# *Vantage Access*

*Central Network Management*

# *User's Guide*

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ZyXEL

www.zyxel.com

# About This User's Guide

## Intended Audience

This manual is intended for people who want to remotely manage multiple ZyXEL DSL/VoIP devices using Vantage Access. You should have at least a basic knowledge of TCP/IP networking concepts and topology, network administration and ZyXEL DSL/VoIP device features.

## Related Documentation

- Quick Start Guide

  The Quick Start Guide is designed to help you get up and running right away. It contains information on installing Vantage Access, inital setup and ZyXEL DSL/VoIP device registration.
- Web Configurator Online Help

  Embedded web help for descriptions of individual screens and supplementary information.
- Supporting Disk

  Refer to the included CD for support documents.
- ZyXEL Web Site

  Please refer to www.zyxel.com for additional support documentation and product certifications.

## User Guide Feedback

Help us help you. Send all User Guide-related comments, questions or suggestions for improvement to the following address, or use e-mail instead. Thank you!

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# 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.**

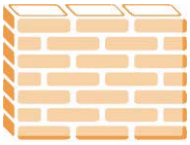
**Notes tell you other important information (for example, other things you may need to configure or helpful tips) or recommendations.**

## Syntax Conventions

- The Vantage Access Central Network Management may be referred to as the "Vantage Access", the "Vantage Access server" or the "system" in this User's Guide.
- A managed ZyXEL DSL/VoIP device may be referred to as the "ZyXEL device" or the "device" 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".

### Icons Used in Figures

Figures in this User's Guide may use the following generic icons. The Vantage Access icon is not an exact representation of your device.

| | | |
|---|---|---|
| Computer | Notebook computer | Server |
| DSLAM | Firewall  | Telephone |
| Switch | Router | |

# Contents Overview

**Introduction** ..... **21**

Introducing Vantage Access ..... 23
Installation ..... 25
The Web Configurator ..... 45
Initial Setup ..... 63

**Management and Logs** ..... **67**

Account Management ..... 69
Log ..... 75
Import Device ..... 83
Files Management ..... 87
System Maintenance ..... 89
HTTP Server ..... 93
Log Setup ..... 95

**Device Configuration** ..... **97**

Device Firmware File Maintenance ..... 99
Device Firmware Upgrade ..... 103
Introducing Device Configuration ..... 107
General Device Setup ..... 115
WAN Device ..... 127
LAN Device ..... 151
Voice Service ..... 165
Syslog ..... 177

**Troubleshooting** ..... **181**

Troubleshooting ..... 183

**Appendices and Index** ..... **185**

# Table of Contents

**About This User's Guide** ..... 3

**Document Conventions** ..... 4

**Contents Overview** ..... 7

**Table of Contents** ..... 9

**List of Figures** ..... 15

**List of Tables** ..... 19

**Part I: Introduction** ..... 21

**Chapter 1**
**Introducing Vantage Access** ..... 23

1.1 Overview ..... 23
1.2 Key Features ..... 23

**Chapter 2**
**Installation** ..... 25

2.1 Installation Overview ..... 25
2.1.1 Installation Method ..... 25
2.1.2 Minimum System Requirements ..... 25
2.2 Preparing to Install ..... 26
2.3 Installation Using the Wizard Screens ..... 26
2.3.1 Installing Vantage Access DB ..... 26
2.3.2 Installing Vantage Access BED ..... 27
2.3.3 Installing Vantage Access HTTPD ..... 29
2.4 Installation Using Text-based Line Commands ..... 31
2.4.1 Installing Vantage Access DB ..... 31
2.4.2 Installing Vantage Access BED ..... 34
2.4.3 Installing Vantage Access HTTPD ..... 37
2.5 Starting Vantage Access ..... 41
2.6 Stopping Vantage Access ..... 42

**Chapter 3**
**The Web Configurator** ..... 45

3.1 Web Browser Requirements ..... 45

3.2 Login Accounts ..... 45
3.3 Accessing the Web Configurator ..... 45
3.4 The Main Vantage Vantage Access Screen ..... 47
3.5 Title Bar ..... 48
3.6 Device Window ..... 48
3.7 Device List ..... 48
3.7.1 Topology ..... 49
3.7.2 Device Search ..... 53
3.7.3 Device List ..... 54
3.7.4 Right-click Menu ..... 57
3.8 Function Window ..... 58
3.8.1 Function Window Right-Click Menu ..... 61
3.9 Message Window ..... 61
3.10 About Vantage Access ..... 61

**Chapter 4**
**Initial Setup ..... 63**

4.1 Specifying an HTTP Server ..... 63
4.2 Registering a Device ..... 64
4.2.1 Importing Device XML File ..... 64
4.2.2 ZyXEL Device Setting ..... 65

**Part II: Management and Logs ..... 67**

**Chapter 5**
**Account Management ..... 69**

5.1 Types of Accounts ..... 69
5.2 Account Management ..... 69
5.3 Deleting an Account ..... 71
5.4 Creating an Account Add User ..... 71
5.5 Editing Account Information Update User ..... 73

**Chapter 6**
**Log ..... 75**

6.1 Log Overview ..... 75
6.1.1 Purging Logs ..... 75
6.2 Viewing ACS System Logs ..... 75
6.3 Viewing CPE Device Logs ..... 77
6.4 Configuration Status ..... 78
6.5 Notification ..... 78
6.6 CPE Status ..... 79

**Chapter 7**
**Import Device ..... 83**

7.1 Import Device Overview ..... 83
7.1.1 Device XML File ..... 83
7.2 The Import Device Screen ..... 83
7.3 ZyXEL Device Setup For Registration ..... 84

**Chapter 8**
**Files Management ..... 87**

8.1 The Files Management Screen ..... 87
8.1.1 Downloading a File ..... 88
8.1.2 Viewing a File ..... 88
8.1.3 Deleting a File ..... 88

**Chapter 9**
**System Maintenance ..... 89**

9.1 System Maintenance Overview ..... 89
9.2 Back up System File Management ..... 89
9.3 Vantage Access System Configuration Restore ..... 90
9.4 Vantage Access System Configuration Backup ..... 91

**Chapter 10**
**HTTP Server ..... 93**

10.1 The HTTP Server Screen ..... 93

**Chapter 11**
**Log Setup ..... 95**

11.1 Log Options ..... 95
11.2 Log Setting ..... 96

**Part III: Device Configuration ..... 97**

**Chapter 12**
**Device Firmware File Maintenance ..... 99**

12.1 Device Firmware File Maintenance Overview ..... 99
12.2 Firmware Management ..... 99
12.2.1 Deleting a Device Firmware File ..... 100
12.2.2 Adding a New Device Firmware ..... 101

**Chapter 13**
**Device Firmware Upgrade ..... 103**

13.1 The Firmware Upgrade Screen ..... 103
13.1.1 Manual Firmware Upgrade ..... 103
13.1.2 Scheduled Firmware Upgrade ..... 104
13.2 Device Firmware Upgrade Request ..... 104
13.2.1 Manual Upgrade List ..... 105
13.2.2 Scheduled Upgrade List ..... 105

**Chapter 14**
**Introducing Device Configuration ..... 107**

14.1 Device Configuration Overview ..... 107
14.1.1 Single Device Configuration ..... 107
14.1.2 Device Group Configuration ..... 108
14.1.3 Device Configuration Update ..... 108
14.2 Device Configuration File Maintenance ..... 109
14.2.1 Single Device Configuration Backup ..... 109
14.2.2 Single Device Configuration Restore ..... 110
14.2.3 Batch Device Configuration Backup ..... 111
14.2.4 Batch Device Configuration Restore ..... 113

**Chapter 15**
**General Device Setup ..... 115**

15.1 Internet Gateway Device ..... 115
15.1.1 Device Information ..... 115
15.1.2 Vendor Configuration File ..... 117
15.2 Device Configuration ..... 117
15.3 Management Server ..... 118
15.4 Time ..... 119
15.5 User Interface ..... 120
15.6 Layer3 Forwarding ..... 122
15.6.1 Layer3 Forwarding Table Setup ..... 123
15.7 LAN Configuration Security ..... 124
15.8 IP Ping Diagnostics ..... 124

**Chapter 16**
**WAN Device ..... 127**

16.1 WAN Device Screen Overview ..... 127
16.2 WAN Common Interface Configuration ..... 127
16.2.1 Connection ..... 128
16.3 WAN DSL Interface Configuration ..... 129
16.3.1 WAN DSL Line Statistics ..... 131
16.4 WAN Ethernet Interface Configuration ..... 133
16.4.1 WAN Ethernet Statistics ..... 133
16.5 WAN DSL Connection Management ..... 134

16.5.1 WAN DSL Connection Service Information ..... 134
16.6 WAN DSL Diagnostics ..... 135
16.7 WAN Connection Device ..... 136
16.7.1 WAN DSL Link Configuration ..... 137
16.7.2 WAN ATM F5 Loopback Diagnostics ..... 138
16.7.3 WAN Ethernet Link Configuration ..... 139
16.7.4 WAN POTS Link Configuration ..... 140
16.7.5 WAN IP Connection ..... 141
16.7.6 WAN PPP Connection ..... 145

**Chapter 17**
**LAN Device ..... 151**

17.1 LAN Device Screen ..... 151
17.2 LAN Host Configuration Management ..... 151
17.2.1 IP Interface ..... 153
17.3 LAN Ethernet Interface Configuration ..... 154
17.3.1 Ethernet Interface Statistics ..... 155
17.4 LAN USB Interface Configuration ..... 155
17.4.1 USB Interface Statistics ..... 156
17.5 WLAN Configuration ..... 157
17.5.1 WEP Key Setup ..... 161
17.5.2 Associated Device ..... 161
17.5.3 Pre-shared Key Setup ..... 162
17.6 LAN Hosts ..... 163
17.6.1 LAN Host Information ..... 163

**Chapter 18**
**Voice Service ..... 165**

18.1 Voice Service Screen ..... 165
18.2 VoIP Capabilities ..... 165
18.2.1 Codecs Information ..... 167
18.2.2 SIP Setup ..... 168
18.3 Voice Profile Setup ..... 168
18.3.1 Voice Profile RTP Setup ..... 169
18.3.2 Voice Profile SIP Setup ..... 170
18.3.3 Voice Profile Line Setup ..... 172

