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You can read the recommendations in the user guide, the technical guide or the installation guide for ZYXEL PLA-401 V3. You'll find the answers to all your questions on the ZYXEL PLA-401 V3 in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual ZYXEL PLA-401 V3
User guide ZYXEL PLA-401 V3
Operating instructions ZYXEL PLA-401 V3
Instructions for use ZYXEL PLA-401 V3
Instruction manual ZYXEL PLA-401 V3

PLA-401 v3

Powerline Ethernet Adapter

User's Guide



Firmware Version 3.3.4
Edition 1, 3/2009

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Manual abstract:

@@@Send all User Guide-related comments, questions or suggestions for improvement to the following address, or use e-mail instead. Thank you! The Technical Writing Team, ZyXEL Communications Corp., 6 Innovation Road II, Science-Based Industrial Park, Hsinchu, 300, Taiwan. E-mail: techwriters@zyxel.com.tw PLA-401 v3 User's Guide 3 About This User's Guide Customer Support In the event of problems that cannot be solved by using this manual, you should contact your vendor. If you cannot contact your vendor, then contact a ZyXEL office for the region in which you bought the device. See http://www.zyxel.com/web/contact_us.

php for contact information. Please have the following information ready when you contact an office. · Product model and serial number. · Warranty Information. · Date that you received your device.

Brief description of the problem and the steps you took to solve it. 4 PLA-401 v3 User's Guide Document Conventions Document Conventions Warnings and Notes These are how warnings and notes are shown in this User's Guide. Warnings tell you about things that could harm you or your device. Note: Notes tell you other important information (for example, other things you may need to configure or helpful tips) or recommendations. Syntax Conventions · The PLA-401 v3 may be referred to as the "PLA-401 v3", the "ZyXEL device", the "device" or the "powerline adapter" in this User's Guide.

· The PLA-4xx Series Configuration Utility version 3.3.4(AG) may be referred to as the "configuration utility" or the "utility" in this User's Guide. · Product labels, screen names, field labels and field choices are all in bold font. · A key stroke is denoted by square brackets and uppercase text, for example, [ENTER] means the "enter" or "return" key on your keyboard. · "Enter" means for you to type one or more characters and then press the [ENTER] key. "Select" or "choose" means for you to use one of the predefined choices. · A right angle bracket (>) within a screen name denotes a mouse click. For example, Maintenance > Log > Log Setting means you first click Maintenance in the navigation panel, then the Log sub menu and finally the Log Setting tab to get to that screen. · Units of measurement may denote the "metric" value or the "scientific" value.

For example, "k" for kilo may denote "1000" or "1024", "M" for mega may denote "1000000" or "1048576" and so on. · "e.g.," is a shorthand for "for instance", and "i.e.," means "that is" or "in other words". PLA-401 v3 User's Guide 5 Document Conventions Icons Used in Figures Figures in this User's Guide may use the following generic icons. The PLA-401 v3 icons used may not be an exact representation of your device. PLA-401 v3 Computer Internet Modem / Router Printer Notebook TV 6 PLA-401 v3 User's Guide Safety Warnings Safety Warnings · Do NOT use this product near water, for example, in a wet basement or near a swimming pool. · Do NOT expose your device to dampness, dust or corrosive liquids.

· Do NOT store things on the device. · Do NOT install, use, or service this device during a thunderstorm. There is a remote risk of electric shock from lightning. · Connect ONLY suitable accessories to the device. · Do NOT open the device or unit.

Opening or removing covers can expose you to dangerous high voltage points or other risks. ONLY qualified service personnel should service or disassemble this device. Please contact your vendor for further information. Make sure to connect the cables to the correct ports. · Place connecting cables carefully so that no one will step on them or stumble over them.

· Always disconnect all cables from this device before servicing or disassembling. · Use ONLY an appropriate power adapter or cord for your device. · Connect the power adapter or cord to the right supply voltage (for example, 110V AC in North America or 230V AC in Europe). · Do NOT allow anything to rest on the power adapter or cord and do NOT place the product where anyone can walk on the power adapter or cord. · Do NOT use the device if the power adapter or cord is damaged as it might cause electrocution. · If the power adapter or cord is damaged, remove it from the power outlet. · Do NOT attempt to repair the power adapter or cord. Contact your local vendor to order a new one. · Do not use the device outside, and make sure all the connections are indoors. There is a remote risk of electric shock from lightning.

· Do NOT obstruct the device ventilation slots, as insufficient airflow may harm your device. · If you wall mount your device, make sure that no electrical lines, gas or water pipes will be damaged. · This power unit is intended to be correctly orientated in a vertical or floor mount position. Your product is marked with this symbol, which is known as the WEEE mark. WEEE stands for Waste Electrical and Electrical Equipment. It means that used electrical and electronic products should not be mixed with general waste. Used electrical and electronic equipment should be treated separately. PLA-401 v3 User's Guide 7 Safety Warnings 8 PLA-401 v3 User's Guide Table of Contents Table of Contents About This User's Guide ...

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l without the need for any new cabling. Devices can securely communicate with each other at high data transfer rates. (See Appendix A on page 81 for speeds currently supported by the PLA-401 v3.) The PLA-401 v3 uses 128-bit Advanced Encryption Standard (AES) to ensure safe transfer of information. Figure 1 Expand Your Network with the PLA-401 v3 PLA-401 v3 User's Guide 15 Chapter 1 Introducing the PLA-401 v3 Connect your PLA-401 v3 to an Internet gateway such as a modem and plug it into an ordinary power outlet in your home.

Plug a second PLA-401 v3 into another power outlet and connect a computer to the PLA-401 v3 for Internet access. Your network can be further expanded by plugging additional PLA-401 v3s into other outlets in your home and connecting other computers or network devices (for example, a printer) to them. Refer to your Quick Start Guide for hardware connection information. Refer to Appendix A on page 81 for wall mounting instructions. 1.

3 Ways to Manage the PLA-401 v3 Use the ENCRYPT button to add powerline devices to your powerline network if they have this button. See Chapter 4 on page 29 for instructions on using the ENCRYPT feature. Use the PLA-4xx Series Configuration Utility (or utility, for short) to manage the PLA-401 v3. See Section 2.2 on page 21 for instructions on installing the utility. Use the firmware upgrade tool to upgrade to the latest firmware. Because the latest PLA-401 v3s are only compatible with other powerline devices with the latest HomePlug AV firmware, as well as the latest version Utility, these tool is available to

help you upgrade. You can download this tool from the ZyXEL website (www.zyxel.com).

tw). See Chapter 3 on page 27 for information in using these tools. Note: This User's Guide describes the latest version utility. This utility is only compatible with a PLA-401 v3 which has the latest firmware installed. If you don't already have them, download the latest firmware and utility from the ZyXEL website.

