device manager, and Outlet User access of each Rack PDU by using RADIUS (Remote Authentication Dial-in User Service) • Synchronize the real-time clock for the Rack PDU with a Network Time Protocol (NTP) server Switched Rack PDU USER'S GUIDE Overview • Reset the Rack PDU to default settings • Define the Menu options Unless noted, the following menu options are available in the control console and Web interface: • User Manager • • • • • Identification Date & Time Tools Links (Web interface) Modem (not supported) • About System Switched Rack PDU USER'S GUIDE • RADIUS The About System option is a Help menu option in the Web interface. Option Settings User Manager Use this option to define access values shared by the control console and Web interface. Definition Values affecting all users Auto Logout The number of minutes (3, by default) before a user is automatically logged off because of inactivity. Outlet User Manager Use the Outlet User Manager option to set up user accounts that have access only to specified outlets. Setting Definition User Name The name of this user accounts that have access only to specified outlets. user name, or choose Add New User to edit accounts. Password Case-sensitive password for this user account. User Description Identification or description of the outlet user. Control console.

Select System from the Control Console menu. Then select Manage Outlet Users from the User Manager menu. Setting Definition Add Outlet User Account User Name: The user name for logging on to this user account. or Password: Case-sensitive password for this user account.

Description: Identification of the outlet user. Switched Rack PDU USER'S GUIDE Edit Outlet User Account Delete Outlet User Account Enter the user name of the outlet user accesses the Switched Rack PDU, it sends an authentication request to the RADIUS server to determine the user's permission level. RADIUS user names are limited to 32 characters. For more information on user permission levels, see Types of user accounts. Switched Rack PDU USER'S GUIDE RADIUS (Remote Authentication Dial-In User Service) is an authentication, authorization, and accounting service. APC supports the authentication and authorization functions of RADIUS.RADIUS Setting Definition Access Local Only: RADIUS is enabled. Local authentication is enabled. RADIUS then Local: RADIUS then Local: RADIUS server first; local authentication is used only if RADIUS authentication fails. RADIUS Only: RADIUS is enabled. Local authentication is disabled.Configuring the RADIUS server. You must configure your RADIUS server to work with the Rack PDU. The following example shows how to configure a RADIUS server for use with a Rack PDU. APC supports authentication and authorization of users by various RADIUS servers and

RADIUS Only: RADIUS is enabled. Local authentication is disabled. Configuring the RADIUS server. You must configure your RADIUS server to work with the Rack PDU. The following example shows how to configure a RADIUS server for use with a Rack PDU. APC supports authentication and authorization of users by various RADIUS servers and does not recommend a specific RADIUS server. 2.

The users must be configured with a Service-Type attribute. If no Service-Type attribute is configured, the user will have read-only access (on the Web interface only).3. Vendor specific attributes (VSA) can also be used. This requires some dictionary entries. VSAs take precedence over standard RADIUS attributes. Example: (RADIUS, dictionary.apc) # # dictionary.Identification See also For more information about the MIB-II OIDs, see the PowerNet® SNMP Management Information Unit Utility CD that came with your Rack PDU. Date & Time Use this option to set the date and time used by the Switched Rack PDU. The option displays the current settings and allows you to change those settings manually or through a Network Time Protocol (NTP) Server. In the control console, use the NTP Client option to enable or disable the NTP Server automatically update the Date and Time settings for the Switched Rack PDU.Tools Switched Rack PDU USER'S GUIDE Use this option to perform the following actions.