**Chapter 19**
**Syslog ..... 177**

19.1 X_001349_Syslog Overview ..... 177
19.2 X_001349_Syslog Setup ..... 177
19.2.1 X_001349_Log Category ..... 178
19.2.2 X_001349_Alert Category ..... 178

**Part IV: Troubleshooting ..... 181**

**Chapter 20**
**Troubleshooting ..... 183**

20.1 Vantage Access Startup and Login ..... 183
20.2 Web Configurator Display ..... 184
20.3 Device Registration ..... 184

**Part V: Appendices and Index ..... 185**

Appendix A Legal Information ..... 187

Appendix B Customer Support ..... 215

**Index ..... 219**

# List of Figures

Figure 1 Vantage Access Application Example ..... 23
Figure 2 Web Configurator: Login Screen ..... 46
Figure 3 Web Configurator: Force Relogin Screen ..... 46
Figure 4 Web Configurator Main Screen ..... 47
Figure 5 Device List ..... 48
Figure 6 Device Window: Topology ..... 49
Figure 7 Device Window: Topology: Add a Group ..... 50
Figure 8 Device Window: Topology: Add Group ..... 50
Figure 9 Device Window: Topology: Delete Group ..... 51
Figure 10 Device Window: Topology: Delete Group Prompt ..... 51
Figure 11 Device Window: Topology: Remove a Group ..... 51
Figure 12 Device Window: Topology: Remove Group ..... 52
Figure 13 Device Window: Topology: Rename ..... 52
Figure 14 Device Window: Topology: Change Name ..... 52
Figure 15 Device Window: Topology: UnAssociate ..... 53
Figure 16 Device Window: Topology: Remove Group ..... 53
Figure 17 Device Window: Search ..... 54
Figure 18 Device Window: Device List ..... 55
Figure 19 Device Window: Device List: Add Device to Group ..... 56
Figure 20 Device Window: Device List: Associate ..... 56
Figure 21 Device Window: Device List: Associate: Prompt ..... 57
Figure 22 Device Window: Device List: UnAssociate ..... 57
Figure 23 Device Window: Right-click Menu ..... 57
Figure 24 Function Window: Main Menu: Root Login ..... 58
Figure 25 Function Window: Main Menu: Administrator Login ..... 58
Figure 26 Function Window: Main Menu: Device Configuration ..... 58
Figure 27 Function Window: Main Menu: Device Group Configuration ..... 59
Figure 28 Function Window ..... 59
Figure 29 Function Window: Right-click Menu ..... 61
Figure 30 Message Window Example ..... 61
Figure 31 About ..... 61
Figure 32 About: Pop-up ..... 62
Figure 33 ACS Management: HTTP Sever ..... 63
Figure 34 Sample Device XML File ..... 64
Figure 35 ACS Management: Import Device ..... 64
Figure 36 Device List: Check New Device ..... 65
Figure 37 Device List: Check Registered Device ..... 66
Figure 38 Administration: Management ..... 70

Figure 39 Administration: Management: Delete Account Prompt ..... 71
Figure 40 Administration: Management: Add User ..... 72
Figure 41 Monitor: Log: ACS Log ..... 76
Figure 42 Monitor: Log: CPE Log ..... 77
Figure 43 Monitor: Configuration Status ..... 78
Figure 44 Monitor: Notification ..... 79
Figure 45 Monitor: CPE Status ..... 80
Figure 46 Sample Device XML File ..... 83
Figure 47 ACS Management: Import Device ..... 84
Figure 48 Device List: Check New Device ..... 84
Figure 49 Device List: Check Registered Device ..... 85
Figure 50 ACS Management: Files Management ..... 87
Figure 51 ACS Management: Maintenance: Management ..... 90
Figure 52 ACS Management: Maintenance: Restore ..... 91
Figure 53 ACS Management: Maintenance: Backup ..... 91
Figure 54 ACS Management: Maintenance: HTTP Server ..... 93
Figure 55 ACS Management: Log Options ..... 95
Figure 56 ACS Management: Log Setting ..... 96
Figure 57 Firmware: Firmware Management ..... 100
Figure 58 Firmware: Firmware Management: Delete ..... 101
Figure 59 Firmware: Firmware Management: Add Firmware ..... 101
Figure 60 Firmware: Firmware Upgrade ..... 103
Figure 61 Firmware: Firmware Upgrade ..... 104
Figure 62 Firmware: Manual Upgrade List ..... 105
Figure 63 Firmware: Scheduled Upgrade List ..... 106
Figure 64 Device Configuration Menu: Single Device ..... 108
Figure 65 Device Configuration Menu: Device Group ..... 108
Figure 66 Backup Device Configuration: Right-Click Menu ..... 109
Figure 67 Backup Device Configuration: Export To File ..... 109
Figure 68 Restore Device Configuration: Download File ..... 110
Figure 69 Restore Device Configuration: Right-Click Menu ..... 110
Figure 70 Restore Device Configuration: Import From File ..... 110
Figure 71 Restore Device Configuration: Log Message ..... 111
Figure 72 Backup Device Configuration: Right-Click Menu ..... 111
Figure 73 Group Configuration: Create a New Batch: Select Device ..... 112
Figure 74 Group Configuration: Create a New Batch: Edit Batch ..... 112
Figure 75 Batch Device Configuration Restore: Download File ..... 113
Figure 76 Batch Device Configuration Restore: Right-Click Menu ..... 113
Figure 77 Batch Device Configuration Restore: Import From File ..... 114
Figure 78 Batch Device Configuration Restore: CPE Log ..... 114
Figure 79 Configuration: InternetGatewayDevice ..... 115
Figure 80 Configuration: DeviceInfo ..... 116
Figure 81 Configuration: VendorConfigFile ..... 117

Figure 82 Configuration: DeviceConfig ....118
Figure 83 Configuration: ManagementServer ....118
Figure 84 Configuration: Time .... 120
Figure 85 Configuration: UserInterface .... 121
Figure 86 Configuration: Layer3Forwarding .... 122
Figure 87 Configuration: Layer3 Forwarding: Forwarding .... 123
Figure 88 Configuration: LANConfigSecurity .... 124
Figure 89 Configuration: IPPingDiagnostics .... 125
Figure 90 Configuration: WANDevice .... 127
Figure 91 Configuration: WAN Device: WANCommonInterfaceConfig .... 128
Figure 92 Configuration: WAN Device: Connection .... 129
Figure 93 Configuration: WAN Device: WANDSLInterfaceConfig .... 130
Figure 94 Configuration: WAN Device: WANDSLInterfaceConfig: Stats (Total) .... 132
Figure 95 Configuration: WAN Device: WANEthernetInterfaceConfig .... 133
Figure 96 Configuration: WAN Device: WANEthernetInterfaceConfig: Stats .... 133
Figure 97 Configuration: WAN Device: WANDSLConnectionManagement .... 134
Figure 98 Configuration: WAN Device: ConnectionService .... 134
Figure 99 Configuration: WAN Device: WANDSLDiagnostics .... 135
Figure 100 Configuration: WAN Device: WANConnectionDevice .... 136
Figure 101 Configuration: WAN Device: WANDSLLinkConfig .... 137
Figure 102 Configuration: WAN Device: WANATMF5LoopbackDiagnostics .... 139
Figure 103 Configuration: WAN Device: WANEthernetLinkConfig .... 140
Figure 104 Configuration: WAN Device: WANPOTSLinkConfig .... 140
Figure 105 Configuration: WAN Device: WANIPConnection .... 142
Figure 106 Configuration: WAN Device: PortMapping .... 144
Figure 107 Configuration: WAN Device: WANIPConnection: Stats .... 145
Figure 108 Configuration: WAN Device: WANPPPConnection .... 146
Figure 109 Configuration: WAN Device: WANPPPConnection: PortMapping .... 148
Figure 110 Configuration: WAN Device: WANPPPConnection: Stats .... 149
Figure 111 Configuration: LANDevice .... 151
Figure 112 Configuration: LAN Device: LANHostConfigManagement .... 152
Figure 113 Configuration: LAN Device: IPInterface .... 153
Figure 114 Configuration: LAN Device: LANEthernetInterfaceConfig .... 154
Figure 115 Configuration: LAN Device: LANEthernetInterfaceConfig: Stats .... 155
Figure 116 Configuration: LAN Device: LANUSBInterfaceConfig .... 156
Figure 117 Configuration: LAN Device: LANUSBInterfaceConfig: Stats .... 157
Figure 118 Configuration: LAN Device: WLANConfiguration .... 158
Figure 119 Configuration: LAN Device: WLANConfiguration: WEPKey .... 161
Figure 120 Configuration: LAN Device: WLANConfiguration: AssociatedDevice .... 162
Figure 121 Configuration: LAN Device: WLANConfiguration: PreSharedKey .... 162
Figure 122 Configuration: LAN Device: Hosts .... 163
Figure 123 Configuration: LAN Device: Hosts: Host .... 163
Figure 124 Configuration: VoiceService .... 165

Figure 125 Configuration: VoiceService: Capabilities ..... 166
Figure 126 Configuration: VoiceService: Capabilities: Codecs ..... 167
Figure 127 Configuration: VoiceService: Capabilities: SIP ..... 168
Figure 128 Configuration: VoiceService: VoiceProfile ..... 169
Figure 129 Configuration: VoiceService: VoiceProfile: RTP ..... 170
Figure 130 Configuration: VoiceService: VoiceProfile: SIP ..... 171
Figure 131 Configuration: VoiceService: VoiceProfile: Line ..... 172
Figure 132 Configuration: VoiceService: VoiceProfile: Line: Codec ..... 173
Figure 133 Configuration: VoiceService: VoiceProfile: Line: Codec: List ..... 173
Figure 134 Configuration: VoiceService: VoiceProfile: Line: Session ..... 174
Figure 135 Configuration: VoiceService: VoiceProfile: Line: Stats ..... 175
Figure 136 Configuration: VoiceService: VoiceProfile: Line: SIP ..... 176
Figure 137 Configuration: X_001349_Syslog ..... 177
Figure 138 Configuration: Syslog: X_001349_LogCategory ..... 178
Figure 139 Configuration: Syslog: AlertCategory ..... 179