1.4 Security Since your powerline network may extend outside your premises, it is important to set up security on your PLA-401 v3. 16 PLA-401 v3 User's Guide Chapter 1 Introducing the PLA-401 v3 1.4.1 Passwords You use two types of passwords in the HomePlug AV powerline network.

The following table describes the differences between the passwords. Table 1 Password Summary

PASSWORD	Network Name	DESCRIPTION
All powerline adapters that follow the HomePlug AV standard are shipped with the same powerline network name "HomePlugAV".		

Change the network name via the PLA-4xx Series Configuration Utility to create a private network. See Section 5.3 on page 37.

In order to manage the powerline adapters on your powerline network you must enter the adapters' DAK password in the PLA-4xx Series Configuration Utility. This password is printed on the powerline adapter itself. You don't need to add the password for the powerline adapter directly connected to the computer running the configuration utility (local powerline adapter), you only have to add the remote powerline adapters' passwords (those on your circuit, but not directly connected to your computer). DAK (Data Access Key) Password 1.4.

2 Setting Up Security The ENCRYPT feature automatically sets up security on your powerline network. Use this feature if your powerline devices have the ENCRYPT button. If your devices do not have the ENCRYPT button, use the PLA-4xx Series Configuration Utility to set up security on the PLA-401 v3.

Although the PLA401 v3 is a "plug-and-play" network expanding solution there are several reasons for enabling security on the powerline network in your home. 1 2 It's easy and only requires you to change a network name. It's a good idea to ensure privacy of your communication. When you use the PLA401 v3 and other powerline adapters, the electrical wiring in your home becomes an extension of your Ethernet network. Your network traffic flows freely within the electrical circuit of your home and is bounded in most cases by a power meter. Without security (encryption) your information is accessible to anyone using a powerline adapter on the same electrical circuit. In some cases, a circuit can be shared by more than one household.

To prevent compromising your network security, you can create a private network. A private network uses a secret password (Network Name) to make sure that only permitted powerline adapters can communicate in your network. See Section 5.3 on page 37 for information on setting up a private network.

PLA-401 v3 User's Guide 17 Chapter 1 Introducing the PLA-401 v3 3 You may need to change the Network Name to create multiple powerline networks. See the next section for more information on how to set up a multiple network. 1.5 Multiple Networks Multiple powerline networks can coexist on a single powerline circuit. You might want to implement multiple powerline networks in a small office environment where you have two separate Ethernet networks. 1 Connect one powerline adapter to a router or switch on the first Ethernet network and assign a Network Name (for example "Password1") to this powerline adapter.

Add additional powerline adapters to your network by plugging them into your powerline outlets and assigning them "Password1". This completes the configuration of your first powerline network. Connect another powerline adapter to a router or switch on the second Ethernet network and assign a different Network Name (for example "Password2") to this powerline adapter. Again, add additional powerline adapters and assign them "Password2". You now have two private networks on your powerline circuit.

Information is not shared between the two networks as only powerline adapters with the same Network Name can communicate with each other. 2 1.6 PLA Compatibility Your PLA-401 v3 can work with different PLA models that have a firmware version of at least 3.0.5 in the same powerline network.

The following table shows a quick summary of firmware and utility versions compatible with the different powerline models. Table 2 Firmware and Utility Compatibility

PLA MODEL	PLA v1 models	PLA v2 models	PLA v3 models	FIRMWARE V 3.0.5	Compatible	Incompatible	UTILITY V 3.0.5
PLA-401 v3	Compatible	Compatible	Incompatible	FIRMWARE V 3.3.4	Compatible	Compatible	Compatible

18 PLA-401 v3 User's Guide Chapter 1 Introducing the PLA-401 v3 For PLA v1 models (for example, PLA-400, PLA-401, PLA-470, PLA-491 and so on) upgrade the firmware version from 1.

4.5 to 3.0.5. Refer to the PLA-4XX series User's Guide for instructions on how to do this. For PLA v2 models (for example, PLA400 v2, PLA402 v2, PLA401 v2, PLA470 v2 and so on) make sure the firmware version is 3.0.5. Note: The PLA v2 models can be upgraded to firmware version 3.



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3.

4. The firmware will be available for download in ZyXEL's website (www.zyxel.com). At the time of writing, PLA-401 v3 can only work with firmware version 3.

3.4. Use Configuration Utility version 3.3.4 to manage PLA v2 and PLA v1 models with firmware versions 3.

0.5. Note: You cannot downgrade the PLA-401 v3's firmware to a version earlier than 3.3.4. This diagram below shows a Powerline network where two PLAs have an earlier firmware that cannot be managed by the 3.3.4 Configuration Utility. You should upgrade the firmware of these PLAs. Figure 2 Wrong Firmware in a Powerline Network 3.

0.5 1.4.5 3.3.4 3.3.4 1.4.5 3.

0.5 PLA-401 v3 User's Guide 19 Chapter 1 The diagram below shows a Powerline network where each PLA has the correct firmware. Use Configuration Utility v 3.3.4 to manage the PLAs in this Powerline network.

Figure 3 Correct Powerline Network Configuration Utility v 3.3.4 3.3.4 3.

3.4 3.0.5 3.0.5 3.0.5 3.3.4 20 PLA-401 v3 User's Guide CHAPTER 2 Installing the Utility This chapter guides you through the installation of the configuration utility for your PLA-401 v3.

2.1 Overview of the Installation Process The installation of the configuration utility does the following: 1 Checks for and installs Microsoft's .NET Framework version 2.0 software on your computer. This software is necessary for the installation of the PLA-4xx Series Configuration Utility. If you already have .NET Framework version 2.0 installed on your computer this step will be skipped. Note: At the time of writing the utility is only compatible with Microsoft Windows XP and Microsoft Windows Vista (32-bit version) operating systems. Users with Windows XP (64-Bit version) operating systems can go to Microsoft's website to upgrade their systems to .

NET Framework version 2.0 so it can work with the utility. To check for your Windows operating system version, right-click on My Computer > Properties. You should see this information in the General tab. 2 Installs ZyXEL's PLA-4xx Series Configuration Utility.