Action Definition No Action (Web Interface only) No change to the Rack PDU. Reset to Defaults Resets all configuration settings. This option will reset the TCP/IP settings and enable DHCP and BOOTP. Reset to Defaults Except TCP/IP Resets all configuration settings except the TCP/IP settings.Links (Web interface) Use this option to modify the links to APC Web pages. Setting Definition Name Defines the link names that appear in the Links menu (by default, APC's Web Site, Testdrive Demo, and Remote Monitoring). URL Defines the URL addresses used by the links. By default, the following URL addresses are used: (APC's Web site) • (Testdrive Demo) • screen also displays the Name, Version, Date, and Time for the Application Module and AOS. This information is reported by the About System option in the Help menu. Switched Back PDU USER'S CUUDE The control console also includes fields for system Elash Type, and Type, Sector or manual settings, the Switched Back PDU can use a dynamic host configuration protocol (DHCP) server to provide the settings that it needs to the for the Application for system elash to provide the settings that it needs to the factory and cannot be changed. In the Web interface, except for Flash Type, this hardware information is reported by the About System option in the Help menu.

Switched Rack PDU USER'S GUIDE The control console also includes fields for system Flash Type, and Type, Sector, and CRC16 for each module.Boot Mode Introduction In addition to using a BOOTP server or manual settings, the Switched Rack PDU can use a dynamic host configuration protocol (DHCP) server to provide the settings that it needs to operate on a TCP/IP network. The method used to provide the network settings for the Rack PDU depends on Boot mode, a TCP/IP option in the Network menu.

To use a DHCP server to provide the network assignment for the Rack PDU, Boot mode must be set either to DHCP & BOOTP, its default DHCP & BOOTP setting, the following occurs when the Switched Rack PDU is started or reset: 2. If the Rack PDU fails to receive a valid BOOTP response after five BOOTP requests, the Rack PDU makes up to five requests for its network assignment from any DHCP server. If a valid DHCP response is received, the Rack PDU starts the network services and sets Boot mode to DHCP Only.DHCP Configuration Settings Switched Rack PDU settings Three settings (Ethernet Port Speed, Host Name, and Domain Name) are available regardless of the TCP/IP option's Boot mode selection except Manual.When Boot mode is set to DHCP Only, two options are available: • DHCP Cookie Is in the control console (or Require vendor specific cookie to accept DHCP Address in the Web interface): By default, this option requires that the DHCP response contains options eta the DHCP response contains options that provide the TCP/IP settings that the Switched Rack PDU will repeat the DHCP response contains options that provide the TCP/IP settings that the Switched Rack PDU needs to operate on a network, and other information that affects the operation of the Rack PDU. Vendor Specific Information (option 43). The Vendor Specific Information option contains up to two APC specific options encapsulated in a Tag/Len/Data format: the APC Cookie and the Boot Mode Transition.