# List of Tables

Table 1 Default Login Accounts ..... 45
Table 2 Title Bar Icon Description ..... 48
Table 3 Device List ..... 48
Table 4 Device Window: Topology ..... 49
Table 5 Device Window: Device List ..... 55
Table 6 Function Window: Menu Summary ..... 59
Table 7 Types of Accounts ..... 69
Table 8 Administration: Management ..... 70
Table 9 Administration: Management: Add User ..... 72
Table 10 Monitor: Log: ACS Log ..... 76
Table 11 Monitor: Log: CPE Log ..... 77
Table 12 Monitor: Configuration Status ..... 78
Table 13 Monitor: Notification ..... 79
Table 14 Monitor: CPE Status ..... 80
Table 15 ACS Management: Files Management ..... 87
Table 16 ACS Management: Maintenance: Management ..... 90
Table 17 ACS Management: Maintenance: HTTP Server ..... 93
Table 18 ACS Management: Log Options ..... 95
Table 19 ACS Management: Log Setting ..... 96
Table 20 Device: Firmware: Firmware Management ..... 100
Table 21 Firmware: Manual Upgrade List ..... 105
Table 22 Firmware: Scheduled Upgrade List ..... 106
Table 23 Configuration: InternetGatewayDevice ..... 115
Table 24 Configuration: DeviceInfo ..... 116
Table 25 Configuration: VendorConfigFile ..... 117
Table 26 Configuration: DeviceConfig ..... 118
Table 27 Configuration: ManagementServer ..... 119
Table 28 Configuration: Time ..... 120
Table 29 Configuration: UserInterface ..... 121
Table 30 Configuration: Layer3Forwarding ..... 123
Table 31 Configuration: Layer3 Forwarding: Forwarding ..... 123
Table 32 Configuration: LANConfigSecurity ..... 124
Table 33 Configuration: IPPingDiagnostics ..... 125
Table 34 Configuration: WANDevice ..... 127
Table 35 Configuration: WAN Device: WANCommonInterfaceConfig ..... 128
Table 36 Configuration: WAN Device: Connection ..... 129
Table 37 Configuration: WAN Device: WANDSLInterfaceConfig ..... 130
Table 38 Configuration: WAN Device: WANDSLInterfaceConfig: Stats ..... 132

Table 39 Configuration: WAN Device: WANEthernetInterfaceConfig ..... 133
Table 40 Configuration: WAN Device: WANEthernetInterfaceConfig: Stats ..... 134
Table 41 Configuration: WAN Device: ConnectionService ..... 135
Table 42 Configuration: WAN Device: WANDSLDiagnostics ..... 136
Table 43 Configuration: WAN Device: WANConnectionDevice ..... 136
Table 44 Configuration: WAN Device: WANDSLLinkConfig ..... 137
Table 45 Configuration: WAN Device: WANATMF5LoopbackDiagnostics ..... 139
Table 46 Configuration: WAN Device: WANEthernetLinkConfig ..... 140
Table 47 Configuration: WAN Device: WANPOTSLinkConfig ..... 140
Table 48 Configuration: WAN Device: WANIPConnection ..... 142
Table 49 Configuration: WAN Device: PortMapping ..... 144
Table 50 Configuration: WAN Device: WANIPConnection: Stats ..... 145
Table 51 Configuration: WAN Device: WANPPPConnection ..... 146
Table 52 Configuration: WAN Device: WANPPPConnection: PortMapping ..... 148
Table 53 Configuration: WAN Device: WANPPPConnection: Stats ..... 149
Table 54 Configuration: LANDevice ..... 151
Table 55 Configuration: LAN Device: LANHostConfigManagement ..... 152
Table 56 Configuration: LAN Device: IPInterface ..... 154
Table 57 Configuration: LAN Device: LANEthernetInterfaceConfig ..... 154
Table 58 Configuration: LAN Device: LANEthernetInterfaceConfig: Stats ..... 155
Table 59 Configuration: LAN Device: LANUSBInterfaceConfig ..... 156
Table 60 Configuration: LAN Device: LANUSBInterfaceConfig: Stats ..... 157
Table 61 Configuration: LAN Device: WLANConfiguration ..... 158
Table 62 Configuration: LAN Device: WLANConfiguration: WEPKey ..... 161
Table 63 Configuration: LAN Device: WLANConfiguration: AssociatedDevice ..... 162
Table 64 Configuration: LAN Device: WLANConfiguration: PreSharedKey ..... 163
Table 65 Configuration: LAN Device: Hosts ..... 163
Table 66 Configuration: LAN Device: Hosts: Host ..... 164
Table 67 Configuration: VoiceService ..... 165
Table 68 Configuration: VoiceService: Capabilities ..... 166
Table 69 Configuration: VoiceService: Capabilities: Codecs ..... 167
Table 70 Configuration: VoiceService: Capabilities: SIP ..... 168
Table 71 Configuration: VoiceService: VoiceProfile ..... 169
Table 72 Configuration: VoiceService: VoiceProfile: RTP ..... 170
Table 73 Configuration: VoiceService: VoiceProfile: SIP ..... 171
Table 74 Configuration: VoiceService: VoiceProfile: Line ..... 172
Table 75 Configuration: VoiceService: VoiceProfile: Line: Codec ..... 173
Table 76 Configuration: VoiceService: VoiceProfile: Line: Codec: List ..... 174
Table 77 Configuration: VoiceService: VoiceProfile: Line: Session ..... 174
Table 78 Configuration: VoiceService: VoiceProfile: Line: Stats ..... 175
Table 79 Configuration: VoiceService: VoiceProfile: Line: SIP ..... 176
Table 80 Configuration: X_001349_Syslog ..... 177

# PART I
# Introduction

This part contains the following chapters.


- Introducing Vantage Access (23)
- Installation (25)
- The Web Configurator (45)
- Initial Setup (63)

# 1

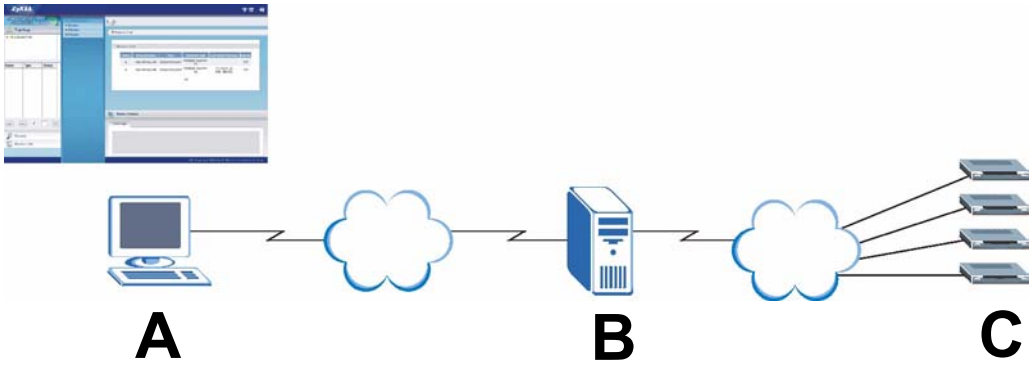
# Introducing Vantage Access

This chapter introduces Vantage Access and its key features. Refer to the Quick Start Guide for setup requirements, installation, and access.

## 1.1 Overview

Vantage Access is a web-based management tool that allows you to remotely management, control and monitor multiple ZyXEL devices. The following figure shows a typical network example.

**Figure 1** Vantage Access Application Example




In this example, you use a computer (**A**) to log into the web configurator on the Vantage Access server (**B**), also known as the Auto-Configuration Server (ACS). You also need to configure the ZyXEL devices (**C**) to update their status to the Vantage Access server. Once the Vantage Access server collects this information, you can

- monitor device status.
- examine device and system logs or events.
- manage multiple devices at a time (for example, remote firmware upgrade, configuration changes, etc).
- set the Vantage Access server to perform scheduled firmware upgrades on the managed device(s).

## 1.2 Key Features

This section describes the main features of the Vantage Access.

### Remote Device Management

You can remotely manage ZyXEL devices through Vantage Access. In addition, you can set Vantage Access to update service provision parameters (such as the WAN connection type, IP address, etc). Changes can be applied to more than one ZyXEL devices.

### Device Firmware Upgrades

Batch download device firmware from Vantage Access (after downloading the firmware from a web site) to multiple devices located anywhere, minimizing time, effort and room for error as well as ensuring firmware consistency across devices. Batch upgrades can be scheduled using the upgrade scheduler. Device owners can be notified automatically and reports can be generated detailing any device's firmware upload history.

### Device Monitors and Logs

Monitor the status of all your ZyXEL devices in one application. You can also look at the logs for all your ZyXEL devices in Vantage Access. Configuration changes logs are also stored for future reference.

### Statistical Reports

Stores reports for historical analysis. These reports include device registration logs, firmware upgrade history logs and access logs.

### File Management and Data Maintenance

You can backup Vantage Access database (containing the device information) and restore them later.

### Multiple Administration Level

Vantage Access provides different login account types (root, administrator and guest) that allow separation of system, device and user management.

# 2

# Installation

This chapter shows you how to install the Vantage Access and register a ZyXEL device.

## 2.1 Installation Overview

Vantage Access consists of three packages: DB, BED and HTTP. You can install these packages on different or the same server.

As Vantage Access comes with its own Apache HTTP server and MySQL database server, it is recommended that you install Vantage Access on a new Linux computer. If you plan to install Vantage Access on an existing Linux computer, you must uninstall Apache and MySQL from that server; otherwise they will conflict with Vantage Access.

### 2.1.1 Installation Method

You can install Vantage Access using one of the following methods.

- Wizard screens
  The user friendly wizard screens are the recommended way to install Vantage Access. You must log into your Linux computer in graphical mode (such as GNOM or KDE).
- Text-based line command
  If your Linux computer does not support graphical mode, use line commands for the installation. This is only recommended for advanced network administrators.

### 2.1.2 Minimum System Requirements

For the Vantage Access server:

- CPU: Dual Intel Xeon 3.0 GHz
- Memory: 4 GB
- Hard Disk: 80 GB
- Operating System: Red Hat Enterprise Linux ES 3

For a Vantage Access client:

- CPU: Compatible Intel Pentium 450 MHz
- Memory: 256 MB
- Hard Disk: 2 GB
- Web Browser: Internet Explorer 6.0.
- Screen Resolution: 1024 x 768 pixels

## 2.2 Preparing to Install

Follow the steps below to copy the installation files to the computer(s).

1. Log into the Linux computer as a root user
2. Insert the Vantage Access CD into the CD-ROM and copy the installation files (.bin) from the Vantage Access CD to a directory in your computer (for example, `./Home/Access`).