This utility allows you to manage the network name (See Section 5.3 on page 37 for more information) or view the devices recognized on your powerline network. Note: This User's Guide describes the latest version utility. This utility is only compatible with a PLA-401 v3 which has the latest firmware installed. If you don't already have them, download the latest firmware and utility from the ZyXEL website.

2.2 Installing the Utility Follow the steps below to install .NET Framework version 2.0 and the PLA-4xx Series Configuration Utility on your computer.

PLA-401 v3 User's Guide 21 Chapter 2 Installing the Utility 1 Insert the included CD-ROM into your computer's CD-ROM drive. The Setup utility runs automatically. Alternatively this can also be done manually by double clicking the setup.exe file on the CD. A prompt appears asking you to install the .NET Framework version 2.

0. Review Microsoft's License Agreement, select Accept to proceed. Figure 4 .NET Framework Installation Prompt 2 The next screen allows you to see the progress of the installation. Figure 5 .NET Framework Installation Process 22 PLA-401 v3 User's Guide Chapter 2 Installing the Utility 3 The Setup utility runs automatically. Click Yes or Next to continue through the initial screen. Click Cancel only if you want to abort the installation. Figure 6 InstallShield Wizard Start Screen 4 If you want the utility to be only available to the currently logged in user, select Only for me(.

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Otherwise, click Everyone to allow all users to use the configuration utility. Click Next to install the utility to the default folder, or click Browse to specify a different location on your computer. Figure 7 Install Destination Folder Note: You can also click Disk Cost to know how much available disk space you have in the hard drives found on your computer.

PLA-401 v3 User's Guide 23 Chapter 2 Installing the Utility 5 When the installation is finished, a screen appears to confirm the InstallShield Wizard has successfully installed the PLA-4xx Series Configuration Utility to your computer. Click Close to exit the wizard. Figure 8 Installation Complete Note: You may be asked to restart your computer when the installation is complete. Click "Yes" to restart your computer. If you select "No, I will restart my computer later", you will not be able to launch the utility until after a restart of your computer.

2.3 Low Power Mode Your PLA-401 v3 is a certified green product. It goes into Low Power mode when there is no Ethernet connection. When you plug the PLA-401 v3 into an electric socket, it waits for an Ethernet connection. When no connection is detected after sixty (60) seconds, the Power LED blinks indicating that it is going into Low Power mode. The same process occurs when you disconnect the PLA-401 v3 from a previously working Ethernet connection. Sixty (60) seconds after disconnecting the Ethernet cable, the PLA-401 v3's Power LED blinks signalling that it is going into Low Power mode. The Ethernet and HomePlug LEDs are turned off in Low Power mode. While in Low Power mode, you cannot use the ENCRYPT button. To enable the ENCRYPT button again, you have to connect the PLA-401 v3's Ethernet cable to a computer/notebook or modem/router first.

The PLA-401 v3 wakes up from Low Power mode and you can start using the ENCRYPT button. Low Power mode is enabled by default. 24 PLA-401 v3 User's Guide PART II Managing the PLA401 v3 Firmware Tool (27) The ENCRYPT Button (29) The Configuration Utility (35) Powerline Network Setup Tutorial (61) LEDs and Troubleshooting (71) 25 26 CHAPTER 3.1 Overview 3 Firmware Tool Use the Firmware Upgrade Tool to ensure you have the latest firmware (version 3.3.4 or later) on your PLA-401 v3(s). You need to upgrade all your PLA-401 v3s to the latest firmware to ensure they can connect with each other and they are compatible with the latest version Utility. If your firmware is an early version (earlier than 3.3.4), then upgrade your firmware using the Firmware Upgrade Tool.

3.2 Firmware Upgrade Tool Use the firmware upgrade tool to upgrade your PLA-401 v3's firmware to the latest version. You can use this tool to upgrade the firmware on the powerline device directly connected to your computer. This is necessary as devices with ZyXEL's early version firmware are not compatible with the latest Utility or with devices running ZyXEL's latest version firmware. At the time of writing, firmware version 3.

3.4 is only available to PLA-401 v3. Note: The firmware is included in the Tool. You do not need to download the firmware separately. PLA-401 v3 User's Guide 27 Chapter 3 Firmware Tool 28 PLA-401 v3 User's Guide CHAPTER 4 The ENCRYPT Button Use the ENCRYPT button to automatically set up a secure powerline connection between your powerline devices.



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4.1 ENCRYPT Button Overview The ENCRYPT button allows you to set up a secure powerline connection with other HomePlug AV compliant powerline devices which also support the ENCRYPT feature. No other powerline setting changes are required to connect. You can use the ENCRYPT button to: · set up a new powerline network · separate an existing powerline network into multiple networks

4.2 Set Up a HomePlug AV Network with ENCRYPT You can connect a number of devices on a powerline network, but you can use the ENCRYPT button on only two devices at a time. 1 Place a powerline device close to another powerline device so you have time to set up each one. After you set up the first powerline device, you have 120 seconds to set up the second powerline device. You can disconnect them from your computer or modem (or other networking equipment) if you need to move them close to each other, but the powerline devices need to be plugged into power outlets. 2 Note: Because your PLA-401 v3 goes into Low Power mode, it must be connected to a networking equipment for the ENCRYPT button to work. Refer to Section 2.

3 on page 24 for more details. 3 Press the ENCRYPT button at the rear of your powerline device for more than 10 seconds until the power () light flashes. This resets the network name to a random value and removes your device from any network it may belong to. PLA-401 v3 User's Guide 29 Chapter 4 The ENCRYPT Button 4 Press the ENCRYPT button at the side of your powerline device for 1~2 seconds. The power () light will blink as the powerline device tries to set up a connection. Figure 9 ENCRYPT Connection Procedure press 2 seconds press 2 seconds within 2 minutes Note: The ENCRYPT button's location varies for each Powerline model. 5 Repeat step 4 in this section for the other powerline device you wish to connect. This must be done within 120 seconds of pressing the ENCRYPT button on the PLA-401 v3. Check the lights on the two powerline devices. The power () and HomePlug () lights should be blinking while the devices are connecting.

Several times all lights blink simultaneously and the HomePlug () light also shows red. Wait for about one minute while your powerline devices connect. 6 If the power () light does not blink when you press ENCRYPT, you have probably pressed the ENCRYPT button for too long. Try again, pressing the ENCRYPT button for 1~ 2 seconds. If the HomePlug () lights on both powerline devices do not light up, the powerline devices are not connected.

