Netgear prosafe gs110tp user manual

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The serial number is already registered to you. Your is already registered! This serial number is already registered to another customer. Please email the NETGEAR Customer Service team at customer.service@netgear.com for further assistance. You can find more information in your MyNETGEAR account to view warranty information, open support cases, and participate in the NETGEAR community. Appendix A Troubleshooting 23 Additional Troubleshooting Suggestions 24 ProSafe® 8 Port Gigabit PoE Smart Switch™ with 2 fiber SFP GS110TPSart HereFollow these instructions to set up your smart switch. Before proceeding with the smart switch installation, familiarize yourself with the contents of the Resource CD, especially the reference manual, which contains support information, and the installation guide. To begin installation: Power on• 48V/1.25A power adapter• Wall-mount kit• Installation Guide• Smart Switch Resource CD that includes the NETGEAR Device Manager Utility (Smart Control Center) and GS110TP Hardware Installation Guide. (A link to the online GS110TP Software Administration User's Manual is on the Resource CD.)• Warranty/Support Information Card.Then, Prepare to Install Your Smart SwitchPrepare a PC with an Ethernet adapter and a CD ROM drive.Next, Install the NETGEAR Device Manager Utility (Smart Control Center) on a PC1. Insert the Resource CD into your computer's CD drive.2. Run the Setup program to install the Smart Control Center Utility. The Installation Wizard will guide you through the installation.Next, Connect Your Smart Switch in the Correct OrderThese instructions assume you are using DHCP in your network. If you are using static IP addresses before connecting it to your network, configure the switch IP address before connecting it to your network. In the absence of a DHCP server, the switch will default to 192.168.0.239 for its IP address.To configure the switch before connecting it to your network:1. Set up the PC with a static IP address in the 192.168.0.x subnet, and connect the PC to the switch. Then, use the Smart Control Center utility to configure the switch.2. Connect each PC to an RJ-45 network port on the switch front panel.Use category 5 (Cat5) unshielded twisted-pair (UTP) cable terminated with an RJ-45 connector to make these connections.Servers Computers PrintersSmart Switch GS110TP Link/Act 10PLink/Act 10FLink/Act 10PLink/Act PoELink/Act PoEReserved Link at 1000MYellow = Link at 1000MGreen = Link at 100M10MBlink = ACTPoE ModeGreen = PoE PoweredYellow = PoE FaultS. Connect the switch to your network.4. Power on the switch.5. Verify that the PC with the Smart Control Center utility is on the same subnet as the switch. Now, Configure the Switch with the NETGEAR Device Manager Utility (Smart Control Center) 1. Double-click the Smart Control Center icon on your desktop or in Windows Start (Smart Control Center) on your utility and view this screen.2. Click Discover to find your switch in the network.GS110TP_IG_8Feb10.fm Page 1 Tuesday, February 9, 2010 7:15 PMPage 2This symbol was placed in accordance with the European Union Directive 2002/96 on the Waste Electrical and Electronic Equipment (the WEEE Directive). If disposed of within the European Union, this product should be treated and recycled in accordance with the laws of your jurisdiction implementing the WEEE Directive.© 2010 by NETGEAR, Inc. All rights reserved. NETGEAR and the NETGEAR logo are registered trademarks of NETGEAR, Inc. in the United States and/or other countries. Other brand and product names are trademarks or registered trademarks of their respective holders. Information is subject to change without notice. February 2010The Smart Control Center utility finds the switch and displays its MAC Address, IP Address, and model number. If you cannot configure your switch, verify that the cable connections are secure, that the IP address configuration of the PC is in the same subnet as the switch, and click the Discover button.3. Click to select the line displaying the details of your switch. If there are multiple switches in your network, be sure to select the one you want to configure.4. Click Web Browser Access to view the switch log in screen.5. Enter the default password of password in lower case letters and click Login. The switch will display the switch settings main page. Configure the switch for your network. Consult the Reference Manual on the Resource CD or the online help in the switch for assistance with configuration procedures.After you log in to the switch, the main Web Access menu displays.Use the configuration menu options to configure your switch.TroubleshootingTipsHere are some tips for correcting simple problems you may have.Turn on the computer and switch in the correct sequence. Follow this sequence: Turn off the switch and computer. First, turn on the switch and wait two minutes. Next, turn on the computer. Make sure the Ethernet cables are securely plugged in. For each powered on computer connected to the switch with a securely plugged in Ethernet cable, the corresponding Smart Switch port status light will be lit. Make sure the network settings of the computer are correct. In most cases, computers should be configured to obtain an IP address automatically via DHCP. For help with this, refer to the GS110TP Software Administration Manual; a link to the online Reference Manual is on the Resource CD.If your network uses static IP addresses, be sure the switch and computer are configured with valid IP addresses.Technical SupportThank you for selecting NETGEAR products. After completing the ProSafe® GS110TP Smart Switch Software setup, locate the serial number on the bottom label of your product, and use it to register your product at . Registration is required before you can use our telephone support service. Registration via our website is strongly recommended.Go to for product updates and Web support. For Warranty and Regional Customer Support information, see the Resource CD that came with your product.GS110TP_IG_8Feb10.fm Page 2 Tuesday, February 9, 2010 7:15 PM Page 1 GS108T and GS110TP Smart Switch Software Administration Manual WARNING! When you change the GS108T and GS110TP Smart Switches . 3 Switch Management Interface ...10 Connecting the Switch to the Network. Page 4 GS108T and GS110TP Smart Switch Software Administration Manual Registering Your Product ...64 Local Information . Page 5 GS108T and GS110TP Smart Switch Software Administration Manual Chapter 4 Configuring Quality of Service Class of Service ...126 Basic CoS Configuration . Page 6 GS108T and GS110TP Smart Switch Software Administration Manual ...184 MAC Binding Table. Page 7 GS108T and GS110TP Smart Switch Software Administration Manual Appendix A Hardware Specifications and Default Values GS108T and GS110TP Gigabit Smart Switches Specifications..238 GS108 Specifications.......238 GS110 Specifications .....238 GS110 Specifications . Getting Started® The NETGEAR GS108T and GS110TP Smart Switch Software Administration Manual describes how to configure and operate the GS108T and GS110TP Gigabit Smart Switches by using the Web-based graphical user interface (GUI). This manual describes the configuration procedures and explains the options available within those procedures. Getting Started with the GS108T and GS110TP Gigabit Smart Switches This chapter provides an overview of starting your NETGEAR Gigabit Smart Switches and accessing the user interface. It also leads you through the steps to use the Smart Control Center utility. In addition to enabling NETGEAR switch discovery, the Smart Control Center provides several utilities to help you maintain the NETGEAR switches on your network, such as password management, firmware upgrade, and configuration file backup. For more information, see on page 18. GS108T and GS110TP Smart Switch Software Administration Manual Connecting the Switch to the Network To enable remote management of the switch through a Web browser or SNMP, you must connect the switch to the network and configure it with network information (an IP address, subnet mask, and default gateway). GS108T and GS110TP Smart Switch Software Administration Manual Switch Discovery in a Network with a DHCP Server This sections describes how to set up your switch in a network that has a DHCP server. If your network has a DHCP server, the DHCP client on the switch is enabled by default. When you connect it to your network, the DHCP server will automatically assign an IP address to your switch. Page 1 GS108T and GS110TP Smart Switch Software Administration Manual Switch Discovery in a Network without a DHCP Server This section describes how to use the Smart Control Center to set up your switch in a network without