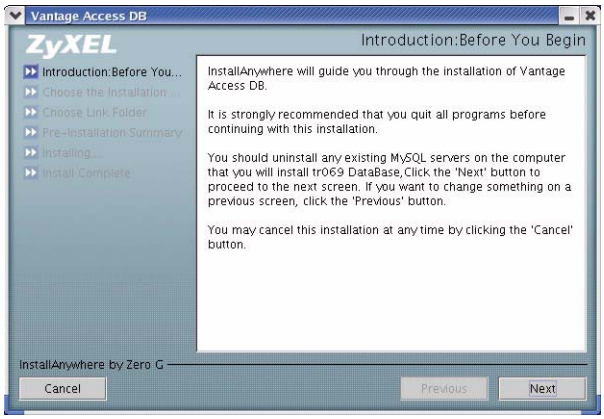
**You must install Vantage Access DB first.**

## 2.3 Installation Using the Wizard Screens

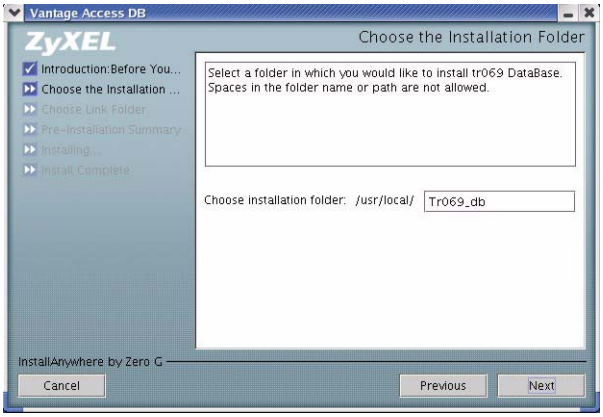
This section shows you how to install Vantage Access using the wizard screens.

### 2.3.1 Installing Vantage Access DB

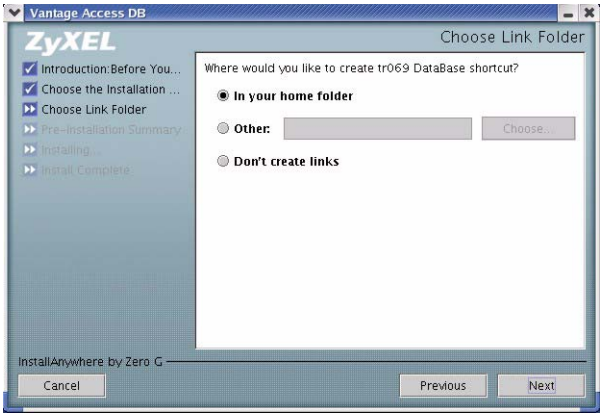
1. In the folder where you stored the installation file, enter `chmod +x Vantage_Access_DB.bin` to set it to be executable.
2. Enter `./ Vantage_Access_DB.bin` to start the installation process.
3. The wizard screen displays. Click **Next** in each screen to continue.



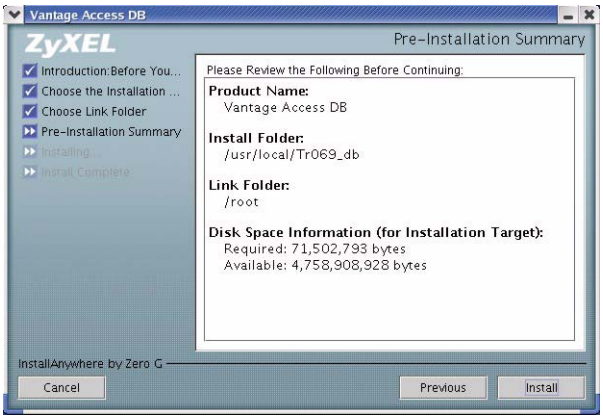

4. Specify the location for the database. Accept the default location (/usr/local) or enter the file path in the field provided.



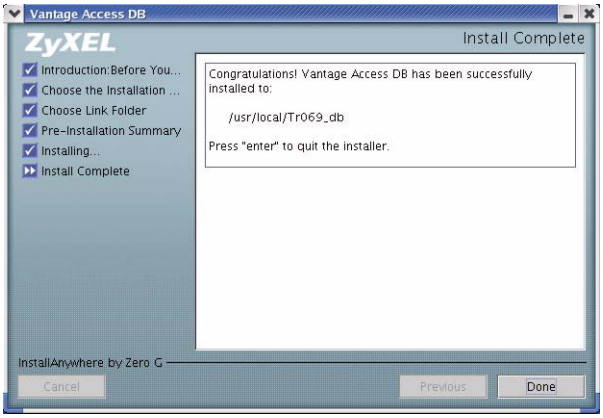
5 Select the location for the shortcut or select **Don't create links** if you don't want to create shortcuts.




6 Verify your installation options in this screen and click **Next** to start the installation process.




7 After the software component is installed successfully, the screen displays. Click **Done**.

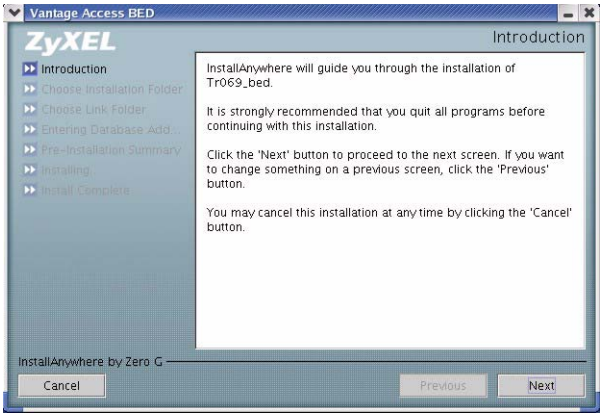



## 2.3.2 Installing Vantage Access BED

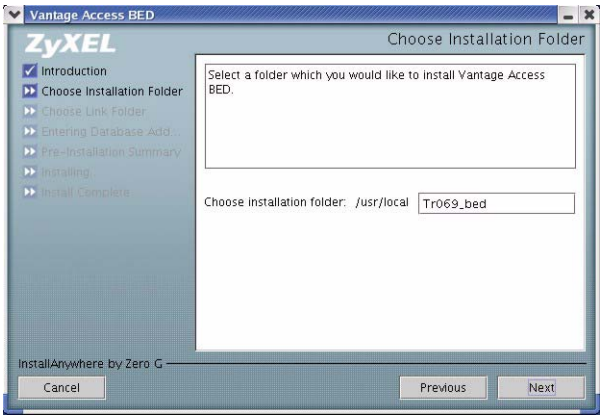
1 In the folder where you stored the installation file, enter `chmod +x Vantage_Access_BED.bin` to set it to be executable.

2 Enter `./ Vantage_Access_BED.bin` to start the installation process.

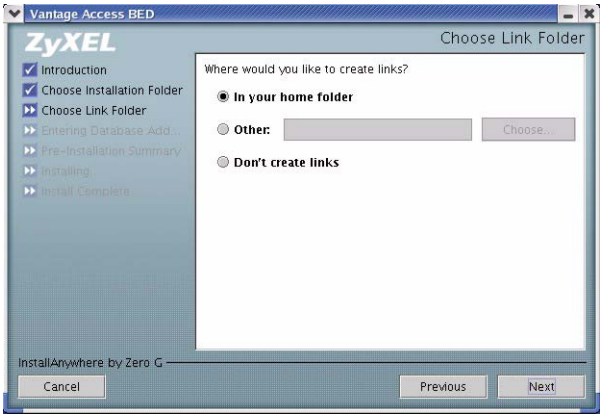
**3** The wizard screen displays. Click **Next** in each screen to continue.




**4** Specify the file location. Accept the default location or enter the file path in the field provided.

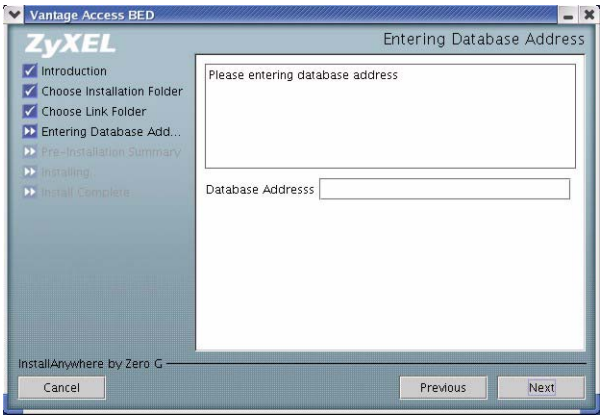



**5** Select the location for the shortcut or select **Don't create links** if you don't want to create shortcuts.

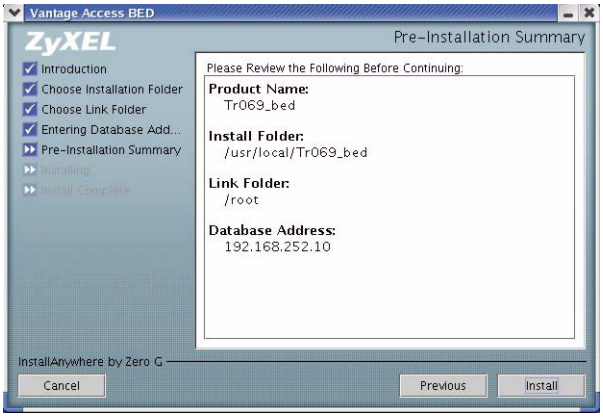



**6** Enter the IP address of the computer on which you installed Vantage Access DB.

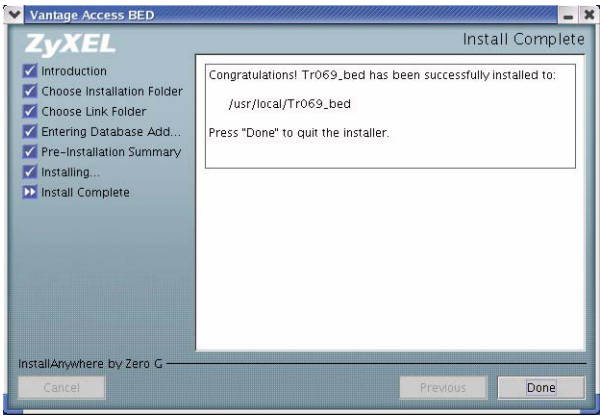
If you install both Vantage Access DB and Vantage Access BED on the same computer, enter the computer IP address or 127.0.0.1.