Repeat steps 4 and 5 in this section. If that doesn't work, see the Troubleshooting in Section 8.5 on page 76 for suggestions. 7 To add more powerline devices to your network, press the ENCRYPT button on device C (shown below) for more than 10 seconds until the power () light flashes. 30 PLA-401 v3 User's Guide Chapter 4 The ENCRYPT Button 8 Then repeat steps 4 and 5 in this section using any powerline device (A or B) you have connected using ENCRYPT and the powerline device you want to connect (C).

You must use the ENCRYPT button on both devices. Figure 10 Adding More Powerline Adapters to Your Network A B A OR B C 9 If you disconnected your computer or modem (or any other networking product connected to your powerline device) in step 1 of this section, you can now reconnect them. This sets up your powerline network between your powerline devices. 4.3 Setting Up Multiple Networks You can use the ENCRYPT button to set up multiple powerline networks using your existing powerline network. PLA-401 v3 User's Guide 31 Chapter 4 The ENCRYPT Button For example, you have already set up a powerline network in your home (A) which accesses a printer (B). Now you want a separate powerline network connection from your laptop to your printer (C). Figure 11 One Existing Powerline Network A C B 1 Click the ENCRYPT button on (A) for more than 10 seconds until the power () light flashes. This disconnects (A) from (B). Click the ENCRYPT button on (A) and (C) for 1~2 seconds and within two minutes of each other.

Wait for about one minute while (A) and (C) connect.) 2 3 32 PLA-401 v3 User's Guide Chapter 4 The ENCRYPT Button 4 Check the LEDs on both (A) and (C). When the power () and HomePlug () lights stop blinking and the power () light shines steadily, the devices are connected.) Figure 12 Two Separate Powerline Networks B A C Congratulations. You now have two separate powerline networks as shown above. If the HomePlug () lights on both powerline devices do not light up, the powerline devices are not connected. Repeat the connection process, making certain you press the ENCRYPT buttons for the correct time and within two minutes of each other. If that does not work see Section 8.5 on page 76 for suggestions. PLA-401 v3 User's Guide 33 Chapter 4 The ENCRYPT Button 4.

4 ENCRYPT Button Behavior The following table summarizes the actions that occur when the ENCRYPT button is pressed for specific lengths of time. Table 3 Time ENCRYPT Button is Pressed and Action TIME less than 3 seconds ACTION The device joins a network. It shares the same network name as other devices on the network. The device leaves any network it is associated with and its network name assumes a random value. POWER LIGHT BEHAVIOR The power () light blinks until the device is connected.

This may take a minute. The power () light blinks several times and then shines steadily. HOMEPLUG LIGHT BEHAVIOR The HomePlug () light turns on if your device is connected to another powerline device or a powerline network. The HomePlug () light blinks red one time and then turns off when it disconnects from the powerline network. more than 10 seconds See Troubleshooting in Chapter 8 on page 76 for suggestions on problems with the ENCRYPT button and the lights.

34 PLA-401 v3 User's Guide CHAPTER 5.1 Overview 5 The Configuration Utility This chapter shows you how to use the Configuration Utility (or Utility) to secure, manage and set up Quality of Service (QoS) on your powerline network. The PLA-401 v3 is designed as a plug-and-play network expanding solution. This means that once you complete your hardware connections, the PLA-401 v3s in your network (without additional configuration) are able to communicate with each other by sending and receiving information over your home's electrical wiring (A). Figure 13 Example Network Setup A All HomePlug AV compliant powerline adapters within range can join your network. The range varies depending on the quality of your home's wiring. Note: See Section 5.1.1 on page 35 for more information on enhancing your powerline network security. 5.

1.1 Powerline Network Security When the PLA-401 v3s communicate with each other, they use encryption to protect the information that is sent in the powerline network. Encryption is like a secret code. If you do not know the secret code, you cannot understand the PLA-401 v3 User's Guide 35 Chapter 5 The Configuration Utility message.



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The HomePlug AV standard uses 128-bit AES (Advanced Encryption Standard) to safely transmit data between powerline adapters. For the powerline adapters to communicate with each other they all need to use the same network name. This network name allows the powerline adapters to understand the encrypted information sent in the powerline network. By default the PLA-401 v3s are all configured with the network name HomePlugAV, this allows you to simply plug the devices in and not worry about setting up security. If you want to enhance the security on your powerline network, you can change the network name on the powerline adapters you want to allow to communicate in your powerline network. 5.

1.2 Device Access Key (DAK) In order to manage the powerline adapters on your powerline network you must enter the adapters' password in the PLA-4xx Series Configuration Utility. This password is called the DAK (Device Access Key) password. This password is printed on the powerline adapter itself. You don't need to enter the DAK password for the powerline adapter directly connected to the computer running the utility (local powerline adapter), you only have to add the remote powerline adapters' passwords (those in your powerline network, but not directly connected to your computer).

5.2 Starting the Configuration Utility To launch the PLA-4xx Series Configuration Utility simply double click on the configuration icon on your desktop. Figure 14 PLA-4xx Series Configuration Utility Icon Alternatively, start the utility by browsing to it from the start menu. Click Start > Programs > ZyXEL PLA-4xx Series Configuration > PLA-4xx Series Configuration Utility. Note: Close the Firmware Upgrade Tool and Firmware Detection Tool if either of them are open for the Utility to work properly.

36 PLA-401 v3 User's Guide Chapter 5 The Configuration Utility 5.3 Configuration Screen Use the Configuration screen to see which devices are recognized by your powerline network, to configure your PLA-401 v3 and to set up a secure powerline network by changing the powerline network name. This screen opens up when you launch the utility. Note: Use the Figure 15 icon to view online help information in each screen of the utility. Configuration Screen The following table describes the labels in this screen. Table 4 Configuration Screen LABEL Network Topology DESCRIPTION Use this to select which powerline network information is displayed. Different powerline networks are identified by the Ethernet interface (network card) connected directly to the PLA-401 v3. Typically there is only one connection, however, if your computer has two network cards and both are connected to a powerline device then you have two powerline networks. The fields described below are used to identify the powerline adapters recognized on the powerline network. The configuration utility automatically updates this information every 10 seconds.