APC Cookie. This option 43 setting enables or disables the Boot mode option to use the setting (DHCP Only or BOOTP Only): • For a data value of 1, the After IP Assignment option is disabled, and the Boot mode option remains in its DHCP & BOOTP setting after successful network assignment. Switched Rack PDU USER'S GUIDE TCP/IP options. The Switched Rack PDU uses the following options within a valid DHCP response to define its TCP/IP settings: • IP Address (from the yiaddr field of the DHCP response): Provides that the DHCP server is leasing to the Rack PDU. • Subnet Mask (option 1): Provides the subnet mask value needed by the Rack PDU to operate on the network. Security Security Features As a network device that passes information across the network, the Switched Rack PDU is subject to the same exposure as other devices on the network. Use the information in this section to plan and implement the security features appropriate for your environment. Summary of access methods Switched Rack PDU USER'S GUIDE Planning and implementing security features appropriate for your environment. Description Always enabled. Switched Rack PDU USER'S GUIDE SNMP. Security Access Description Available methods: • Communities with read/write/disable capability The domain name restricts access only to the NMS as that location, and the NMS IP filters allow access only from designated IP addresses. • 162.245.12.1 allows only the NMS with that IP address to have access. • 162.245.12.255 allows access for any NMS on the 162.245.12.255 allows access for any NMS on the 162.245.12.255 allows access. • 162.245.12.255 allows access for any NMS on the 162.245.12.255 allows access. • 162.245.12.255 allow Sockets Layer (SSL) and Transport Layer Security (TLS) In basic HTTP authentication mode, the user name and password are transmitted base-64 encoded (with no encryption). SSL and TLS are available on Web browsers supported for the Switched Rack PDU and on most Web servers. If a Telnet, FTP, SSH/SCP, or Web/SSL/TLS server uses a nonstandard port, a user must specify the port when using the client interface, such as a Web browser. The non-standard port address becomes an extra "password," hiding the server to provide an additional level of security. The TCP ports for which these servers listen are initially set at the standard "well known ports" for the protocols. To hide the interfaces, use any port numbers from 5000 to 32768. To ensure that data and communication between the Switched Rack PDU and the client interfaces, such as the control console and the Web interfaces, such as the control console and the Web interfaces. user names and passwords for control console access, use the Secure SHell (SSH) and Secure CoPy (SCP) • SSH is an alternative to Telnet, which does not provide encryption. • SSH protects the username and password, the credentials for authentication, from being used by anyone intercepting network traffic. • To authenticate the SSH server and that provides an identification that cannot be falsified. Secure CoPy (SCP) is a secure file transfer application that you can use instead of FTP. SCP uses the SSH protocol as the underlying transport protocol for encryption of user names, passwords, and files. • When you enable and configure SSH, you automatically enable and configure SCP. No further configuration of SCP is needed. Switched Rack PDU USER'S GUIDE • You must explicitly disable FTP. It is not disabled by enabling SSH. For secure Web communication, you enable Secure Sockets Layer (SSL) and Transport Layer Security (TLS) by selecting HTTPS (SSL/TLS) as the protocol mode to use for access to the Web interface of the Switched Rack PDU. Hypertext Transfer Protocol over Secure Sockets Layer (HTTPS) is a Web protocol that encrypts and decrypts page requests from the user and pages that are returned by the web server to the user. Originally developed by Netscape, it has become an internet standard supported by most Web browsers. See Creating and Installing Digital Certificates for a summary of how these certificates are used. See also To create certificates and certificate and certificate and certificates and certifi intercepted and sent by another server). Creating and Installing Digital Certificates For network communication that requires a higher level of security than password encryption, the Web interface of the Switched Rack PDU supports the use of digital certificates with the Secure Sockets Layer (SSL) protocol. Digital certificates can authenticate the Switched Rack PDU (the server) to the Web browser (the SSL client). The sections that follow summarize the three methods of creating, implementing, and using digital certificates. Choosing a method for your system Method 1: Use the auto-generated default certificates. When you enable SSL, you must reboot the Rack PDU. During rebooting, if no server certificate exists on the Rack PDU, the Rack PDU generates a default server certificate that is self-signed but that you cannot configure.- The length of the public key used in Methods 2 and 3 is 1024 bits, providing more complex encryption and consequently a higher level of security.) Switched Rack PDU USER'S GUIDE PDU can control access to its Web interface by user name, password, and account type (e.g., Administrator, Device Manager, or Read Only User), the browser cannot authenticate what Rack PDU is sending or receiving data. Method 2: Use the APC Security Wizard to create a CA certificate and a server certificate. You use the APC Security Wizard to create two digital certificates: • A server certificate, it uses the CA root certificate to sign the server certificate. The server certificate that you upload to the Rack PDU. enables SSL to authenticate that data are being received from and sent to the correct Rack PDU. This provides an extra level of security beyond the encryption of the user name, password, and transmitted data. • Disadvantage: Because the certificates do not have the digital signature of a commercial Certificate Authority, you must load a root certificate individually into the certificate store (cache) of each user's browser. You can also use Method 3 if your company or agency operates its own Certificate Authority. Use the APC Security Wizard in the same way, but use your own Certificate Authority in place of a commercial Certificate Authority. disadvantages. Switched Rack PDU USER'S GUIDE Method 3: Use the APC Security Wizard to create a server certificate - signed by the root certificate - signed by the root certificate of an external Certificate - signed by the root certificate of an external Certificate of an external Certificate - signed by the root certificate of an external Ce signature on the CA root certificate that is already in the browser's certificate cache to provide additional protection from unauthorized access. • Disadvantages: - Setup requires the extra step of requesting a signed root certificate from a certificate from certificates. Firewalls Switched Rack PDU USER'S GUIDE Although some methods of authentication provide a higher level of security than others, complete protection from security wizard Overview Authentication verifies the identity of a user or a network device (such as an APC Switched Rack PDU). Passwords typically identify computer users. However, for transactions or communications requiring more stringent security methods on the Internet, the Switched Rack PDU supports more secure methods of authentication. • Secure Sockets Layer (SSL), used for secure Web access, uses digital certificates for authentication. Authentication of the server. The browser to the server is certificate is signed by a Certificate Authority known to the browser. For this authentication to occur: • Any browser that is used to access the Rack PDU's Web interface must contain the CA root certificate Authority. This Certificate Authority can be one that is managed by your own company or agency or can be one of the commercial Certificate Authorities whose CA root certificate are distributed as part of a browser's software. • A certificate signing request if you are using an external Certificate Authority. • A CA root certificate a Root Certificate & Server Certificates Summary The public RSA key that is part of a certificate generated by the APC Security Wizard is 1024 bits.) • Create a CA root certificate that will be used to sign all server certificates to be used with Switched Rack PDUs. During this task, two files are created. - The file with the .The procedure Create the CA root certificate. Perform these steps. (Click Next to move from screen to screen.) 2. On the Windows Start menu, select Programs, then APC Security Wizard, to start the Wizard program. 3. On the screen labeled "Step 1," select CA Root Certificate as the type of file to create. 4. Enter a name for the file that will contain the Certificate's public root certificate's issuer information and the certificate's issuer information and the server certificates. - This screen also displays the location and name of the .crt file, which is the CA root certificate that you will load into the browser of each user who needs to access the Rack PDU. Load the CA root certificate to your browser. Load the .Create an SSL Server User Certificate. Perform these steps (Click Next to move from screen to screen.) 1. On the Windows Start menu, select Programs, then APC Security Wizard, to start the Wizard program. 3. Enter a name for the file that will contain the server certificate and the private key. The file name must have a .p15 extension. By default, the file will be created in the installation folder C:\Program Files\American Power Conversion\APC Security Wizard. 4.7. The last screen verificate has been created and instructs you on the next task, to load the server certificate to the Switched Rack PDU. It displays the location and name of the Server Certificate, which has a .p15 file extension and contains the Rack PDU private key and public root certificate. Load the server certificate to the Rack PDU. Perform these steps: 1. On the Network menu of the Web/SSL option. Create a Server Certificate and Signing Request (CSR). The CSR contains all the information for a server certificate except the digital signature. This process creates two output files: - The file with the .csr extension contains the certificate signing request, which you send to an external Certificate Authority.2. On the Windows Start menu, select Programs, then APC Security Wizard, to start the Wizard program. 4. Enter a name for the file that will contain the Switched Rack PDU's private key. The file name must have a .p15 extension. By default, the file will be created in the installation folder C:\Program Files\American Power Conversion\APC Security Wizard. 5.8. Send the certificate signing request to an external Certificate Authority, either a commercial Certificate Authority or, if applicable, a Certificate Authority managed by your own company or agency.