7 Verify your installation options in this screen and click **Next** to start the installation process.




8 After the software component is installed successfully, the screen displays. Click **Done**.

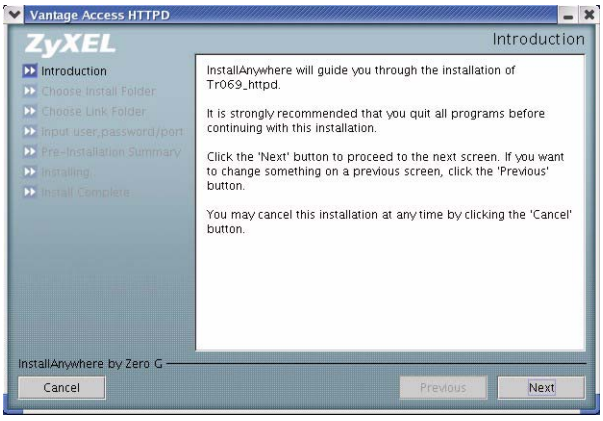



## 2.3.3 Installing Vantage Access HTTPD

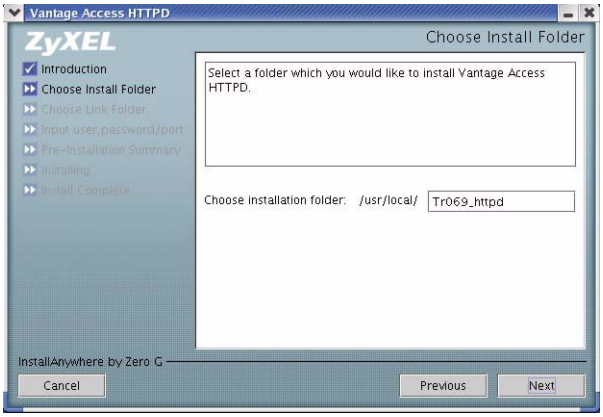
1 In the folder where you stored the installation file, enter `chmod +x Vantage_Access_HTTPD.bin` to set it to be executable.

2 Enter `./ Vantage_Access_HTTPD.bin` to start the installation process.

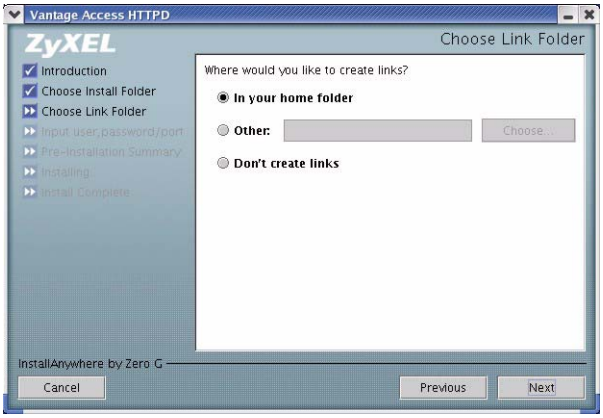
3 The wizard screen displays. Click **Next** in each screen to continue.



4 Specify the file location. Accept the default location or click **Choose** to specify one.

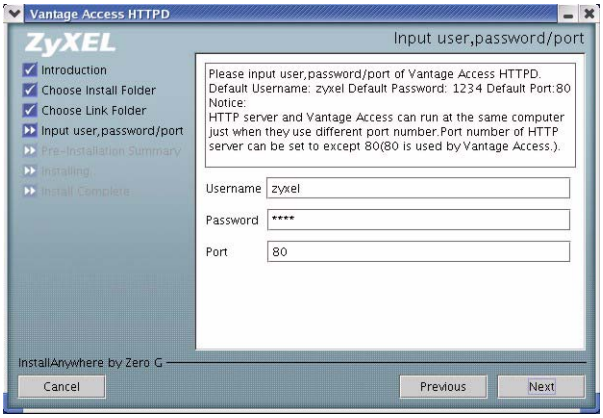



5 Select the location for the shortcut or select **Don't create links** if you don't want to create shortcuts.



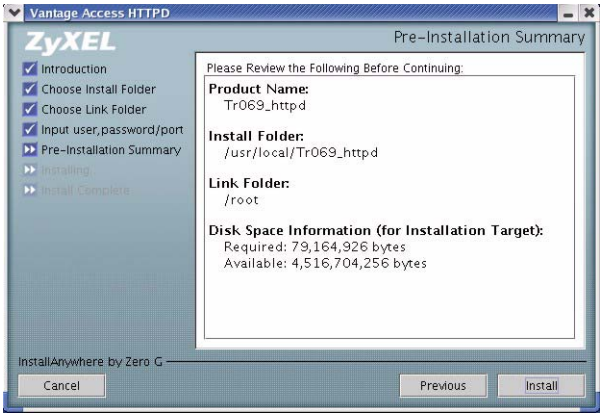

6 Specify the user name and password to log into the Vantage Access HTTPD server. You can use the default settings or enter the information in the fields provided.

Remember this user name and password as you will need this information later.



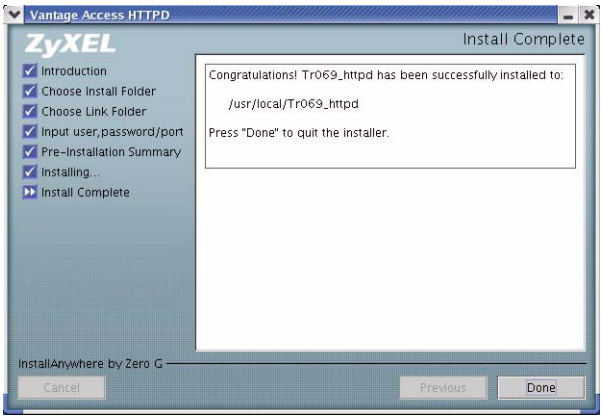

**If you install Vantage Access BED and Vantage Access HTTPD on the same computer, enter a different port number other than 80 in this screen. For example, 8080.**

7 Verify your installation options in this screen and click **Next** to start the installation process.




8 After the software component is installed successfully, the screen displays. Click **Done**.

9 Restart your computer.




## 2.4 Installation Using Text-based Line Commands

This section shows you how to install Vantage Access using text-based commands.

### 2.4.1 Installing Vantage Access DB

1 In the folder where you stored the installation file, enter `chmod +x Vantage_Access_DB.bin` to set it to be executable.

2 Enter `./ Vantage_Access_DB.bin -i console` to start the installation process.

**3** Press [ENTER] at the prompt to continue.

```
Script started on Wed 30 Aug 2006 10:59:09 AM HKT
[root@localhost root]# cd /usr/local/vantage
[root@localhost vantage]# ./Vantage_Access_DB.bin -i console
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing CONSOLE Mode Installation...

===============================================================================
                                        (created with InstallAnywhere by Zero G)
-------------------------------------------------------------------------------



===============================================================================
Introduction:Before You Begin
-----------------------------

InstallAnywhere will guide you through the installation of Vantage Access DB.

It is strongly recommended that you quit all programs before continuing with
this installation.

You should uninstall any existing MySQL servers on the computer that you will
install tr069 DataBase,Click the 'Next' button to proceed to the next screen.
If you want to change something on a previous screen, click the 'Previous'
button.

You may cancel this installation at any time by typing 'quit'.

PRESS <ENTER> TO CONTINUE:
```

**4** Specify the location for the database or press [ENTER] to accept the default location and continue.

```
===============================================================================
Choose the Installation Folder
------------------------------

Select a folder in which you would like to install tr069 DataBase. Spaces in the folder
name or path are not allowed.

Choose installation folder:  /usr/local/ (DEFAULT: Tr069_db)
   :
```

**5** Enter a number to specify the location for the shortcut or press [ENTER] to create the shortcut in the default location and continue.

```
================================================================================
Choose Link Location
--------------------

Where would you like to create tr069 DataBase shortcut?

  ->1- Default: /root
    2- In your home folder
    3- Choose another location...

    4- Don't create links

ENTER THE NUMBER OF AN OPTION ABOVE, OR PRESS <ENTER> TO ACCEPT THE DEFAULT
      :
```

**6** Verify your installation options in this screen and press [ENTER] to start the installation process.

```
================================================================================
Pre-Installation Summary
------------------------

Please Review the Following Before Continuing:

Product Name:
    Vantage Access DB

Install Folder:
    /usr/local/Tr069_db

Link Folder:
    /root

Disk Space Information (for Installation Target):
    Required:  71,502,793 bytes
    Available: 4,754,452,480 bytes

PRESS <ENTER> TO CONTINUE:
```

**7** After the software component is installed successfully, press [ENTER] to exit.

```
================================================================================
Installing...
-------------

 [==================|==================|==================|==================]
 [------------------|------------------|------------------|------------------]



================================================================================
Installation Complete
---------------------

Congratulations. Vantage Access DB has been successfully installed to:

/usr/local/Tr069_db
Press "enter" to quit the installer.

PRESS <ENTER> TO EXIT THE INSTALLER:
[root@localhost vantage]#
```

## 2.4.2 Installing Vantage Access BED

**1** In the folder where you stored the installation file, enter `chmod +x Vantage_Access_BED.bin` to set it to be executable.