Click Scan to refresh the information in these fields (immediately). Note: Only devices which share the same network name are displayed in this table. PLA-401 v3 User's Guide 37 Chapter 5 The Configuration Utility Table 4 Configuration Screen (continued) LABEL Site DESCRIPTION This field displays Local, if it is identifying the powerline adapter directly connected to the computer running the configuration utility. Remote, if it is a powerline adapter in your powerline network but not directly connected to the computer running the configuration utility. MAC Address This is a read-only field which shows the MAC address of the powerline adapter you are configuring. @@DAK (Device Access Key) password is used to verify that you are authorized to perform changes on a remote device. You can find the DAK password printed on a sticker on the bottom of your PLA-401 v3. Select the remote powerline adapter you want to manage by clicking the MAC address which corresponds to it in the MAC Address column. Enter the DAK Password value and click Save. DAK Password Note: You must enter the DAK Password value exactly as it is printed on the label (all caps and with dashes "-").

Network Name The default network name (sometimes called a network password or network membership key (NMK)) of the PLA-401 v3 is "HomePlugAV". HomePlug compatible devices use the same network name to recognize and communicate with each other over the powerline network. If you change the network name of one device on the network, it will no longer be recognized as part of that network. If you change the network name, make sure you change the network name for all of the powerline adapters that you want to be part of your powerline network. The network name can be from 8 to 64 characters in length, using "A"~"Z", "a"~"z", "0"~"9"; spaces are not allowed.

Set NMK to this device Set NMK to all devices Save Select this to apply the NMK (entered in the field above) as the network name for the powerline adapter directly connected to the computer running the configuration utility. Select this to apply the NMK (entered in the field above) as the network name for all powerline adapter detected by the utility. Click this to apply your changes. The new Network Name is applied to the selected powerline adapter. Note: You must enter the correct DAK password for the selected powerline adapter before you can make changes to it.

5.4 Firmware Screen Use the Firmware screen to update the firmware on the PLA-401 v3 directly connected to the computer running the configuration utility.

38 PLA-401 v3 User's Guide Chapter 5 The Configuration Utility Firmware is the software which is embedded in the PLA-401 v3. This software contains processing instructions for how the PLA-401 v3 sends and receives information in a secure way. Parameter Information Block (PIB) is similar to firmware. It contains the most basic operating instructions for the PLA-401 v3 such as how to power up and how to load the firmware. You can check the ZyXEL website for firmware upgrades for your PLA-401 v3. Note: To upgrade to the latest firmware, use the firmware upgrade tool available from the ZyXEL website (www.zyxel.com), or from the CD included with your PLA401 v3.

Make sure you also upgrade the PLA-4xx Series Configuration Utility if you do so, as older version utilities are not compatible with PLA-401 v3s using the latest firmware. Note: Be sure to upload the correct model firmware as uploading the wrong model firmware may damage your device. Figure 16 Firmware Screen PLA-401 v3 User's Guide 39 Chapter 5 The Configuration Utility 5.5 Network Info Screen Use the Network Info screen to see the rates at which a specific PLA-401 v3 is communicating with other powerline adapters on your powerline network. Figure 17 Network Info Screen The following table describes the labels in this screen. Table 5 Network Info Screen LABEL Adapter DESCRIPTION This field identifies which powerline network information is displayed.



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Different powerline networks are identified by the Ethernet interface (network card) connected directly to the PLA-401 v3. Typically there is only one connection, however, if your computer has two network cards and both are connected to a PLA-401 v3, then you have two powerline networks. The Central Coordinator of the powerline network is the powerline adapter which keeps track of which devices are part of the network as well as synchronizes communication within the powerline network. If the Central Coordinator is removed from the powerline network then another powerline adapter takes its place.

This field displays the MAC address of the PLA-401 v3 which is the Central Coordinator of the powerline network. The powerline adapters in your powerline network automatically select the Central Coordinator. Central Coordinator MAC 40 PLA-401 v3 User's Guide Chapter 5 The Configuration Utility Table 5 Network Info Screen (continued) LABEL DESCRIPTION The information provided in the following table reflects transmission rate information about the powerline adapters which communicate in your powerline network. The powerline adapters listed in this table are all the powerline adapters in your powerline network except the powerline adapter selected in the Configuration page of the configuration utility. In other words, if the Local powerline adapter is selected in the Configuration screen, then this table will display the rates of transmission from the powerline adapter connected to the computer running the configuration utility to all the Remote powerline adapters.

Site This field displays: · · MAC Address Local, if it is the PLA-401 v3 directly connected to the computer running the configuration utility. Remote, if it is a PLA-401 v3 in your powerline network but not directly connected to the computer running the configuration utility. This field displays the MAC address of your powerline adapter. The MAC address of your powerline adapter can be found by looking at the label on your device. It consists of six pairs of hexadecimal characters (hexadecimal characters are "0-9" and "a-f").

In the case of the PLA-401 v3, this label is on the bottom of the device. This field displays how fast information is sent from the powerline adapter selected in the Configuration screen to this powerline adapter. The rate is given in the following format: "application data transmission rate / raw data transmission rate". Application data reflects more accurately how fast devices are transmitting application relevant traffic (for example Internet Protocol (IP) traffic). Raw data refers to the whole payload of the packets transmitted across the powerline network. This field displays how fast information is received from the powerline adapter selected in the Configuration screen to this powerline adapter. The rate is given in the following format: "application data transmission rate / raw data transmission rate". Application data reflects more accurately how fast devices are transmitting application relevant traffic (for example Internet Protocol (IP) traffic). Raw data refers to the whole payload of the packets transmitted across the powerline network. Transmit Rate (Mbps) Receive Rate (Mbps) 5.

6 Advanced Screen Note: This feature is only available with the latest version utility. Go to the ZyXEL website to download the latest utility and firmware for your ZyXEL HomePlug AV adapter. You can configure the powerline adapters on your network to give priority to network traffic depending on its importance. When you set the priority of a powerline adapter, you set how quickly messages FROM your powerline adapter are sent in your powerline network. Transmissions TO your powerline adapter do not receive any priority. PLA-401 v3 User's Guide 41 Chapter 5 The Configuration Utility For example, if you have a file server on your home network to deliver music and movie files to computers in your home, you should set the priority of the powerline adapter connected to this server to Medium. If video traffic is delivered too slowly, quality problems may occur. @@@@The powerline adapter attached to it should have a medium setting. @@@@· Device D is a modem attached to the Internet. @@@@Typically there is only one connection.