a DHCP server. If your network does not have a DHCP server, you must enter a static IP address to your switch. GS108T and GS110TP Smart Switch Software Administration Manual You must enter the current password every time you use the Smart Tip: Control Center to update the switch settings. The default password is password. Please ensure that your PC and the switch are in the same subnet. Make a note of these settings for later use. Page 16 GS108T and GS110TP Smart Switch Software Administration Manual Web Access To access the GS108T or GS110TP management interface, use one of the following methods: From the Smart Control Center, select the switch and click Web Browser Access. • Open a Web browser and enter the IP address of the switch in the address field. •.. GS108T and GS110TP Smart Switch Software Administration Manual Smart Control Center (Smart Control Center includes several maintenance features. This section describes the following Smart Control Center utilities: on page 18 •.. GS108T and GS110TP Smart Switch Software Administration Manual Changing the Switch Password Select the switch. Click Change Password. Additional fields appear on the screen. Type the switch password in the Current Password field. The default password for the switch is password. Type the new password in the New Password and Confirm Password fields. Page 20 GS108T and GS110TP Smart Switch Software Administration Manual Click OK. Enter the switch password and click Apply. The file is uploaded to the administrative computer as a *.cfg file. You can open it and view the contents with a text editor. To restore the configuration to a previously saved version. Click the Maintenance tab and select the device with the configuration to restore. GS108T and GS110TP Smart Switch Software Administration Manual Firmware Upgrade The application software for the GS108T and GS110TP Smart Switches is upgradeable, enabling your switch to take advantage of improvements and additional features as they become available. The upgrade procedure and the required equipment are described in this section. Secondary Storage option. To prevent the switch from using the downloaded firmware as the active image, make sure the Run this FW after download option is. NETGEAR recommends that you download the same image as the Note: primary and secondary image for redundancy. Page 23 GS108T and GS110TP Smart Switch Software Administration Manual The following list describes the command buttons that are specific to the Tasks page: Delete Task—Remove a completed or scheduled task from the list. • Reschedule—Change the scheduled date and time for a pending firmware upgrade or •.. GS108T and GS110TP Smart Switch Software Administration Manual Understanding the User Interfaces The switch software includes a set of comprehensive management functions for configuring and monitoring the system by using one of the following methods: Web user interface • Simple Network Management Protocol (SNMP) •.. Page 25 GS108T and GS110TP Smart Switch Software Administration Manual Navigation Tab Feature Links Help Page Page Menu Configuration Status and Options Figure 3. Administrative Page Layout Navigation Tabs, Feature Links, and Page Menu The navigation tabs along the top of the Web interface give you quick access to the various switch functions. GS108T and GS110TP Smart Switch Software Administration Manual Page Link Configuration Pages Figure 4. Menu Hierarchy Configuration and Monitoring Options The area directly under the feature links and to the right of the page menu displays the configuration information or status for the page you select. On pages that contain configuration options, you can input information into fields or select options from drop-down menus. Page 27 GS108T and GS110TP Smart Switch Software Administration Manual The following figure shows the Device View of the GS108T. The following figure shows the Device View of the GS110TP. Click the port you want to view or configure to see a menu that displays statistics and configuration options. Page 28 GS108T and GS110TP Smart Switch Software Administration Manual When a port displays in blue, you click on that specific port, the main menu appears, as the following figure shows. This menu contains the same options as the navigation tabs at the top of the page. GS108T and GS110TP Smart Switch Software Administration Manual Using SNMP The switch software supports the configuration of SNMP groups and users that can manage traps that the SNMP agent generates. switch includes ten standard-default MIBs for standard functionality and private MIBs that support additional switch functionality. GS108T and GS110TP Smart Switch Software Administration Manual The switch default is blank. System Contact Enter the contact person for this switch. You may use up to 31 •.. Page 33 GS108T and GS110TP Smart Switch Software Administration Manual To configure the network information for the management interface: Select the appropriate radio button to determine how to configure the network's management interface: Dynamic IP Address (DHCP). Specifies that the switch must obtain the IP address •.. GS108T and GS110TP Smart Switch Software Administration Manual The switch must obtain the IP address •.. GS108T and GS110TP Smart Switch Software Administration Manual SNMP Version (PVID) of the port to be connected in that management VLAN be the same as the management VLAN ID. The management VLAN has the following requirements: Only one management VLAN can be active at a time. •.. GS108T and GS110TP Smart Switch Software Administration Manual To configure the time by using the CPU clock cycle as the source: From the Clock Source field, select Local. In the following time fields: • T1: Time at which the original request was sent by the client. • T2: Time at which the original request was received by the server. •.. Page 38 GS108T and GS110TP Smart Switch Software Administration Manual To configure the time by using SNTP: In the New Seconds field, enter the CPU's clock cycle. GS108T and GS110TP Smart Switch Software Administration Manual Field Description Last Attempt Status Specifies the status of the last SNTP request or unsolicited message for both unicast and. If message has been received from a server, a status of Other is displayed. Page 40 GS108T and GS110TP Smart Switch Software Administration Manual To configure a new SNTP Server: Enter the appropriate SNTP server information in the available fields: Server Type. Specifies whether the address for the SNTP server is an IP address • (IPv4) or hostname (DNS). Address. Page 41 GS108T and GS110TP Smart Switch Software Administration Manual New SNTP Server Status table displays status information about the SNTP servers configured on your switch. Field Descriptions Address Specifies all existing Server Addresses. If no Server configuration exists, a message saying 'No SNTP servers exists'. GS108T and GS110TP Smart Switch Software Administration Manual Denial of Service Denial of Service refers to the exploitation of a variety of vulnerabilities which would interrupt the ability of a network to transmit packets. You can configure your system to monitor and block specific types of DoS attacks by classifying and blocking specific types of DoS attacks. You can configure your system to monitor and block six types of attacks. SIP=DIP: Source IP address = Destination IP address. Page 43 GS108T and GS110TP Smart Switch Software Administration Manual DoS Configuration The DoS Configuration page allows you to select which types of DoS attacks for the switch to monitor and block. To access the DoS Configuration page, click System Management Denial of Service > DoS Configuration. GS108T and GS110TP Smart Switch Software Administration Manual Field Description First Type SYN and FIN set. Enter the DNS source port number to block with TCP flag SYN and FIN set. TCP Port SYN, URG, and PSH set and TCP sequence number set to 0 or both TCP flags SYN and FIN set. Enter the DNS default domain name to include in DNS queries. When the system is performing a lookup on an unqualified hostname, this field is provided as the domain name (for example, if default domain name is netgear.com and the user enters test, test is changed to test.netgear.com to resolve the name). Page 44 GS108T and GS110TP Smart Switch Software Administration Manual To add a static entry to the local DNS table: Specify the static host name to add. Enter the host name to add. Specify up to 158 characters. Specify the IP addresses. Specify a unique IP associate with the hostname. Click Add. GS108T and GS110TP Smart Switch Software Administration Manual Domain Name Server Entry Configuration On this page to configure Green Ethernet features. Using the Green Ethernet features allows you to reduce power consumption savings. To