**2** Enter `./ Vantage_Access_BED.bin -i console` to start the installation process.

**3** Press [ENTER] at the prompt to continue.

```
[root@localhost vantage]# ./Vantage_Access_BED.bin -i console
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing CONSOLE Mode Installation...

===============================================================================
                                     (created with InstallAnywhere by Zero G)
-------------------------------------------------------------------------------




===============================================================================
Introduction
------------

InstallAnywhere will guide you through the installation of Tr069_bed.

It is strongly recommended that you quit all programs before continuing with
this installation.

Respond to each prompt to proceed to the next step in the installation.  If you
want to change something on a previous step, type 'back'.

You may cancel this installation at any time by typing 'quit'.

PRESS <ENTER> TO CONTINUE:
```

**4** Specify the file location or press [ENTER] to accept the default location and continue.

```
===============================================================================
Get User Input
--------------

Enter requested information

Choose installation folder:  /usr/local (DEFAULT: Tr069_bed)
   :
```

**5** Enter a number to specify the location for the shortcut or press [ENTER] to create the shortcut in the default location and continue.

```
================================================================================
Choose Link Location
--------------------

Where would you like to create links?

  ->1- Default: /root
    2- In your home folder
    3- Choose another location...

    4- Don't create links

ENTER THE NUMBER OF AN OPTION ABOVE, OR PRESS <ENTER> TO ACCEPT THE DEFAULT
      :
```

**6** Enter the IP address of the computer on which you installed Vantage Access DB.
If you install both Vantage Access DB and Vantage Access BED on the same computer, enter the computer IP address or 127.0.0.1.

```
================================================================================
Entering Database Address
-------------------------

Please entering database address

Database Address (DEFAULT: ):
```

**7** Verify your installation options in this screen and press [ENTER] to start the installation process.

```
================================================================================
Pre-Installation Summary
------------------------

Please Review the Following Before Continuing:

Product Name:
    Tr069_bed

Install Folder:
    /usr/local/Tr069_bed

Link Folder:
    /root

Database Address:
    192.168.252.10

Disk Space Information (for Installation Target):
    Required:  83,932,756 bytes
    Available: 4,629,377,024 bytes

PRESS <ENTER> TO CONTINUE:
```

**8** After the software component is installed successfully, press [ENTER] to exit.

```
================================================================================
Installing...
-------------

 [==================|==================|==================|==================]
 [------------------|------------------|------------------|------------------]



================================================================================
Installation Complete
---------------------

Congratulations. Tr069_bed has been successfully installed to:

   /usr/local/Tr069_bed

PRESS <ENTER> TO EXIT THE INSTALLER:
[root@localhost vantage]#
```

## 2.4.3 Installing Vantage Access HTTPD

**1** In the folder where you stored the installation file, enter `chmod +x Vantage_Access_HTTPD.bin` to set it to be executable.

2. Enter `./ Vantage_Access_HTTPD.bin -i console` to start the installation process.
3. Press [ENTER] at the prompt to continue.

```
[root@localhost vantage]# ./Vantage_Access_HTTPD.bin -i console
Preparing to install...
Extracting the JRE from the installer archive...
Unpacking the JRE...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...

Launching installer...

Preparing CONSOLE Mode Installation...

===============================================================================
                                        (created with InstallAnywhere by Zero G)
-------------------------------------------------------------------------------




===============================================================================
Introduction
------------

InstallAnywhere will guide you through the installation of Tr069_httpd.

It is strongly recommended that you quit all programs before continuing with
this installation.

Click the 'Next' button to proceed to the next screen. If you want to change
something on a previous screen, click the 'Previous' button.

You may cancel this installation at any time by clicking the 'Cancel' button.

PRESS <ENTER> TO CONTINUE:
```

4. Specify the file location or press [ENTER] to accept the default location and continue.

```
===============================================================================
Choose Install Folder
---------------------

Select a folder which you would like to install Vantage Access HTTPD.
Where Would You Like to Install?

Choose installation folder:  /usr/local/ (DEFAULT: Tr069_httpd)
   :
```

**5** Enter a number to specify the location for the shortcut or press [ENTER] to create the shortcut in the default location and continue.

```
================================================================================
Choose Link Location
--------------------

Where would you like to create links for Vantage FW Server?

  ->1- Default: /root
    2- In your home folder
    3- Choose another location...

    4- Don't create links

ENTER THE NUMBER OF AN OPTION ABOVE, OR PRESS <ENTER> TO ACCEPT THE DEFAULT
      :
```

**6** Specify the user name and password to log into the Vantage Access HTTPD server. You can use the default settings or enter the information in the fields provided.

Remember this user name and password as you will need this information later. Press [ENTER] to continue.

```
================================================================================
Entering username
-----------------

Please entering username for Vantage Access HTTPD. Valid characters include a-z, A-Z
0-9. Default value is "zyxel".

Username (DEFAULT: zyxel):




================================================================================
Enter password
--------------

Please entering password for Vantage Access HTTPD, Valid characters include a-z, A-Z
0-9. Default value is "1234".

Password (DEFAULT: 1234):
```

**7** Specify a port number for the HTTP server and press [ENTER].

**If you install Vantage Access BED and Vantage Access HTTPD on the same computer, enter a different port number other than 80 in this screen. For example, 8080.**

```
===============================================================================
Enter port
----------

Please entering port for Vantage Access HTTPD, Valid port number between 1 to 65535.
Default value is 80.
Notice:
HTTP server and Vantage Access can run at the same computer just when they use
different port number.Port number of HTTP server can be set to except 80(80 is used by
Vantage Access.).

Port (DEFAULT: 80): 8080
```

**8** Verify your installation options in this screen and press [ENTER] to start the installation process.

```
===============================================================================
Pre-Installation Summary
------------------------

Please Review the Following Before Continuing:

Product Name:
    Tr069_httpd

Install Folder:
    /usr/local/Tr069_httpd

Link Folder:
    /root

Disk Space Information (for Installation Target):
    Required:  79,164,926 bytes
    Available: 4,512,309,248

PRESS <ENTER> TO CONTINUE:
```

**9** After the software component is installed successfully, press [ENTER] to exit. It is recommended that you reboot your computer.

```
================================================================================
Installing...
-------------

 [==================|==================|==================|==================]
 [------------------|------------------|------------------|------------------]



================================================================================
Installation Complete
---------------------

Congratulations. Tr069_httpd has been successfully installed to:

/usr/local/Tr069_httpd

Recommand, reboot your computer!

PRESS <ENTER> TO EXIT THE INSTALLER:
[root@localhost vantage]#
```

**10** Restart your computer.

## 2.5 Starting Vantage Access

After the installation, you need to start the Vantage Access DB, BED and HTTPD services. You can do this in one of two ways,

- Enter `./start.sh` in the folders (`Tr_069_db`, `Tr_069_bed` and `Tr_069_httpd`).
- If you choose to create shortcuts during the installation process, you can also use the shortcuts in your home directory (`./root`) or specific location(s) to start Vantage Access.

The following figure shows how to start Vantage Access using the `./start.sh` command for each software component.

```
[root@localhost Tr069_db]# ./start.sh
Starting mysqld daemon with databases from /usr/local/Tr069_db/mysql/data

########################################################################
Vantage_Access_DB started successfully!
########################################################################

[root@localhost Tr069_db]# cd /usr/local/Tr069_bed
[root@localhost Tr069_bed]# ./start.sh

Starting tr069 server....success
Starting httpd...success

########################################################################
Vantage Access BED started successfully
########################################################################

[root@localhost Tr069_bed]# cd /usr/local/Tr069_httpd
[root@localhost Tr069_httpd]# ./start.sh

#############################################################################
#
Vantage Access HTTPD started successfully from /usr/local/Tr069_httpd
Version: 1.0.47.81.00_B2        Date: 2006-08-04
#############################################################################
#
[root@localhost Tr069_httpd]#
```

## 2.6 Stopping Vantage Access

You can stop Vantage Access DB, BED and HTTPD services in one of two ways,

- use the ./stop.sh command in the folders (`Tr_069_db`, `Tr_069_bed` and `Tr_069_httpd`).
- If you choose to create shortcuts during the installation process, you can also use the shortcuts in your home directory (`./root`) or specific location(s) to stop Vantage Access services.

The following figure shows how to stop Vantage Access services using shortcuts in the home directory.

```
[root@localhost root]# ls
manaconda-ks.cfg       LaunchVantageAccess_DB    Vantage_Access_BED.bin
install.log            Vantage_Access_DB.bin     install.log.syslog
StopVantageAccess_BED  Vantage_Access_HTTPD.bin  LanuchVantageAccess_HTTPD
StopVantageAccess_DB   LaunchVantageAccess_BED   StopVantageAccess_HTTPD
[root@localhost root]#
[root@localhost root]# ./StopVantageAccess_BED
################################################################################
###                  Vantage_Access_DB shutdown successfully!              ###
################################################################################
[root@localhost root]#
[root@localhost root]# ./StopVantageAccess_BED
Stopping httpd....success
Stopping tr069 server....success

################################################################################
Vantage Access BED stopped successfully
################################################################################

No watchdog is running.
[root@localhost root]# ./StopVantageAccess_HTTPD
################################################################################
Vantage Access HTTPD shutdown successfully
################################################################################
[root@localhost root]#
```

# 3

# The Web Configurator

This chapter provides the minimum requirements to use the web configurator, describes how to access the web configurator, and explains each part of the main screen in the web configurator.

## 3.1 Web Browser Requirements

The web configurator is a browser-based interface that you can use to set up, manage, and use Vantage Access. You can access it on the Vantage Access server or on a different computer. Your web browser should meet the following requirements:

- Internet Explorer 6.0
- JavaScript enabled
- Macromedia Flash Player plugin 7 or later
- Recommended screen resolution: 1024 x 768 pixels

## 3.2 Login Accounts

Vantage Access provides three login account types with different privilege levels. The web configurator screens and privileges vary depending on which account you use to log in. The following table shows the default user name and password for the different login accounts.

**Table 1** Default Login Accounts

| TYPE | DEFAULT SETTINGS |
|---|---|
| Root | User name: root<br>Password: root |
| Administrator | User name: admin<br>Password: admin |
| Guest | User name: guest<br>Password: guest |

Refer to Table 7 on page 69 for more information on the login accounts.

## 3.3 Accessing the Web Configurator

To access the web configurator, follow these steps:

1 Start Vantage Access (refer to the quick start guide).

2 Open a web browser, and enter “http://a.b.c.d”, where “a.b.c.d” is the IP address of the Vantage Access server (for example, http://10.10.10.1).

If you open the web configurator on the same computer Vantage Access is installed, you can also enter “http://localhost”.

3 A **Login** screen displays as shown. Specify the **User Name** and **Password** fields.

**Figure 2** Web Configurator: Login Screen

4 Click **Login**.

**If you enter the wrong password three times for a user name, you have to wait for 10 minutes before Vantage Access allows you to log in again with the same user name.It is recommended that you change the default administrator login password after the first login. Refer to Chapter 5 on page 69 for more information.**

5 If you did not properly log out previously, a screen displays as shown. Enter the user name and password again and click **Login**.