See the instructions provided by the Certificate Authority regarding the signing and issuing of server certificates. Import the signed certificate. When the external Certificate Authority returns the signed certificate. When the external Certificate Authority returns the signed certificate. The last screen verifies that the certificate has been created and instructs you on the next task, to load the server certificate to the Switched Rack PDU. It displays the location and name of the server certificate, which has a p15 file extension and contains the Rack PDU's private key and the public key obtained from the .cer or .crt file. 1. On the Network menu of the Security Wizard to create a host key, which is encrypted and stored in a file with .p15 extension. • Load the host key onto the Rack PDU generates a 768-bit RSA key DU generates a 768-bit RSA key DU generates a 768-bit RSA key Put is the boots.the correct host key, use ploaded by verifying that the fingerprints displayed here match the SSH fingerprints on the Rack PDU, select the Telnet/SSH option. 2. In the SSH user Host key, the .p15 file you created in the procedure Create the host key, the .p15 file you created in the procedure Create the host key. APC Device IP Configuration Wizard to configure the basic TCP/IP settings of installed or embedded Network Management Cards in either of the following ways: Switched Rack PDU USER'S GUIDE Purpose: configure a lost key in the Wizard Automated installation If autorun is enabled on your CD-ROM drive, the installation If autorun is enabled on your CD-ROM drive, the settings. TCP/IP settings remotely Prepare to configure the basic TCP/IP settings remotely Prepare to configure the setter or the following ways: Switched Rack PDU USER'S GUIDE Purpose: configure the setter or the Key the Wizard Configure the basic TCP/IP settings of installed on your CD-ROM drive, the installation If autorun is enabled on your CD-ROM drive, the installation from the APC Web site, www.apc.com and run setup.exe from the folder to which y