access this page, click System Management Green Ethernet Power Configuration. Enable or disable the Short Cable Mode. GS108T and GS110TP Smart Switch Software Administration Manual PoE GS110TP Only) Ports gl–g8 on the GS110TP are IEEE802.3af-compliant ports. Each port is capable of delivering up to 15.4W of reliable, uninterrupted power to connected PoE-powered devices (PD). The GS110TP can provide a total of 46W of power to all connected devices. You can configure port priority settings, timers, and power limits to manage the power supplied to the connected PDs and to ensure that the GS110TP power budget is used effectively. GS108T and GS110TP Smart Switch Software Administration Manual To configure PoE trap settings: Select the appropriate radio button to enable or disable SNMP traps. Click Apply to apply the new settings to the system. Click Cancel to cancel the configuration on the screen and reset the data on the screen to the latest value of the switch. Page 50 GS108T and GS110TP Smart Switch Software Administration Manual To configure settings for both physical ports and LAGs, click ALL. Select the check box next to the port or LAG to configure. You can select multiple ports and LAGs to apply the same setting to the selected interfaces. Select the Port State in the heading row to apply the same settings to all interfaces. GS108T and GS110TP Smart Switch Software Administration Manual To configure global timer settings: To add a timer, enter a name in the Timer Schedule Name field, and click Add. To remove a timer, select the check box next to the timer and click Delete. To change the schedule created on the Timer Global Configuration page. Specify the day to turn off power. The time range is from 00:00 to 23:59. Specify the day to turn off power by clicking the calendar icon and selecting the date. GS108T and GS110TP Smart Switch Software Administration Manual To configure SNMP V1/V2 and SNMPv3. From the SNMP link, you can access the following pages: on page 54 • SNMPV1/V2 on page 57 • SNMPV3 on page 58 • Community on page 60 •.. GS108T and GS110TP Smart Switch Software Administration Manual Community SNMP communities: This section describes below, and then click Add. Recipients IP. The address is x.x.x.x format to receive SNMP traps from this device. •.. GS108T and GS110TP Smart Switch Software Administration Manual Trap Flags The pages in the Trap Flags page to enable or disable traps the switch can send to a network administrator. GS108T and GS110TP Smart Switch Software Administration Manual SNMP v3 User Configuration. The SNMPv3 Access Mode is a read-only field that shows the access privileges for the user account. GS108T and GS110TP Smart Switch Software Administration Manual LLDP The IEEE 802.1AB-defined standard, Link Layer Discovery Protocol (LLDP), allows systems on an 802 LAN to advertise major capabilities and physical descriptions. This information is viewed by a network manager to identify system topology and detect bad configurations on the LAN. Page 60 GS108T and GS110TP Smart Switch Software Administration Manual To configure global LLDP settings: Select the interval at which frames are transmitted. The • default is 30 seconds, and the valid range is 1–32768 seconds. Hold Multiplier. GS108T and GS110TP Smart Switch Software Administration Manual LLDP Port Settings Use to specify LLDP parameters that are applied to a specific interface. To display the LLDP Port Settings page, click Switching LLDP Advanced LLDP Port Settings. GS108T and GS110TP Smart Switch Software Administration Manual Optional TLVs). Enable or disable the transmission of optional type-length-value • (TLV) information from the interface. The TLV information includes the system name, system description, system capabilities, and port description. To configure the System Name, see on page 33. Page 63 GS108T and GS110TP Smart Switch Software Administration Manual From the Interface menu, select the interface with the information to view. The following table describes the LLDP-MED network policy information that displays on the screen. Field Description Network Policy Number Specifies the policy number. Application Specifies the media application type associated with this policy, which can be one of the following:... GS108T and GS110TP Smart Switch Software Administration Manual From the Port field, select the port to configure. GS108T and GS110TP Smart Switch Software Administration Manual Local Information The LLDP Local Information page to view the data each port sends out when it advertises information to its partners. From the Port link, you can access the following pages: on page 7 •.. Page 66 GS108T and GS110TP Smart Switch Software Administration Manual LLDP-MED Network Policy Settings MED NetSettings Use this page to enable LLDP-MED mode on an interface and specify the properties. To display this page, click System LLDP Advanced LLDP-MED Port Settings. GS108T and GS110TP Smart Switch Software Administration Manual Field Description MSAP Entry Displays the Media Service Access Point (MSAP) entry number for the remote device. Local Port Displays the interface on the local system that received LLDP information from a remote system. Page 69 GS108T and GS110TP Smart Switch Software Administration Manual Field Description Capabilities Supported Specifies the supported capabilities that were received in MED TLV from the device. Port. GS108T and GS110TP Smart Switch Software Administration Manual The following table describes the information that displays on the screen. Field Description Network Policy Information Specifies the policy number. Application Capabilities Specifies the advertised capabilities associated with this policy, which can be. VLAN ID Specifies the VLAN ID associated with the policy. VLAN Type Specifies whether the VLAN associated with the policy is tagged or untagged. GS108T and GS110TP Smart Switch Software Administration Manual Protocol-based VLANs A protocol-based VLAN groups physical ports together, based on their protocol.. An attack is when an unauthorized DHCP server responds to a DHCP request if requires an option 82 field. Attackers use this option to gain access to the network. Use DHCP snooping configuration to filter and rate-limit traffic from untrusted ports. Any DHCP messages received on a trusted port are forwarded. If a response is received on an untrusted port, the DHCP response packets received on a trusted port are forwarded. Page 74 GS108T and GS110TP Smart Switch Software Administration Manual Chapter 2: Configuring System Information... Configuring System Information Specifies the types of traffic on the Ports tab allow you to view and monitor the physical port information for the ports available on the switch. From the Ports link, you can access the following pages: on page 77 GS108T and GS110TP Smart Switch Software Administration Manual Field Description Port Speed Use the menu to select the port's speed and duplex mode. If you select • Auto, the duplex mode and speed of the switch is Auto. Speed 1000 Mbps) will be advertised. Otherwise, the speed is set for the negotiation. The 100 Mbps will be advertised. GS108T and GS110TP Smart Switch Software Administration Manual LAG Configuration Link Aggregation Groups (LAGs), also known as port-channels (LAGs), which are also known as port-channels. LAGs allow you to combine multiple full-duplex Ethernet links into a single link. which increases fault tolerance and provides load sharing. Page 80 GS108T and GS110TP Smart Switch Software Administration Manual Select the check box next to the LAG to configure. You can select multiple LAGs to apply the same setting to the selected interfaces. Select the check box in the heading row to apply the same settings to all interfaces. GS108T and GS110TP Smart Switch Software Administration Manual LAG Membership Use to configure LAGs. The LAG Membership page to select two or more full-duplex Ethernet links to be aggregated together to form a link aggregation group (LAG), which is also known as a port-channel (LAG). GS108T and GS110TP Smart Switch Software Administration Manual LACP Configuration To configure LACP. From the LACP System Priority field, specify the device's LACP priority value relative to the devices at the other ends of the links on which the device participates in link aggregation. GS108T and GS110TP Smart Switch Software Administration Manual LACP Port Configuration To display the LACP Port Configuration page, click Switching LAG Advanced LACP Port Configuration. To configure LACP port priority settings: Select the check box next to the port to configure. You can select multiple ports to apply the same setting to all selected ports. GS108T and GS110TP Smart Switch Software Administration Manual VLAN Operations One device with both bridging