**Figure 3** Web Configurator: Force Relogin Screen

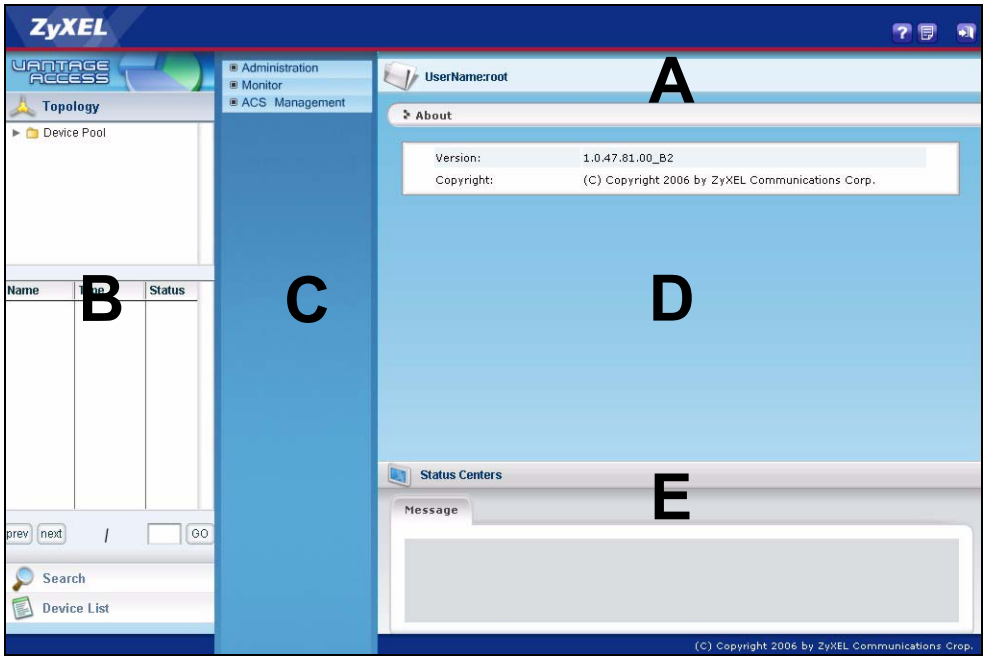
6 The main Vantage Access screen displays.

**If there is no activity for more than 15 minutes, the web configurator automatically logs you out. If this happens to you, simply log back into the web configurator again.**

## 3.4 The Main Vantage Vantage Access Screen

This section describes the parts of the Vantage Access screens.

**Figure 4** Web Configurator Main Screen




The web configuration screen is divided into the following parts:

- The title bar (**A**)
  The title bar displays the link path.
- The device window (**B**)
  The device window displays the ZyXEL devices that are managed by the Vantage Access. You can also configure and view the logical groupings of the managed ZyXEL devices.
- The function window (**C**)
  The function window displays the list of navigation links that you click to access configuration or log screens.
- The configuration window (**D**)
  The configuration window displays the configuration screens that you set for Vantage Access or a selected device.
- The status center (**E**)
  The status center displays real-time log information.

**For security reasons, Vantage Access automatically times out after fifteen minutes of inactivity. Log in again if this happens.**

## 3.5 Title Bar

The following table describes the icons in the title bar.

**Table 2** Title Bar Icon Description

| ICON | DESCRIPTION |
|---|---|
| | This icon opens a screen that displays the version of Vantage Access. |
| | This icon opens the help page for the current screen in Vantage Access. |
| | This icon logs you out of Vantage Access. |

## 3.6 Device Window

Use the device window to view the logical network topology, search for a device, view general device status or select which device(s) you want to edit configuration settings.

## 3.7 Device List

The **Device List** screen displays when you select a device or a device group in the device window. Use this screen to view detailed device information (such as the MAC address, firmware version and the registration status).

**Figure 5** Device List

The following table describes the labels in this screen.

**Table 3** Device List

| LABEL | DESCRIPTION |
|---|---|
| Device List | |
| Index | This field displays the index number. |
| Device Name | This field displays the descriptive name or MAC address of a ZyXEL device. |

**Table 3** Device List (continued)

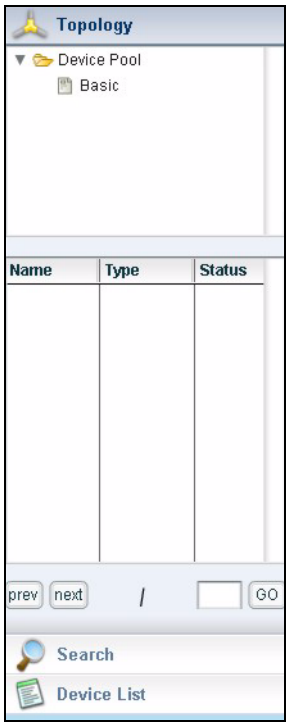
| LABEL | DESCRIPTION |
|---|---|
| Type | This field displays the MAC address or model of a ZyXEL device. For example, P-2602R. |
| Software Version | This field displays the firmware version the ZyXEL device is currently running. |
| Status | This field displays the registration status.<br>**Off** means that the device registration process is successful.<br>**None** indicates an incomplete or failed device registration.<br>**Upgrading** indicates that firmware upgrade is currently in progress on the ZyXEL device. |
| Owner | This field displays the name of the administrator who is responsible for this ZyXEL device. |

## 3.7.1 Topology

You can view the logical network topology in the Topology screen in the device window. You can also create, delete or rename a device group folder in the Topology screen.

In the Topology screen, you can only view the group folder(s) for your login account. You cannot view the group folders created by another user.

**Figure 6** Device Window: Topology




The following table describes the labels in the Device window.

**Table 4** Device Window: Topology

| LABEL | DESCRIPTION |
|---|---|
| Topology | Click **Topology** to display device groups in a tree structure. |
| Name | This field displays the descriptive name or MAC address of a ZyXEL device. |

**Table 4** Device Window: Topology (continued)

| LABEL | DESCRIPTION |
|---|---|
| Type | This field displays the model number of a ZyXEL device. For example, P-2602R. |
| Status | This field displays the registration status.<br>**Off** means that the device registration process is successful.<br>**None** indicates an incomplete or failed device registration.<br>**Upgrading** indicates that firmware upgrade is currently in progress on the ZyXEL device. |
| prev | Click **prev** to go to the previous screen in the device list. |
| next | Click **next** to go to the next screen in the device list. |
| Go | Enter a page number and click **Go** to display that screen of the device list. |
| Search | Click **Search** to look for a device. |
| Device List | Click **Device List** to display a list of devices that Vantage Access can manage. |

### 3.7.1.1 Creating a Group Folder

Topology group folders allow you to group managed ZyXEL devices logically. You can add or delete ZyXEL device(s) in a group. The following steps show you how to create a device group folder in the Topology screen.

1. In the device window, click **Topology.**
2. Right-click on **Device Pool** and click **Add Group**.

**Figure 7** Device Window: Topology: Add a Group

3. The screen displays as shown. Enter a descriptive name for the group and click **Save**.

**Figure 8** Device Window: Topology: Add Group

4. A new folder icon displays.

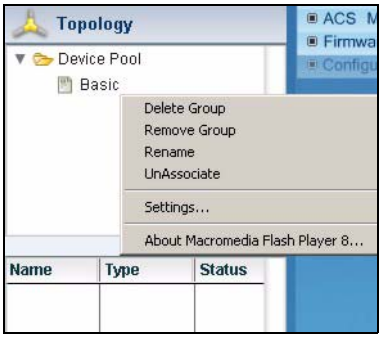
### 3.7.1.2 Deleting a Group

Deleting a group removes the association between the device(s) and the group folder. It does not delete the devices.

Follow the steps below to delete a group.

1 In the device window, click **Topology**.
2 Right-click on a group folder and click **Delete Group**.

**Figure 9** Device Window: Topology: Delete Group




3 A warning screen displays.
Click **OK** to delete.
Click **Cancel** to close this screen without deleting the selected group.

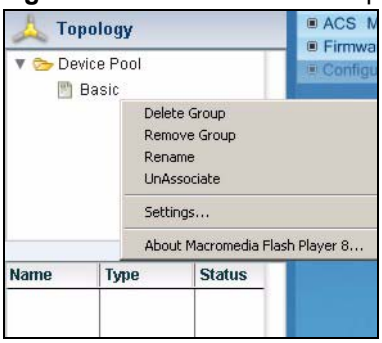
**Figure 10** Device Window: Topology: Delete Group Prompt

### 3.7.1.3 Removing a Group

When you remove a group, you delete the group folder and all the associated device(s).

1 In the device window, click **Topology**.
2 Right-click on a folder and click **Remove Group**.

**Figure 11** Device Window: Topology: Remove a Group



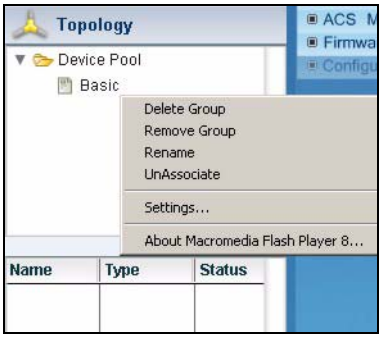

3 A warning screen displays.
Click **OK** to delete.
Click **Cancel** to close this screen without deleting the selected group.

**Figure 12** Device Window: Topology: Remove Group

### 3.7.1.4 Renaming a Group Folder

1. In the device window, click **Topology.**
2. Right-click on a folder and click **Rename**.

**Figure 13** Device Window: Topology: Rename




3. Specify a unique, descriptive name (up to 64 alphanumerical characters including 0-9, a-z, A-Z , _, -) in the **Name** field and click **Save**.

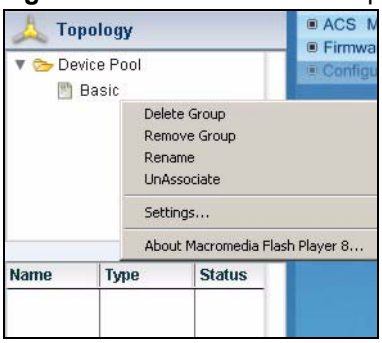
**Figure 14** Device Window: Topology: Change Name

### 3.7.1.5 Unassociating a Device Group

You can unassociate a device group from the account. This will also unassociate all devices in the device group from the account.

1. In the device window, click **Topology**.
2. Right-click on a group folder and click **UnAssociate**.

**Figure 15** Device Window: Topology: UnAssociate




3 A warning screen displays.

Click **OK** to unassociate the device group (including all the devices in the group) from the account.

Click **Cancel** to close this screen without any actions.

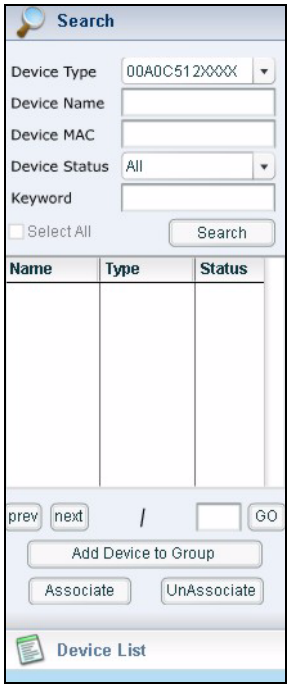
**Figure 16** Device Window: Topology: Remove Group

## 3.7.2 Device Search

Use the **Search** function in the device window to look for a device.