@@@@@@@@Click this to apply your changes. @@@@@@@@@All HomePlug AV compliant powerline adapters within range can join your network. The range varies depending on the quality of your home's wiring. In the case of coaxial cable this can extend beyond the boundary of your home such as your neighbor's house or apartment for example . Use the Mac utility to configure the following tasks: · Change Network Name (NMK) · Change Nickname · QoS Settings · Set HomePlug Light Color · Link Information · Download Firmware 6.

1.1 System Requirements These are the OS X utility system requirements at the time of writing. · Supported Models: PLA-401 v3 · Supported Mac operating systems: Mac OS X 10.3, Mac OS X 10.4, Mac OS X 10.

5 · Supported Languages: English, German, French, Spanish, Italian, Russian, Traditional Chinese, Dutch PLA-401 v3 User's Guide 47 Chapter 6 The OS X Configuration Utility 6.1.2 Start the Configuration Utility Drag the utility application from the CD (or download it from the ZyXEL download library) to the Applications folder on your computer. Double-click it to open it. Figure 21 Utility Main Screen 6.1.3 Add a Device To add a device, click Add a Device in the configuration utility main screen. 6.1.4 Change Network Name The network name or Network Membership Key (NMK) is a password that identifies a powerline network.

All powerline devices with the same NMK are in the same powerline network. The default network name of the PLA-401 v3 is HomePlugAV. HomePlug compatible devices use the same network name to recognize and communicate with each other over the powerline network. If you change the network name of one device on the network, it will no longer be recognized as part of that network. If you change the network name, make sure you change the network name for all of the powerline adapters that you want to be part of your powerline network. 48 PLA-401 v3 User's Guide Chapter 6 The OS X Configuration Utility To enter the NMK for a powerline adapter, select the device icon in the left panel of the main utility screen and then click Change Network Name (NMK) in the main utility screen. Figure 22 Change Network Name (NMK) Table 9 Change Network Name (NMK) LABEL Network Name DESCRIPTION The network name may consist of 8 to 64 letters, numerals and any printable character found on a typical English language keyboard. Spaces are not allowed. Click this button to display a screen showing other powerline devices that are already in the same powerline network as the selected powerline adapter. Click OK to change their NMKs to the Network Name you entered here.



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Click Cancel to not change them and return to the previous screen. All authenticated devices This device only Cancel Click this button to just update the NMK on the selected powerline adapter. Click this button to close this window without saving any changes. 6.1.

5 Change Nickname You can give each device in your powerline network a 'friendly name' in order to easily distinguish them in your powerline network. The name may consist of up to 64 letters, numerals and any printable character found on a typical English language keyboard. Type a nickname, for example, 'bedroom', and then click OK. Figure 23 Change Nickname) 6.1.

6 QoS Settings You can configure the powerline adapters on your network to give priority to data they transmit. PLA-401 v3 User's Guide 49 Chapter 6 The OS X Configuration Utility The following table shows some example priority settings based on application type. Table 10 Priority Settings PRIORITY LEVEL Highest High Mid Low APPLICATION Voice Application Video and Audio Applications Data Applications Data Applications Figure 24 QoS Settings Table

11 QoS Settings LABEL IP Port Priority Rule Name DESCRIPTION You can configure up to eight rules defining priority for traffic transmitted from the selected powerline device. Type a rule name. The name may consist of up to 31 letters, numerals and any printable character found on a typical English language keyboard. Spaces are not allowed. Select the type of traffic to which this rule applies. You may select one of the following: FTP HTTP E-Mail Telnet User-Defined Port # If you select User-Defined then enter the port number that defines that traffic type, such as 1823 for MSN traffic. See the common services appendix for port numbers of other traffic types. After you select the traffic type, select the priority level (Highest, High, Mid, Low) assigned to this traffic.

Click Add to save the rule to the list in this screen. If you want to delete an existing rule, select it in the text box and then click Delete. Rule Name This field displays the name of a previously created priority rule. 50 PLA-401 v3 User's Guide Chapter 6 The OS X Configuration Utility Table 11 QoS Settings (continued) LABEL Port # Priority OK Cancel DESCRIPTION This field displays the port number for the type of traffic to which this rule applies. This field displays the priority level that this traffic receives. Click this button to save the settings to the device. Click this button to close this window without saving any changes. 6.1.7 Set HomePlug Light Color Use this screen to define which color the HomePlug light shines at various speeds.

For example, configure the light to shine red when the speed is slow enough to warrant your attention, amber for 'near slow' speeds and green for acceptable powerline speeds for your network. The Maximum Possible Speed is the best speed that can be attained on your electrical circuit. It varies depending on the electrical wiring, insulation, distance between devices, and electromagnetic interference from adjacent wiring or other electrical devices on your network. In the default screen shown in Figure 25 on page 51, the maximum possible speed is 150 Mbps. If the speed falls below 10 Mbps, the light will shine red.

It will shine amber for speeds between 10 and 40 Mbps and green for speeds above 40 Mbps. Figure 25 Set HomePlug Light Color Use the slider to define the light behaviour or type a range in the text boxes for when the light should shine amber. For example, if the maximum possible speed in your network is 100 Mbps and you feel that speeds below 15 Mbps are abnormally slow, and speeds above 50 Mbps are good, then enter '15' in the first text box and '50' in the second. The maximum possible speed, 100 Mbps in our example, is detected automatically by the device; you do not enter it. If the HomePlug light displays red, indicating that the powerline speed is abnormally slow, try unplugging electrical devices such as lamps, phone chargers, hair dryers, drills and vacuum cleaners from the electrical circuit where your powerline adapters are connected.

PLA-401 v3 User's Guide 51 Chapter 6 The OS X Configuration Utility 6.1.8 Link Information Use the Link Info screen to find out more information on the connection between two powerline adapters on your powerline network. The link information screen shows the MAC addresses of connected powerline adapters and statistics on the links. Figure 26 Link Information Table 12 Link Information LABEL Link Characteristics Source Address This is the MAC address of the local powerline adapter. The local powerline adapter is the one connected directly to your computer. A MAC address is a number that uniquely identifies a device in a network. This is the MAC address of a remote powerline adapter. A remote powerline adapter is in the same powerline network as the local powerline adapter but is not connected directly to your computer. Click this button to show detailed link information between the local and remote power adapters.