and routing. Like a bridge, a VLAN captures the VLAN ID, and type, and port then click Add. VLAN ID Specifies the Group operation through this page. To configure the VLAN Membership page click Switching VLAN Advanced Membership. GS108T and GS110TP Smart Switch Software Administration Manual Use Group Operations field to select all the ports and configure them. Possible values are: Untag All. Select all the ports on which all frames transmitted from this VLAN will be untagged. •.. Page 85 GS108T and GS110TP Smart Switch Software Administration Manual To configure settings for both physical ports and LAGs, click ALL. Select the check box next to the port or LAG to configure. You can select multiple ports and LAGs to apply the same setting to the selected interfaces. Select the VLAN ID associated with the policy is tagged or untagged. GS108T and GS110TP Smart Switch Software Administration Manual PVID settings on a physical port, click PORTS. To configure PVID settings for a Link Aggregation Group (LAG), click LAGs. To configure PVID settings for both physical ports and LAGs, click ALL. Select the check box next to the port or LAG to configure. GS108T and GS110TP Smart Switch Software Administration Manual Voice VLAN settings for ports that carry traffic from IP phones. The Voice VLAN feature can help ensure the sound quality of an IP phone is safeguarded from deteriorating when the traffic on the port is high. GS108T and GS110TP Smart Switch Software Administration Manual VLAN Port Priority, enter a value from 0 to 7. Click Apply to send the updated configuration to the switch. GS108T and GS110TP Smart Switch Software Administration Manual Field Description VLAN ID OUI (Organizational Unique Identifier) (OUI) identifies the IP phone manufacturer. The switch contains a pre-configured list of well-known IP phone OUIs. SIEMENS • 00:03:6B: CISCO1 • 00:12:43: CISCO2 • 00:0F:E2: 3Com •.. Page 92 GS108T and GS110TP Smart Switch Software Administration Manual To modify information for a newly added OUI list, select the check box next to the OUI prefix, and then make the changes to the OUI prefix or description, and click Apply. GS108T and GS110TP Smart Switch Software Administration Manual Auto-VoIP enable VoIP protocols carrying the following VoIP protocols: Session Initiation Protocol (SIP), Multiple STP, and Rapid STP. GS108T and GS110TP Smart Switch Software Administration Manual The Spanning Tree path between end stations, avoiding and eliminating loops. GS108T and GS110TP Smart Switch Software Administration Manual To display the Spanning Tree State Configuration/Status page, click Switching > STP > Basic STP Configuration. To configure STP settings on the switch: From the Spanning Tree State field, specify whether to enable or disable Spanning Tree operation on the switch. To display the Spanning Tree CST Configuration page, click Switching > STP > Advanced CST Configuration. GS108T and GS110TP Smart Switch Software Administration Manual Spanning Tree CST Configuration page to configure Common Spanning Tree (CST) and Internal Spanning Tree on the switch. To display the Spanning Tree CST Configuration page, click Switching > STP > Advanced CST Configuration. GS108T and GS110TP Smart Switch Software Administration Manual To configure CST settings: To configure CST settings for a Link Aggregation Group (LAG), click LAGs. To configure CST settings for both physical ports and LAGs, click ALL. Select the check box next to the port or LAG to configure. GS108T and GS110TP Smart Switch Software Administration Manual Field Description Port Specifies the amount of time it takes a port to transition from the blocking state to the learning state. Port Path Cost Set the amount of time a port waits before configuration messages. The value is fixed at 2 seconds. Click Cancel to cancel the configuration on the screen and reset the data on the screen to the latest value of the switch. GS108T and GS110TP Smart Switch Software Administration Manual Designated Bridge is the bridge Identifier of the bridge with the Designated Port. It is made up using the bridge priority and base MAC address of the bridge. GS108T and GS110TP Smart Switch Software Administration Manual The following table describes the Rapid STP Status information displayed on the screen. Field Description Port The physical or port channel interfaces associated with VLANs associated with the CST. Role Each MST Bridge Port that is enabled is assigned a Port Role for each spanning tree. The port role will be one of the following values: Root Port, Designated Port, Alternate Port, Backup Port, Master Port, or Disabled Port. Page 103 GS108T and GS110TP Smart Switch Software Administration Manual lowest priority value number (0 through 61440 in increments of 4096. If you specify a priority that is not a multiple of 4096, the priority is automatically set to the next lowest priority for a multiple of 4096. GS108T and GS110TP Smart Switch Software Administration Manual MST Port Configuration The Spanning Tree MST Port Configuration page to configure and display Multiple Spanning Tree (MST) settings on a specific port on the switch. To display the Spanning Tree MST Port Status page, click Switching > STP > Advanced MST Configuration. GS108T and GS110TP Smart Switch Software Administration Manual To configure MST settings for both physical ports and LAGs, click ALL. Select the check box next to the port or LAG to configure. You can select multiple ports and LAGs to apply the same setting to the selected interfaces. Select the check box in the heading row to apply the same settings to all interfaces. GS108T and GS110TP Smart Switch Software Administration Manual Port BPDUs Transmitted Number of STP BPDUs transmitted from the selected port. GS108T and GS110TP Smart Switch Software Administration Manual Multicast Snooping. GS108T and GS110TP Smart Switch Software Administration Manual The following table describes the information associated with the STP Statistics page. Field Description Interface Select a physical or port channel interface to view its statistics. STP BPDUs Received Number of STP BPDUs received at the selected port. STP BPDUs Transmitted Number of STP BPDUs transmitted from the selected port. RSTP BPDUs Received Number of RSTP BPDUs received at the selected port. RSTP BPDUs Transmitted Number of RSTP BPDUs transmitted from the selected port. Page 108 GS108T and GS110TP Smart Switch Software Administration Manual Multicast Multicast IP traffic is traffic that is destined to a host group. To configure the Multicast settings: On the following pages: on page 1 •.. GS108T and GS110TP Smart Switch Software Administration Manual Internet Group Management Protocol (IGMP) Snooping feature allows a network switch to listen in on the IGMP conversation between hosts and routers. GS108T and GS110TP Smart Switch Software Administration Manual To configure IGMP Snooping settings for both physical ports and LAGs, click ALL. Select the check box next to the port or LAG to configure. Page 113 GS108T and GS110TP Smart Switch Software Administration Manual IGMP Snooping Table. Field Description MAC Address A multicast MAC address for which the switch has forwarding and/or filtering information. The format is 6-two-digit hexadecimal numbers that are separated by colons, for example, 01:00:5e:45:67:89. Page 114 GS108T and GS110TP Smart Switch Software Administration Manual When a packet enters the switch, the destination MAC address is combined with the VLAN ID and a search is performed in the Layer 2 Multicast Forwarding Database. If no match is found, then the packet is either flooded to all ports in the VLAN or discarded, depending on the switch configuration. GS108T and GS110TP Smart Switch Software Administration Manual The following table describes the information displayed on the configurable data fields and non-configurable data fields. Configured, Network Configured, and Network Assisted. Interface The list of interfaces that are designated for forwarding (Fwd) or the selected address. Multicast Routing (Rtr) for the selected address. Page 116 GS108T and GS110TP Smart Switch Software Administration Manual MFDB Table Entries Displays the maximum number of entries that the Multicast Forwarding Database table can hold. Most MFDB Entries Since The largest number of entries that have been present in the Multicast Forwarding Database table at any one time. Most Deleted. GS108T and GS110TP Smart Switch Software Administration Manual IGMP Snooping Querier Configuration This page, click Switching... GS108T and GS110TP Smart Switch Software Administration Manual IGMP Snooping Querier VLAN Configuration On this page to configure and display the IGMP Snooping Querier VLAN Status Use this page to view the operational state and other information for