Contact your network administrator to obtain valid TCP/IP settings to use. 2.

If you are configuring multiple unconfigured Network Management Cards, obtain the MAC address of each one so that you can identify each Network Management Card that the Wizard to perform the configuration. To discover and configure, over the network, installed or embedded Network Management Cards that are not configured: 1. From the Start menu, launch the Wizard automatically detects the first Network Management Card that is not configured. 3.

Enter the TCP/IP settings (System IP, Subnet Mask, and Default Gateway) for the unconfigured Network Management Card identified by the MAC address at the top of the screen. Then click Next >. 4.Configure or reconfigure the TCP/IP settings locally To configure a single Network Management Card through a serial connection: 2. Connect the serial configuration cable that came with the Network Management Card or with the device that contains an embedded Network Management Card. a. Connect one end to an available communications port on your computer. Make sure no other application is using the port. b. Connect the other end to the serial port of the card or device. 3. How to Export Configuration Settings Retrieving and Exporting the .ini File As an Administrator, you can retrieve a dynamically generated .ini file of a Switched Rack PDU or to multiple Switched Rack PDU or to multiple Switched Rack PDU. 3. Customize the .ini file (to change at least the TCP/IP settings) and make a copy to export. Contents of the .ini file that you retrieve from a Switched Rack PDU contains the following: Only section headings and keywords supported for the specific device associated with the Rack PDU from which you retrieve the file are included.

• Each keyword is followed by an equals sign and the current value for that parameter's setting, either the default value (if the value has not been specifically configured) or the configured value. Detailed procedures Use the following procedures to retrieve the settings of one Switched Rack PDU and export them to one or more other Switched Rack PDUs. Retrieving. To set up and retrieve an .ini file to export: To avoid errors, configure the Rack PDU by using its Web interface or control console whenever possible.

Directly editing the .ini file risks introducing errors. 2. Use FTP to retrieve the file config.ini from the Rack PDU you configured: a.Customizing. You must customize the file to change at least the TCP/IP settings before you export it.

1. Use a text editor to customize the file. – Section headings, keywords, and pre-defined values are not casesensitive, but string values that you define are case-sensitive, but string values that you define are case-sensitive, but string values that contain leading or trailing spaces or values which are already enclosed in quotation marks. Exporting the file to a single Rack PDU. To export the .ini file to another Switched Rack PDU, use any of the file transfer protocols supported by Switched Rack PDUs (including FTP, FTP Client, SCP, and TFTP). The following example uses FTP: ftp> open 158.165.4.135 2. Export the copy of the customized .ini file. The receiving Rack PDU accepts any file name that has the .ini suffix, is no more than 64 characters in length, and is exported to its root directory. ftp> put filename. The Upload Event and Error Messages The event and its error messages The following system event occurs when the receiving Switched Rack PDU completes using the .ini file to update its settings. This event has no default severity level. If a keyword, section name, or value is invalid, the event text is extended to include notification of the following errors.