. In powerline networks data is sent in physical blocks (PB). This field shows the average percentage of errors in the physical blocks received by the destination device from your source device before the errors are corrected using FEC (Forward Error Correction). Forward Error Correction (FEC) is a system where the sender adds redundant data to its transmissions. It allows the receiver to correct errors without the need of asking the sender to resend the data. A high error rate may not necessarily result in a poor connection as PBs with errors are discarded and the powerline device adjusts the signal to a frequency level where fewer errors occur. DESCRIPTION Destination Address Show Statistics Statistics Avg. Pre-FEC Bit Error Rate 52 PLA-401 v3 User's Guide Chapter 6 The OS X Configuration Utility Table 12 Link Information (continued) LABEL Avg. Source PB CRC Error Rate DESCRIPTION This field displays the average CRC (Cyclic Redundancy Check) error rate of transmission from the source device (as shown in the screen) received by destination powerline device. A Cyclic Redundancy Check (CRC) is used as a checksum to detect alteration of data during transmission.

The CRC error check is performed after Forward Error Correction. If the error rate after FEC error correction is still high, then this indicates a lot of noise at all frequencies on this section of your powerline. Data transmission rates are reduced if there is a lot of noise on the line. Avg. Destination PB CRC Error Rate A Cyclic Redundancy Check (CRC) is used as a checksum to detect alteration of data during transmission.

This field displays the average CRC (Cyclic Redundancy Check) error rate of transmission from the destination powerline device to the source device (as shown in the screen). The CRC error check is performed after Forward Error Correction.



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If the error rate after FEC error correction is still high, then this indicates a lot of noise at all frequencies on this section of your powerline. Data transmission rates are reduced if there is a lot of noise on the line. Avg.

Bits/Carrier This field displays the average number of bits transferred over the connection measured in Mbps. This represents the physical rate of data transmission (the PHY rate) which includes not only the files sent on your powerline, but also line overhead required to manage your network, such as error correction bits. The PHY rate is the clearest indicator of the quality of your line. . . . If the PHY rate is close to the HomePlug AV maximum data transfer rate, then the quality of this section of the line is very high, with very little attenuation. If the PHY rate varies between the maximum level and a lower level (such as 60 Mbps), there is noise on this section of your powerline. Attenuation is not a factor. If the PHY rate is steady at a lower level (such as 80 Mbps), this is caused by attenuation and not noise on this section of your powerline. Avg. **SNR/Carrier** This field displays the average Signal to Noise Ratio (SNR) measured in dB. Use this to check the amount of noise on this part of your powerline network.

The higher the number the better the connection quality. Noise on your powerline is usually caused by household appliances running on your powerline. The motor of a refrigerator can create electrical interference. A cell/mobile phone recharger which rapidly alternates between on and off can also generate noise. Poor cable quality and installation can also cause noise. To identify causes of noise on your network, disconnect an appliance connected on this part of your powerline network and observe whether this reduces the Signal-to-Noise ratio. PLA-401 v3 User's Guide 53 Chapter 6 The OS X Configuration Utility Table 12 Link Information (continued) LABEL Avg. Attenuation/ Carrier DESCRIPTION This field displays the average attenuation measured in dB. Attenuation is the reduction in strength of a signal as it travels over a transmission line. Use this field to check the reduction in the strength of the signal between two devices.

Attenuation may vary considerably across a powerline network as line conditions also vary. A typical level of attenuation may be 40 dB, but may reach over 70 dB, depending on line quality and distance. A main cause of attenuation is the power requirements of appliances on your electrical circuit. Powerline traffic near an appliance such as a refrigerator may be affected by attenuation more than on other sections of your powerline. Avg.

Output Power/ Carrier This field shows the average power produced by the source device. Power levels should be constant and limited by the output power standard of your country. Unusually high output power levels may damage your device. Click this button to reset all counters in this screen to zero. Click this button to close this window.

Clear Statistics Close 6.1.9 Download Firmware Use this screen to go to the ZyXEL download library from where you can download firmware to your computer. Figure 27 Download Firmware 6.2 Firmware Detection Tool Use the Firmware Detection Tool to detect the firmware version of the powerline devices on your network. All powerline devices of the same type should 54 PLA-401 v3 User's Guide Chapter 6 The OS X Configuration Utility use the same firmware version. Use the Firmware Upgrade Tool to upload new firmware. You cannot run the Firmware Detection Tool, the Firmware Upgrade Tool or the Configuration Utility at the same time, as only one of these applications can access the PLA-401 v3 connected to your computer at any time. Figure 28 Firmware Detection Tool Table 13 Firmware Detection Tool LABEL Site DESCRIPTION This field shows Local, if it is identifying the powerline adapter directly connected to the computer running the configuration utility and Remote, if it is a powerline adapter in your powerline network but not directly connected to the computer running the configuration utility. This shows the MAC address of the powerline adapter.

@@ This field displays the version number of the powerline device. In the example firmware version given in the screen, 3-0-3052, the numbers 305 represent firmware version 3.0.5. This field displays the manufacturer of the powerline device. You can upgrade your device if this field displays ZyXEL. If Other displays then you cannot use the Firmware Upgrade Tool. Click this button to display the firmware versions of local and remote devices in the same powerline network. Click this button to close this screen. MAC Address Firmware Version Manufacturer Detect Finish PLA-401 v3 User's Guide 55 Chapter 6 The OS X Configuration Utility 6.

3 Firmware Upgrade Tool Use the firmware upgrade tool to upgrade firmware to the powerline device directly connected to your computer. To upgrade to the latest firmware, use the firmware upgrade tool on the CD included with your PLA-401 v3. Make sure you also use the latest PLA-4xx Series Configuration Utility; older utilities may not be compatible with PLA-401 v3s using the latest firmware. 6.3.

1 Notes on Upgrading Firmware · If the firmware version of devices in your powerline network is greater than 3.0.5, then you may only need to upgrade the utility; otherwise you must upgrade both the utility and the firmware! · Be sure to upload the correct model firmware as uploading the wrong model firmware may damage your device. · The firmware is included in the upgrade tool. You do not need to download the firmware separately.

· After you upgrade firmware, all settings that you configured in the utility revert to their factory defaults. Before upgrading, write down your current settings. After you upgrade the firmware, you need to reconfigure your device using the utility. · Your device automatically reboots after you upload the firmware. · You cannot downgrade firmware to an older version firmware. 6.3.2 Procedure to Upgrade Firmware 1 2 Connect the powerline device to be upgraded to your computer. Close the Configuration Utility and Firmware Detection Tool if either of them are open. 56 PLA-401 v3 User's Guide Chapter 6 The OS X Configuration Utility 3 Open the Firmware Upgrade Tool application.