IGMP snooping queriers for VLANs on the network. To access this page, click Switching Multicast IGMP Snooping Querier Querier VLAN Status. GS108T and GS110TP Smart Switch Software Administration Manual Forwarding Database The forwarding database maintains a list of MAC addresses after having received a packet from this MAC address. The transparent bridging function uses the forwarding database entries to determine how to forward a received frame. The Address Table contains links to the following pages: on page 54 •.. Page 122 GS108T and GS110TP Smart Switch Software Administration Manual MAC Address from the menu and enter the VLAN ID. You can configure the amount of time to keep a learned MAC address entry in the forwarding database. To access the Static MAC Address Configuration page, click Switching Address Table. GS108T and GS110TP Smart Switch Software Administration Manual To add a static MAC address: From the Interface menu, select the interface. Enter the VLAN ID associated with the MAC address. Enter the MAC address in the MAC Address field, and click Apply. GS108T and GS110TP Smart Switch Software Administration Manual Dynamic Address static entries, which are removed if a switch reset takes place. In addition to the static MAC address entries, the switch also learns dynamic MAC address entries. To display the Dynamic Addresses Configuration page, click Switching Address Table Dynamic Addresses. GS108T and GS110TP Smart Switch Software Administration Manual Chapter 4: Configuring Quality of Service In a typical switch, the most critical element of packet processing is the switching function. GS108T and GS110TP Smart Switch Software Administration Manual Class of Service The Class of Service (CoS) queueing feature lets you directly configure certain aspects of switch queueing. This provides the desired QoS behavior for different types of network traffic when the complexities of DiffServ are not required. The priority of a packet arriving at an interface can be used to determine how the packet is handled. GS108T and GS110TP Smart Switch Software Administration Manual To configure the Global CoS settings: Select the Global radio button to apply the settings to all interfaces. Alternatively, you can select the Interface radio button to apply trust mode settings to individual interfaces. GS108T and GS110TP Smart Switch Software Administration Manual To display the CoS Interface Configuration page, click the QoS CoS tab, and then click the Advanced Service Configuration link. GS108T and GS110TP Smart Switch Software Administration Manual The following fields are configurable to shape the outbound transmission rate in increments of 64 kbps. This value is controlled independently of any per-queue maximum bandwidth configuration. It is effectively a second-level shaping mechanism. GS108T and GS110TP Smart Switch Software Administration Manual To configure the 802.1p priority mapping to class of service. Specify which internal traffic class to map the corresponding 802.1p priority. GS108T and GS110TP Smart Switch Software Administration Manual To display the IP DSCP Mapping Configuration page, click the QoS CoS tab, and then click the Advanced IP DSCP link. GS108T and GS110TP Smart Switch Software Administration Manual DiffServ Standard IP-based networks are designed to provide "best effort" data delivery service. Best effort service implies that the network delivers the data in a timely fashion, although there is no guarantee that it will. GS108T and GS110TP Smart Switch Software Administration Manual To display the DiffServ Configuration page, click the QoS DiffServ tab. GS108T and GS110TP Smart Switch Software Administration Manual Class Configuration The DiffServ Class Configuration page to add a new Diffserv class name, or to rename or delete an existing class. To display the DiffServ Class Configuration page, click QoS DiffServ Advanced Class Configuration. GS108T and GS110TP Smart Switch Software Administration Manual The DiffServ Class Configuration page to define the criteria to associate with a DiffServ class. As packets are received, these DiffServ classes are used to prioritize packets. GS108T and GS110TP Smart Switch Software Administration Manual When you select a value from the Class Type drop-down box, the screen refreshes and a Port ID field appears. Enter a user-defined Port ID by which packets are matched to the rule. IP DSCP. Matches the packet's DSCP value to the class value defined in the class rule. Page 139 GS108T and GS110TP Smart Switch Software Administration Manual Available policy type is is, which indicates the type is specific to inbound traffic. This field is not configurable. To rename an existing policy or add a new member class to an existing policy, select the check box next to the configured class, update the fields, and click Apply. Page 140 GS108T and GS110TP Smart Switch Software Administration Manual Simple Policy. Use this to establish the traffic policing style for the specified • class. The simple form of the policing command uses a single data rate and burst size, resulting in two outcomes: conform and violate. If you select the Simple Policy attribute, you can configure the following fields: Color Mode. GS108T and GS110TP Smart Switch Software Administration Manual Class Configuration To display the DiffServ Policy Attribute Configuration page, click QoS DiffServ Advanced Policy Attribute Configuration. GS108T and GS110TP Smart Switch Software Administration Manual Chapter 5: Configuring Quality of Service ... Managing Device Security The Security Services available from the Security tab to configure management access settings for your port, and server services. GS108T and GS110TP Smart Switch Software Administration Manual Management Security From the Management Security Settings page, you can configure the logon password, the Remote Authentication Dial-In User Service (RADIUS) settings, Terminal Access Controller Access Control System (TACACS+) settings, and Authentication Server information. GS108T and GS110TP Smart Switch Software Administration Manual The Current Server IP Address field is blank if no servers are configured (see RADIUS on page 148). The switch supports up to three configured RADIUS Server Configuration servers. If more than one RADIUS servers are configured, the current server is the server configured as the primary server. Page 149 GS108T and GS110TP Smart Switch Software Administration Manual To add a RADIUS server: To add a RADIUS server, specify the settings the following list describes, and click Add. In the Server Address field, specify the IP address of the RADIUS server to add. •.. Page 150 GS108T and GS110TP Smart Switch Software Administration Manual The following fields describe the RADIUS server accounting configuration. RADIUS Accounting allows you to track usage information such as session time and the amount of data. Page 152 GS108T and GS110TP Smart Switch Software Administration Manual The following describes the RADIUS accounting server statistics available on the page. Field Description Accounting Server IP Address Shows the IP address of the accounting server. To reset the RADIUS accounting server counters to zero, click Clear Counters. GS108T and GS110TP Smart Switch Software Administration Manual Configuring TACACS+ provides a centralized user management system, while still retaining consistency with RADIUS and other authentication processes. TACACS+ provides the following services: Authentication. Provides authentication during login and via user names and •.. Page 154 GS108T and GS110TP Smart Switch Software Administration Manual To add a new TACACS+ server: In the Host IP Address field, enter the IP address of the TACACS+ server, and click Add. You can make changes to the page, click Apply to apply the new settings to the system. TACACS+ Server Configuration page to configure up to five TACACS+ servers with which the switch can communicate. GS108T and GS110TP Smart Switch Software Administration Manual Use this page to specify the order in which the TACACS+ servers are used. If a TACACS+ server does not respond, the switch tries the next server in the priority list. In the Priority field, specify the order in which the TACACS+ servers are used. Page 156 GS108T and GS110TP Smart Switch Software Administration Manual To select the authentication method that should appear first in the selected authentication login list. If you select a method that does not time out as the first method, such as 'local', no other method will be tried, even if the second and third. GS108T and GS110TP Smart Switch Software Administration Manual Management Access From the Access menu, you can configure Access Control Profiles and Access Rules. The Access Control Profiles and Access Rules enable network