The export to and the subsequent upload by the receiving Rack PDU succeeds even if there are errors. A feature might not be supported for the device to which you export the configuration settings. In this case, the user configuration file contains, under the section name for that feature, a message stating that the feature is not supported. No keywords and values are listed, and that feature will not be configuration file. Using the APC Device IP Configuration Wizard See APC Device IP Configuration Wizard for a detailed description of how to discover and configure unconfigure unconfigured Switched Rack PDU service is not support to the serial port of your computer to the Switched Rack PDU. Switched Rack PDU USER'S GUIDE On Windows operating systems, instead of using the preceding procedure for exporting. File Transfers Introduction The Switched Rack PDU automatically recognizes binary firmware files.

Each of these files contains a header and one or more Cyclical Redundancy Checks (CRCs) to ensure that the data contained in the file is not corrupted before or during the transfer operation. When new firmware is transmitted to the Rack PDU, the program code is updated and new features become available. This chapter describes how to transfer firmware files (Switched Rack PDU. Upgrading Firmware: Methods and Tools Benefits of upgrading firmware on the Switched Rack PDU has the following benefits: • New features in the same manner. Firmware files (Switched Rack PDU Villy CD hat came withy our Rack PDU vill upgrade your device to the tast AOS and application modules available when the CD was released. • If a later firmware upgrade is available, you can obtain an updated version of the APC web site www.apc.com/tools/download.If you have a networked computer running a supported Microsoft Windows systems to upgrade the firmware of a Switched Rack PDU uutomates the entire upgrade process, even if your crement firmware is a 1.x. version. Firmware file (Switched Rack PDU uses Strement of a Switched Rack PDU upgrade to lor Microsoft Windows system, you can use FTP to vpgrade one Rack PDU upgrade the firmware of a Switched Rack PDU was the entwork. You can use SMODEM through a serial connection to transfer the individual AOS and application firmware modules. • For a Switched Rack PDU was the Rack PDU was the Rack PDU was the connected to the network. • The Switched Rack PDU upgrade a single Switched Rack PDU upgrade a single Switched Rack PDU upgrade a single Switched Rack PDU was the following device to retwork adverted to the network. • The Switched Rack PDU upgrade the firmware was deviced to the network. • To upgrade the firmware upgrade to lor Microsoft Windows systems to upgrade the firmware of a Switched Rack PDU upgrade to to ransfer the individual AOS and application firmware modules. • For a Switched Rack PDU upgrade to the Rack PDU upgrade to the Rack PDU upgrade to the Rack PDU upgrade a single Switched Rack P

Start an XMODEM transfer: a. Select option 3—System b. Select option 3—System b. Select option 3—System b. Select option 4—Fib Transfer Result OID Last Transfer Result OID Last Transfer Result OID Last Transfer Result OID. Last Transfer Result OID Last Transfer Result OID Last Transfer Result OID. Last Transfer Result OID Last Transfer Result of purchase. Its obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. This warranty does not apply to equipment that has been damaged by accident, negligence, or misapplication or has been altered or modified in any way. This warranty applies only to the original purchase. Obtain support for problems with your Switched Rack PDU: 0.2. Contact Customer Support at a phone number located at the end of this manual. A technician will give you are turn material authorization (RMA) number. If the warranty expired, you will be charged for reach interface 117. Acack the unit carefilly. The warranty does not opye sustained in transit. Life-Support Policians where failure or to affect significantly its safety or effectiveness. • In direct patient care. Index BOOTP A After IP Assignment setting 112 Boot mode setting 74 BOOTP Only boot mode setting 74 BOOTP Only boot mode setting 74 BOOTP only boot process 111 Remain in DHCP & BOOTP mode setting 74 Dornal names for trans precievers 63 configuration 70 using FTP to retrieve 57 data.with SSL 88 Follower outlet groups 33 Free mathers and work and setting 70 using FTP to retrieve 57 data.with SSL 88 Follower outlet groups 33 Free means 120 Gover or Follower of the transfer Result of transfer Result and service of the support policy in Stress and work manual bot mode setting 74 FTP Server of Security of using FTP to retrieve 57 data.with SSL 88 Follower 00 Del groups 33 Free deg Security FTP error messages for firmware using at the free failure or the file transfer 159 disability of the Security of the Security of the Security for the setting 74 SOVE were for email of Secur