Click Next to begin the firmware upgrade process. Figure 29 Firmware Upgrade Tool: Start 4 If you already have the latest version firmware, you'll see a warning screen. Click No unless you want to re-upload the firmware. Figure 30 Firmware Upgrade Tool: Start PLA-401 v3 User's Guide 57 Chapter 6 The OS X Configuration Utility 5 Select the region where your powerline network is located in the following screen. Make sure you upload the correct firmware for your region as different regions have different firmware characteristics. Figure 31 Firmware Upgrade Tool: Start 6 The firmware upgrade may take several minutes.



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Do not click anything or reboot the device while firmware upgrade is in progress. Figure 32 Firmware Upgrade Tool: Upgrading 58 PLA-401 v3 User's Guide Chapter 6 The OS X Configuration Utility 7 If your firmware is successfully upgraded, a successful screen appears. Click OK, then Finish to close the application. Your device automatically restarts.

Figure 33 Firmware Upgrade Tool: Finish 8 To check if your firmware is successfully upgraded, run the Firmware Detection Utility again and check your firmware version. Repeat this upgrade process for each powerline device you need to upgrade. 9 PLA-401 v3 User's Guide 59 Chapter 6 The OS X Configuration Utility 60 PLA-401 v3 User's Guide CHAPTER 7.0.1 Overview Use this tutorial to expand your existing powerline network.

7 Powerline Network Setup Tutorial After setting up your first home powerline network (instructions for that are in the Quick Start Guide for your ZyXEL powerline adapter) you may want to extend the network or create a new one by adding additional powerline adapters. This tutorial shows you the following.

How to start up your new powerline adapter. You need to do this before you can begin the next sections. · How to make your existing powerline network bigger by adding new powerline adapters. · How to make a new network separate from your existing network with new powerline adapters. · How to make a new, separate powerline network with the powerline adapters you have. The tutorial uses the PLA-4xx Series Configuration Utility to set up your powerline adapter. If you haven't already installed the utility, see Chapter 2 on page 21 for instructions. If you do not have the CD with the utility, the utility software is also available for download at www.zyxel.com. Navigate to the powerline products section of the ZyXEL website to find this software. Follow the instructions provided by the software to install it on your computer. See the product specifications in the User's Guide for a list of hardware and software compatible with the utility.

Note: The PLA-401 v3 in this tutorial is an example only. Your powerline adapter may be different. PLA-401 v3 User's Guide 61 Chapter 7 Powerline Network Setup Tutorial 7.0.2 Important Terms Network Name The network name allows a powerline adapter to connect with other powerline adapters that have the same network name. It provides security for your powerline network. The network name uses English letters or numbers, from 8 to 64 characters long, with no spaces allowed. DAK = Device Access Key. The DAK Password lets you access the powerline adapter. You can find the DAK Password on a label on your powerline device.

DAK Password 7.0.3 Accessing Your Powerline Adapter 1 Plug the powerline adapter you want to add to your network into a power socket and, if needed, switch the power socket on. Figure 34 Plug Your Powerline Adapter into a Power Socket 1 2 3 Connect the powerline adapter to your computer. Use a LAN or Ethernet cable (shown below) to connect the LAN or Ethernet port on your adapter to the same kind of port on your computer.

Figure 35 Connect Your Powerline Adapter to a Computer 3 2 62 PLA-401 v3 User's Guide Chapter 7 Powerline Network Setup Tutorial 4 Open the PLA-4xx Series Configuration Utility on your computer. Go to Start > (All) Programs > ZyXEL PLA-4xx Series Configuration > PLA-4xx Series Configuration Utility, or click on the icon on your desktop shown below. Figure 36 Click on the PLA-4xx Series Configuration Utility Icon 5 You are now ready to extend your powerline network or set up a second network. · See Section 7.0.

4 on page 63 to add a new powerline adapter to your network. · See Section 7.0.5 on page 65 to set up a second network with your new adapters. · See Section 7.0.6 on page 67 to set up a second network with your existing adapters. 7.0.4 Adding a Powerline Adapter This section shows you how to add a new powerline adapter to expand your existing network.

The figure below shows the family computer with Internet access on a powerline network. Expand the network by adding a new powerline adapter connected to a printer. Figure 37 Add a Printer to Your Powerline Network Note: You do not need to know the network name of the new adapter to add it to your network. PLA-401 v3 User's Guide 63 Chapter 7 Powerline Network Setup Tutorial 1 Connect your computer to the powerline adapter you want to add to your network and open the PLA-4xx Series Configuration Utility (see Section 7.0.3 on page 62). The utility should open to the configuration tab. On this screen in the Site column your new powerline adapter should appear as Local (A). Check the Local adapter's MAC address (B). It should match the MAC address listed on the label on the back of your powerline adapter.

2 Figure 38 Adding a New Adapter A B 3 Select your adapter by selecting Local and type the network name for your existing network in the Network Name field (C). Figure 39 Adding an Adapter to an Existing Network C 64 PLA-401 v3 User's Guide Chapter 7 Powerline Network Setup Tutorial 4 Click Save and click OK on the pop-up. Figure 40 Network Name Pop-up 5 Your new adapter will now have the same Network Name as your existing network and so has now joined your existing network. Connect the adapter to the device you want to add to the network, for example, your Internet refrigerator in the kitchen.

Plug the adapter's power cord into a power outlet and, if required, switch the power outlet on.

Repeat this procedure for all additional powerline adapters that you want to add to your existing or new powerline network. 6 7 8 7.0.5 Setting Up a New Network with a New Adapter This section shows you how to use your new powerline adapters to set up a new powerline network separate to your existing network. The figure below shows two powerline networks in a house.

The first network (1) shows the home computer connected to a printer and access to the Internet. The second network (2) has no Internet access but with a media adapter such as the PLA-401 v3 User's Guide 65 Chapter 7 Powerline Network Setup Tutorial ZyXEL DMA-1100P you can use your TV to watch movies and play games which are stored on a computer. Figure 41 Add New Adapters to Make a Second Network 1 Connect your new powerline adapter and open the configuration utility as shown in Section 7.0.5 on page 65. The screen shown below appears. 66 PLA-401 v3 User's Guide Chapter 7 Powerline Network Setup Tutorial 2 Type a Network Name that is different from the Network Name for your existing network. Make sure you use the same new Network Name for all new adapters you want to add to your new network. Figure 42 Making a New Network with the New Adapter 3 After you have set up a new network, you are ready to connect each powerline adapter on your new network to devices, for example, a computer or a games console.



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