managers to define a profile and rules for accessing the switch. You can configure profiles and rules that specify whether the switch should permit or deny access based on various settings. GS108T and GS110TP Smart Switch Software Administration Manual HTTP The Secure HTTP access to the GS108T or GS110TP management interface. You can also configure Access Control Profiles and Access Rules that limit management access to the switch. To access the GS108T or GS110TP management interface, use one of the following methods. GS108T and GS110TP Smart Switch Software Administration Manual Certificates must be a valid certificate within 24 hours. GS108T and GS110TP Smart Switch Software Administration Manual To generate a certificate: The detailed page is Disable. You can only download SSL certificates when the HTTPS Admin mode is disabled. Use the radio buttons in the SSL Version 3.0 and its related parameters. Page 160 GS108T and GS110TP Smart Switch Software Administration Manual The Certificate Present Field. SSL Server Host Certificate Present. Use the Generate Certificate button to generate the certificate. GS108T and GS110TP Smart Switch Software Administration Manual To download an SSL Certificate to the switch: From the File Transfer menu, select the method of transferring the certificate to the switch. GS108T and GS110TP Smart Switch Software Administration Manual The Security page fields describe the rules that are configured for the profile, in the following table. Field Description Rule Type Identifies the action the rule takes, which is either Permit or Deny. Service Type Identifies the type of service to which the rule applies. GS108T and GS110TP Smart Switch Software Administration Manual Port Security Port security helps secure the network by preventing unknown devices from forwarding packets. When a link goes down, all dynamically locked addresses are freed. The Port Security feature offers the following benefits: You can limit the number of MAC addresses on a given port. •.. Page 165 GS108T and GS110TP Smart Switch Software Administration Manual To configure a port to accept a limited number of dynamically learned MAC addresses and manually add secure MAC addresses. GS108T and GS110TP Smart Switch Software Administration Manual To enable port security on a port: Select the check box in the Port Security column to enable port security. •.. Page 166 GS108T and GS110TP Smart Switch Software Administration Manual To configure 802.1X settings for the port: Select the check box next to the port to configure. You can also select multiple check boxes to apply the same setting to all selected ports. Page 167 GS108T and GS110TP Smart Switch Software Administration Manual 802.1X is an access control feature that uses port-based authentication in which one or more authentication servers supplies authentication services to clients attempting to access the network. If a supplicant requests authentication, the authentication server verifies the identity of the supplicant before the supplicant can access network services. Page 169 GS108T and GS110TP Smart Switch Software Administration Manual To configure the global 802.1X settings: Select the check box next to the port to configure. You can also select multiple check boxes to apply the same setting to all selected ports. Select the check box in the heading row to apply the same settings to all interfaces. GS108T and GS110TP Smart Switch Software Administration Manual To configure port 802.1X settings: From the Port menu, select the port to configure. Page 171 GS108T and GS110TP Smart Switch Software Administration Manual To configure advanced port 802.1X settings: From the Port menu, select the port to configure. Use the fields to configure the 802.1X settings for the port. Page 172 GS108T and GS110TP Smart Switch Software Administration Manual The amount of time that lapses before the switch resets the authentication process on the port for failed authentications. The value is between 1 and 65535 seconds, and the default value is 30 seconds. Control Direction. GS108T and GS110TP Smart Switch Software Administration Manual The amount of time that lapses before the switch resends an EAP request. GS108T and GS110TP Smart Switch Software Administration Manual Traffic Control From the Traffic Control menu, you can configure features. GS108T and GS110TP Smart Switch Software Administration Manual The following table describes the fields on the Port Security Summary page. The Port Security feature enables you to lock one or more ports on the switch. When a port is locked, only packets with an allowable source MAC address can be forwarded. To display the Port Security page, click Security Traffic Control Port Security. GS108T and GS110TP Smart Switch Software Administration Manual Storm control. A broadcast storm is the result of an excessive number of broadcast messages simultaneously transmitted across a network by a single port. Forwarded message responses can overload network resources and/or cause the network to time out. The switch measures the incoming broadcast/multicast/unknown unicast packet rate per port and discards packets when the rate exceeds the defined value. GS108T and GS110TP Smart Switch Software Administration Manual Port Security The Port Security feature enables you to lock one or more ports on the switch. When a port is locked, only packets with an allowable source MAC address can be forwarded. All other packets are discarded. GS108T and GS110TP Smart Switch Software Administration Manual MAC Filter MAC Filtering The MAC Filter feature allows the user to set up a list of allowed source MAC addresses that can gain access to a selected port. Packets with a matching source MAC address can be forwarded normally. All other packets will be discarded. GS108T and GS110TP Smart Switch Software Administration Manual To display the MAC Filter Summary page, click Security Traffic Control MAC Filter. The following table describes the fields configured on the system. To display the MAC Filter Configuration page, click Security Traffic Control MAC Filter. GS108T and GS110TP Smart Switch Software Administration Manual Storm Control A broadcast storm is the result of an excessive number of broadcast messages simultaneously transmitted across a network by a single port. Forwarded message responses can overload network resources and/or cause the network to time out. GS108T and GS110TP Smart Switch Software Administration Manual Port Security Port Security feature allows you to set a limit on the number of MAC addresses learned on an interface increases beyond the limit. If the rate of packet traffic on the interface increases beyond the configured threshold, the traffic will be dropped. GS108T and GS110TP Smart Switch Software Administration Manual The Port Security Violation table shows information about unknown source MAC addresses of the frames the port receives and discards. GS108T and GS110TP Smart Switch Software Administration Manual To configure port security settings on a physical port, click PORTS. To configure port security settings for a Link Aggregation Group (LAG), click LAGs. GS108T and GS110TP Smart Switch Software Administration Manual The Security MAC Address Use the Security MAC Address page to convert a dynamically learned MAC address to a statically locked address. To display the Security MAC Address page, click Security Traffic Control, and then click the Port Security MAC Address link. GS108T and GS110TP Smart