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APC, the APC logo, InfraStruXure, and PowerNet are trademarks of American Power Conversion Corporation and may be registered in some jurisdictions. All other trademarks, product names, and corporate names are the property of their respective owners and are used for informational purposes only. Page 2®USER'S GUIDESwitched Rack PDU77. From the Control Console menu, select System, then User Manager. 8. Select Administrator, and change the User Name and Password settings, both of which are now defined as apc.9. Press CTRL-C, log off, reconnect any serial cable you disconnected, and restart any service you disabled. Page 3® USER'S GUIDES witched Rack PDU5You must use the Web interface to configure values for the Read-Only User, and you must use the control console to configure values for an Outlet User. Page 4® USER'S GUIDES witched Rack PDU has two internal interfaces (control console and Web interface) that allow you to manage the Rack PDU. The SNMP interface also allows you to use an SNMP browser with the PowerNet® Management Information Base (MIB) to manage the Rack PDU. Access priority for logging onOnly one user at a time can log on to the Rack PDU to use its internal user interface features.

The priority for access is as follows: • Local access to the control console from a computer with a direct serial connection to the Rack PDU always has the highest priority. • Telnet or Secure SHell (SSH) access to the control console from a remote computer has priority over Web access, either directly or through the InfraStruXure Manager, has the lowest priority. For more information about the internal user interfaces, see Control Console and Web Interfaces, see the PowerNet® SNMP Management Information Base (MIB) Reference Guide (\doc\en\mibguide.pdf), which is provided on the Utility CD that came with your Switched Rack PDU.Page 5®USER'S GUIDESwitched Rack PDU1IntroductionProduct DescriptionFeatures of the Switched Rack PDUThe APC® Switched Rack PDU1IntroductionProduct DescriptionFeatures of the Switched Rack PDU1 is a stand-alone, network-manageable device that provides current monitoring and allows programmable control of eight, sixteen, or twenty-four power outlets (depending on the model). You can manage a Switched Rack PDU through its Web interface, its control console, the InfraStruXure® Manager, or SNMP:• The Web interface supports using HTTPS access with Secure Sockets Layer (SSL) and using HTTPS access.• You can access the control console through a serial connection, Telnet, or Secure SHell (SSH).• Your Rack PDU is compatible with the APC InfraStruXure system and can be monitored and managed through the InfraStruXure Management Information Base (MIB) to manage your Rack PDU. Switched Rack PDUs have these additional features:• Current monitoring per phase or bank• Configurable alarm thresholds that provide network and visual alarms to help avoid overloaded circuits• Independent outlet user accountsPage 6®USER'S GUIDESwitched Rack PDUIIData Menu (Web Interface Only)--69Log Option

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ManualInstallation guidePhysicalColorBlackHeight1.73 in (4.4 cm)Width17.52 in (44.5 cm)Depth4.25 in (10.8 cm)Net Weight5.00 lb(US) (2.27 kg)Mounting preferenceMounting preferenceMounting preferenceMounting modeRack-mountedMounting positionHorizontalInputLine Rated Current12 APermissible voltage100...120 VInput current limits15 ALoad Capacity1440 VAInput Frequency50/60 HzOutputNumber of power socket outlets8 NEMA 5-15RConformanceProduct CertificationscUL ListedUL Temperature for Storage-13...149 °F (-25...65 °C)Storage Relative Humidity0...95 %Storage altitude0...50000 ft (0.00...15240.00 m)Ordering and shipping detailsGTIN731304205722Packing UnitsUnit Type of Package 1 PCENumber of Units in Package 1 Height2.76 in (7 cm)Package 1 Width13.50 in (34.3 cm)Package 1 Length18.50 in (47 cm)Package 1 Weight7.61 lb(US) (3.45 kg)Contractual warrantyWarranty2 years repair or replace Green PremiumTM label is Schneider Electric's commitment to delivering products with best-in-class environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO2 products.Learn morearrow2 left Easily find answers to the most frequently asked questions.