Switch Software Administration Manual Protected Ports Membership If a port is configured as protected, it does not forward traffic to any other protected port on the switch, but it will forward traffic to unprotected ports. Use the Protected Ports Membership page to configure the ports as protected or unprotected. GS108T and GS110TP Smart Switch Software Administration Manual Configuring Access Control Lists Access Control Lists (ACLs) ensure that only authorized users have access to specific resources while blocking off any unwarranted attempts to reach network resources. ACLs are used to provide traffic flow control, restrict contents of routing updates, decide which types of traffic are forwarded or blocked, and above all provide security for the network. GS108T and GS110TP Smart Switch Software Administration Manual To use the ACL Wizard: Determine the type of ACL to configure and create a MAC ACL, standard IP ACL, or extended IP ACL. To permit or deny traffic based on the Source MAC Address, create a MAC ACL. •... GS108T and GS110TP Smart Switch Software Administration Manual MAC ACL A MAC ACL consists of a set of rules which are matched sequentially against a packet. When a packet meets the match criteria of a rule, the specified rule action (Permit/Deny) is taken and the additional rules are not checked for a match. GS108T and GS110TP Smart Switch Software Administration Manual Click Cancel to cancel the configuration on the screen and reset the data on the screen to the latest value of the switch. MAC Rules Use the MAC Rules page to define rules for MAC-based ACLs. The access list definition includes rules that specify whether traffic matching the criteria is forwarded normally or discarded. GS108T and GS110TP Smart Switch Software Administration Manual example, if the MAC address is aa:bb:cc:dd:ee:ff, and the mask is 00:00:ff:ff:ff:ff, all MAC addresses with aa:bb:xx:xx:xx:xx result in a match (where x is any hexadecimal number). A MAC mask of 00:00:00:00:00:00 matches a single MAC address. EtherType Key. Page 185 GS108T and GS110TP Smart Switch Software Administration Manual To configure MAC ACL interface bindings: Select an existing MAC ACL from the ACL ID menu. The packet filtering direction for ACL is Inbound, which means the MAC ACL rules are applied to traffic entering the port. Specify an optional sequence number to indicate the order of this access list relative to other access lists already assigned to this interface and direction. GS108T and GS110TP Smart Switch Software Administration Manual MAC Binding Table Use the MAC Binding Table page to view or delete the MAC ACL bindings. To display the MAC Binding Table, click Security ACL, then click the Basic Binding Table link. GS108T and GS110TP Smart Switch Software Administration Manual IP ACL IP ACLs allow network managers to define classification actions and rules for specific ingress ports. Packets can be filtered on ingress (inbound) ports only. If the filter rules match, then some actions can be taken, including dropping the packet or disabling the port. GS108T and GS110TP Smart Switch Software Administration Manual To delete an IP ACL, select the check box next to the IP ACL ID field, then click Delete. To change the name of an IP ACL, select the check box next to the IP ACL ID field, update the name, then click Apply. GS108T and GS110TP Smart Switch Software Administration Manual Assign Queue ID. Specifies the hardware egress queue identifier used to handle all • packets matching this ACL rule. Enter an identifying number from 0–3 in the appropriate field. Match Every. Requires a packet to match the criteria of this ACL. Select True or •... Page 190 GS108T and GS110TP Smart Switch Software Administration Manual To configure rules for an IP ACL: To add an IP ACL rule, select the ACL ID to add the rule to, select the check box in the Extended ACL Rule table, and click Add. The page displays the extended ACL Rule Configuration fields, as the following figure shows. Page 191 GS108T and GS110TP Smart Switch Software Administration Manual Action. Selects the ACL forwarding action, which is one of the following: • Permit. Forwards packets which meet the ACL criteria. • Deny. Drops packets which meet the ACL criteria. • Egress Queue. Specifies the hardware egress queue identifier used to handle all •... Page 192 GS108T and GS110TP Smart Switch Software Administration Manual Destination L4 Port Number: If the destination L4 keyword is Other, enter a • user-defined Port ID by which packets are matched to the rule. Service Type. Choose one of the Service Type match conditions for the extended IP •... GS108T and GS110TP Smart Switch Software Administration Manual IP Binding Configuration When an ACL is bound to an interface, all the rules that have been defined are applied to the selected interface. Use the IP Binding Configuration page to assign ACL lists to ACL Priorities and Interfaces. GS108T and GS110TP Smart Switch Software Administration Manual IP Binding Table Use the IP Binding Table page to view or delete the IP ACL bindings. To display the IP Binding Table, click Security ACL, then click the Advanced Binding Table link The following table describes the information displayed in the MAC Binding Table. Monitoring the System Use the features available from the Monitoring tab to view a variety of information about the switch and its ports and to configure how the switch monitors events. The Monitoring tab contains links to the following features: on page 196 •... GS108T and GS110TP Smart Switch Software Administration Manual Ports The pages available from the Ports link contain a variety of information about the type and type of traffic transmitted from and received on the switch. From the Ports link, you can access the following pages: on page 196 •... Page 197 GS108T and GS110TP Smart Switch Software Administration Manual The following table describes the Switch Statistics displayed on the screen. Field Description ifIndex This object indicates the ifIndex of the interface table entry associated with the processor of this switch. Octets Received The total number of octets of data received by the processor (excluding framing bits, but including FCS octets). GS108T and GS110TP Smart Switch Software Administration Manual Field Description Most VLAN Entries Ever The largest number of VLANs that have been active on this switch since the Used last reboot. Static VLAN Entries The number of presently active VLAN entries on this switch that have been created statically. GS108T and GS110TP Smart Switch Software Administration Manual The following table describes the per-port statistics displayed on the screen. Field Description Interface Lists the ports on the system. Total Packets Received The total number of packets received that were without errors. Without Errors Packets Received With Error The number of inbound packets that contained errors preventing them from being deliverable to a higher layer protocol. Page 200 GS108T and GS110TP Smart Switch Software Administration Manual To view information about a different port, select the port number from the Interface menu. Field Description Interface Use the drop down menu to select the interface for which data is to be displayed or configured. Page 201 GS108T and GS110TP Smart Switch Software Administration Manual Field Description Port Type For most ports this field is blank. Otherwise the possible values are: Mirrored: Indicates that the port has been configured as a monitoring port • and is the source port in a port mirroring session. For additional information about port monitoring and probe ports, see Multiple Port on page 216. Page 202 GS108T and GS110TP Smart Switch Software Administration Manual Field Description Link Trap This object determines whether or not to send a trap when link status changes. The factory default is Enable. Enable: Specifies that the system sends a trap when the link status •... Page 203 GS108T and GS110TP Smart Switch Software Administration Manual Field Description Packets Received The total number of packets (including bad packets) received that were 512-1023 Octets between 512 and 1023 octets in length inclusive (excluding framing bits but including FCS octets). Packets Received The total number of packets (including bad packets) received that were 1024-1518 Octets... Page 204 GS108T and GS110TP Smart Switch Software Administration Manual Field Description Local Traffic Frames The total number of frames dropped in the forwarding process because the destination address was located off of this port. 802.3x Pause Frames A count of MAC Control frames received on this interface with an opcode Received indicating the PAUSE operation. Page 205 GS108T and GS110TP Smart Switch Software Administration Manual Field Description Packets Transmitted The total number of packets (including bad packets) transmitted that were 1519-1522 Octets between 1519 and 1522 octets in length inclusive (excluding framing bits but including FCS octets). Total Packets Transmitted The number of frames that have been transmitted by this port to its segment. GS108T and GS110TP Smart Switch Software Administration Manual Field Description 802.3x Pause Frames A count of MAC Control frames transmitted on this interface with an opcode Transmitted indicating the PAUSE operation. This counter does not increment when the interface is operating in half-duplex mode. EAPOL Frames Received The number of valid EAPOL frames of any type that have been received by this authenticator. Page 207 GS108T and GS110TP Smart Switch Software Administration Manual The following table describes the EAP statistics displayed on the screen. Field Description Ports Specifies the interface which is polled for statistics. Frames Received Displays the number of valid EAPOL frames received on the port. Frames Transmitted Displays the number of EAPOL frames transmitted through the port. GS108T and GS110TP Smart Switch Software Administration Manual System Logs The switch may generate messages in response to events, faults, or errors occurring on the platform as well as changes in configuration or other occurrences. These messages are stored locally and can be forwarded to one or more centralized points of collection for monitoring purposes or long term archival storage. Page 209 GS108T and GS110TP Smart Switch Software Administration Manual To configure the Memory Log settings: Use the radio buttons in the Admin Status field to determine whether or not to send a trap when link status changes. Enable: Specifies system logging. • Disable: Prevents the system from logging messages. •... GS108T and GS110TP Smart Switch Software Administration Manual Use the buttons at the bottom of the page to perform the following actions: Click Clear to clear the messages out of the buffered log in the memory. • Click Refresh to update the page with the latest messages in the log. •... Page 211 GS108T and GS110TP Smart Switch Software Administration Manual To configure the FLASH Log settings: Use the radio buttons in the Admin Status field to determine whether to log messages to persistent storage. Enable: Enables persistent logging. • Disable: Prevents the system from logging messages in persistent storage. •... GS108T and GS110TP Smart Switch Software Administration Manual Server Log Configuration Use the Server Log Configuration page to allow the switch to send log messages to the remote logging hosts configured on the system. To access the Server Log Configuration page, click the Monitoring Logs tab, and then click the Server Log link. Page 213 GS108T and GS110TP Smart Switch Software Administration Manual To configure a remote log server To add a remote syslog host (log server), specify the settings in the following list and click Add. Host Address. Specify the IP address or hostname of the host configured for syslog. •... GS108T and GS110TP Smart Switch Software Administration Manual Trap Logs Use the Trap Logs page to view information about the SNMP traps generated on the switch. To access the Trap Logs page, click the Monitoring Logs tab, and then click the Trap Log link. GS108T and GS110TP Smart Switch Software Administration Manual Click Clear Counters to clear all the counters. This resets all statistics for the default values. Event Logs Use the Event Log page to display the event log, which is used to hold error messages for catastrophic events. GS108T and GS110TP Smart Switch Software Administration Manual Port Mirroring The page under the Mirroring link allows you to view and configure port mirroring on the system. Multiple Port Mirroring Port mirroring selects the network traffic for analysis by a network analyzer. This is done for specific ports of the switch. Page 217 GS108T and GS110TP Smart Switch Software Administration Manual From the Session Mode menu, select the mode for port mirroring on the selected port: Enable. Multiple Port Mirroring is active on the selected port. • Disable. Port mirroring is not active on the selected port, but the mirroring information •... Page 218 GS108T and GS110TP Smart Switch Software Administration Manual 218 | Chapter 6: Monitoring the System... Maintaining the System Use the features available from the Maintenance tab to help you manage the switch. The Maintenance tab contains links to the following features: on page 220 • Reset on page 222 • Upload File From Switch on page 223 •... GS108T and GS110TP Smart Switch Software Administration Manual Reset The Reset menu contains links to the following options: on page 220 • Device Reboot on page 221 • Factory Default Device Reboot Use the Device Reboot page to reboot the GS108T or GS110TP. To access the Device Reboot page, click System Reset... GS108T and GS110TP Smart Switch Software Administration Manual Factory Default Use the Factory Default page to reset the system configuration to the factory default values. If you reset the switch to the default configuration, the IP address is Note: reset to 192.168.0.239, and the DHCP client is enabled. If you loose network connectivity after you reset the switch to the factory defaults, see on page 11 . GS108T and GS110TP Smart Switch Software Administration Manual Upload File From Switch Use the File Upload page to upload configuration (ASCII), log (ASCII), and image (binary) files from the switch to the TFTP server. To display the File Upload page, click Maintenance Upload File Upload. To upload a file from the switch to the TFTP server: Use the File Type menu to specify the type of file you want to upload: Code: Uploads a stored code image. GS108T and GS110TP Smart Switch Software Administration Manual In The Transfer File Name field, specify a destination file name for the file to upload. You may enter up to 32 characters. The transfer fails if you do not specify a file name. For a code transfer, use an .stk file extension. Page 224 GS108T and GS110TP Smart Switch Software Administration Manual From the Server Address Type filed, specify the format for the address you type in the TFTP Server Address field IPv4. Indicates the TFTP server address is an IP address in dotted-decimal format. •... Page 226 GS108T and GS110TP Smart Switch Software Administration Manual To download a file to the switch from by using HTTP: From the File Type menu, Specify what type of file you want to download to the switch: Code: The code is the system software image, which is saved in one of two flash •... Page 227 GS108T and GS110TP Smart Switch Software Administration Manual Click the Apply button to initiate the file download. After a file transfer is started, please wait until the page refreshes. Note: When the page refreshes, the Select File option will be blanked out. This indicates that the file transfer is done. GS108T and GS110TP Smart Switch Software Administration Manual To set the selected image as the active image, select the Active Image check box. After activating an image, you must perform a system reset of the Note: switch in order to run the new code. To remove the selected image from permanent storage on the switch, select the Delete Image check box. Page 230 GS108T and GS110TP Smart Switch Software Administration Manual The following table describes the information on the Dual Image Status page. Field Description Unit The unit ID of the switch is always 1. Image1 Ver Displays the version of the image1 code file. Image2 Ver Displays the version of the image2 code file. GS108T and GS110TP Smart Switch Software Administration Manual Troubleshooting The Troubleshooting menu contains links to the following options: on page 231 • Ping on page 232 • Traceroute Ping Use the Ping page to tell the switch to send a Ping request to a specified IP address. You can use this feature to check whether the switch can communicate with a particular network host. GS108T and GS110TP Smart Switch Software Administration Manual Click Apply to send the ping. The switch sends the number of pings specified in the Count field, and the results are displayed below the configurable data in the Ping area. If successful, you will see "Reply From IP/Host: icmp_seq = 0. time = xx usec. Tx = x, •... Page 233 GS108T and GS110TP Smart Switch Software Administration Manual MaxFail. Specify the maximum number of failures allowed in the session. The valid range is 0–255. Interval. Specify the time between probes in seconds. The valid range is 1–60. • Port. Specify the UDP destination port in probe packets. The valid range is 1–65535. •... Page 234 GS108T and GS110TP Smart Switch Software Administration Manual 234 | Chapter 7: Maintaining the System... Use the Support page to connect to the Online Support site at netgear.com. To access the Support page, click Help Support. To connect to the NETGEAR support site for the GS108T or GS110TP, click Apply. Chapter 8: Accessing Help... User Guide Use the User Guide page to access the GS108T and GS110TP Smart Switch Software Administration Manual (the guide you are now reading) that is available on the NETGEAR Website. To access the User Guide page, click Help User Guide. Page 237 GS108T and GS110TP Smart Switch Software Administration Manual Chapter 8: Accessing Help | 237... Hardware Specifications and Default Values GS108T and GS110TP Gigabit Smart Switches Specifications The GS108T and GS110TP Gigabit Smart Switches conform to the TCP/IP, UDP, HTTP, ICMP, TFTP, DHCP, IEEE 802.1D, IEEE 802.1p, and IEEE 802.1Q standards. GS108 Specifications Feature Value Interfaces Eight 10/100/1000 Ethernet ports PoE-Powered Device... GS108T and GS110TP Smart Switch Software Administration Manual GS108T and GS110TP Switch Performance Feature Value Switching capacity Non-Blocking Full WireSpeed on all packet sizes Forwarding method Store and Forward Packet forwarding rate 10M:14,880 pps/ 100M:148,810 pps/ 1G:1,488,000 pps MAC addresses Green Ethernet Power consumption savings by cable length (

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