1 In the device window, click **Search**.

**Figure 17** Device Window: Search




2 Specify the search criteria (the **Device Type**, **Device Name**, **Device MAC**, **Device Status** and **Keyword** fields) and click **Search**.

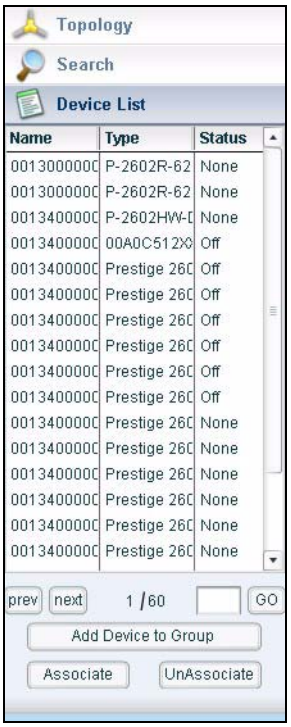
3 Vantage Access displays the device(s) that match any of the search criteria. Refer to Table 4 on page 49 for information on device information fields and navigation.

After the device(s) are found, you can add the selected device(s) to a group, associate or un-associate the device(s). Refer to Section 3.7.3 on page 54 for more information.

## 3.7.3 Device List

To view a list of ZyXEL devices in Vantage Access, click **Device List** in the device window. When you log in as root, this screen display all devices in Vantage Access. As an administrator, you can only view the device(s) associated to your account. When you log in as a guest, you can view the device(s) associated with the administrator that created your guest account.

**Figure 18** Device Window: Device List




The following table describes the labels in this screen.

**Table 5** Device Window: Device List

| LABEL | DESCRIPTION |
|---|---|
| Device List | |
| Name | This field displays the descriptive name or MAC address of a ZyXEL device. |
| Type | This field displays the model number of a ZyXEL device. For example, P-2602R. |
| Status | This field displays the registration status.<br>**Off** means that the device registration process is successful.<br>**None** indicates an incomplete or failed device registration.<br>**Upgrading** indicates that firmware upgrade is currently in progress on the ZyXEL device. |
| prev | Click **prev** to go to the previous screen in the device list. |
| next | Click **next** to go to the next screen in the device list. |
| Go | Enter a page number and click **Go** to display that screen of the device list. |
| Add Device to Group | Click this button to add the select device(s) to a group. See Section 3.7.3.1 on page 55. |
| Associate | This button is available when you log into Vantage Access as a root.<br>Click this button to associate the selected device(s) to an administrator or a guest account. See Section 3.7.3.2 on page 56. |
| UnAssociate | This button is available when you log into Vantage Access as the root or administrator.<br>Click this button to un-associate the selected device(s) from an administrator or a guest account. |

### 3.7.3.1 Adding a Device to a Group

Follow the steps below to add a device to a group.

1. In the device window, click **Device List**.
2. Select the device(s) in the list. To select more than one device, hold down the [CTRL] key and click. To select a range of devices, hold down the [SHIFT] key and click at the same time. Then click **Add Device to a Group**.
3. In the **Group Name** field, select the name of the group you want to associate the devices and click **Save**.

**Figure 19** Device Window: Device List: Add Device to Group

### 3.7.3.2 Associating a Device to an Account

To associate a device to an administrator account, log into the web configurator as root.

1. In the device window, click **Device List**.
2. Select the device(s) in the list. To select more than one device, hold down the [CTRL] key and click. To select a range of devices, hold down the [SHIFT] key and click at the same time. Then click **Associate**.

**Figure 20** Device Window: Device List: Associate

3. In the **User Name** field, select an administrator account user name and click **Save**.
4. A prompt screen displays if the selected device(s) is already associated to another administrator account.

   Click **OK** to associate the device(s) to the selected administrator account. The device(s) will be un-associated from the exiting administrator account. Click **Cancel** to discard the settings and close this screen.

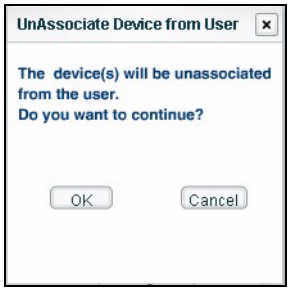
**Figure 21** Device Window: Device List: Associate: Prompt

#### 3.7.3.3 Un-associating a Device from an Account

To un-associate a device from an administrator account, log into the web configurator as root.

1. In the device window, click **Device List**.
2. Select the device(s) in the list. To select more than one device, hold down the [CTRL] key and click. To select a range of devices, hold down the [SHIFT] key and click at the same time. Then click **UnAssociate**.
3. A prompt screen displays.
   Click **OK** to un-associate the device(s) from the administrator account. Click **Cancel** to discard the settings and close this screen.

**Figure 22** Device Window: Device List: UnAssociate




### 3.7.4 Right-click Menu

In the device window, if you right-click without selecting a device first, the following menu display.

**Figure 23** Device Window: Right-click Menu

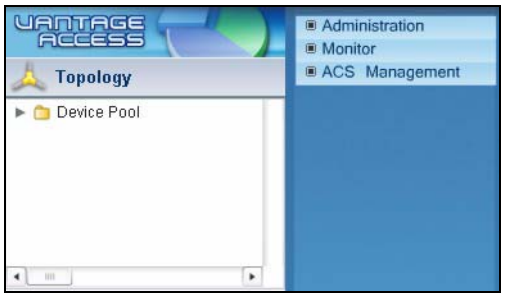
Click **Settings...** if you want to change the Flash settings on Vantage Report. In most cases, this is unnecessary. Click **About Macromedia Flash Player ...** to get information about the current version of Flash.

## 3.8 Function Window

Use the function window to navigate to and display the screens. These screens are organized into different menus. Main menu items available in the function window vary depending your login account type and whether you have selected a device or device group.

The following main menu displays for a root login.

**Figure 24** Function Window: Main Menu: Root Login

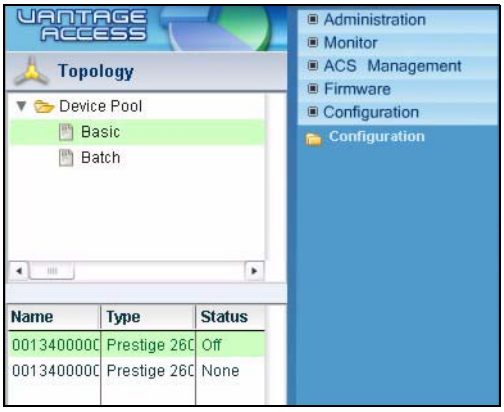



The following main menu displays when you log in as an administrator.

**Figure 25** Function Window: Main Menu: Administrator Login

The Configuration menu is applicable in the main menu when you select a device in the Device window.

**Figure 26** Function Window: Main Menu: Device Configuration



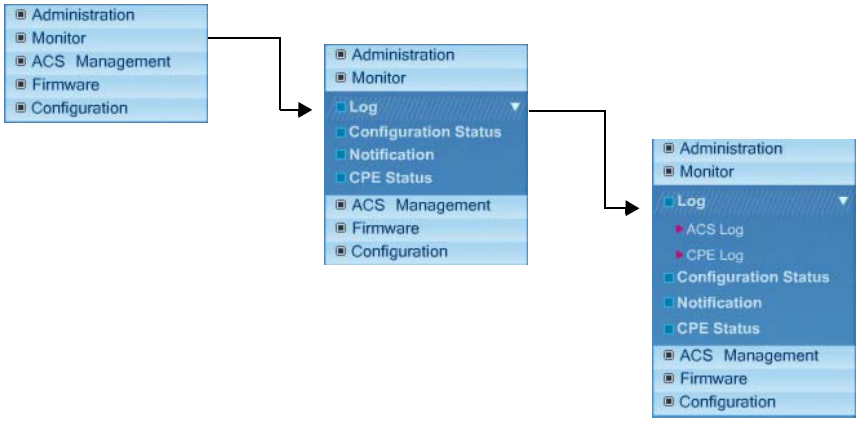

The Group Configuration menu is applicable in the main menu when you select a device group in the Device window.

**Figure 27** Function Window: Main Menu: Device Group Configuration

**To open a Configuration screen, select a device in the Device window. To open a Group Configuration screen, select a device group in the Device window.**

Click on each top-level menu item to look at the second-level menu items. If a small triangle appears on the right side next to the menu item, then click on the second-level menu item to look at the third-level menu items. The following shows an example.

**Figure 28** Function Window




**You can only expand one second-level or third-level menu at one time. If you expand another one, the previous one automatically contracts.**

The following table describes the menus.

**Table 6** Function Window: Menu Summary

| MENU | DESCRIPTION |
|---|---|
| Administration | |
| Management | This link takes you to screens where you can create, delete and view login accounts. |
| Monitor | |

**Table 6** Function Window: Menu Summary (continued)

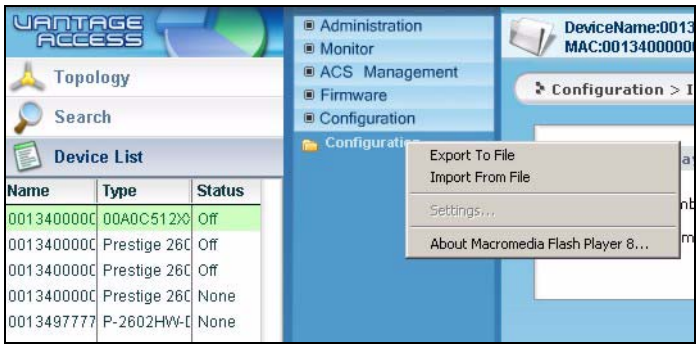
| MENU | DESCRIPTION |
|---|---|
| Logs | |
| ACS Logs | This link takes you to a screen where you can view the Vantage Access system logs. |
| CPE Logs | This link takes you to a screen where you can view the logs of a selected ZyXEL device. |
| Configuration Status | This link takes you to a screen where you can view the list of configuration changes waiting to be applied to the selected ZyXEL device. |
| Notification | This link takes you to a screen where you can view a list of configuration changes that have been applied to and successfully updated on the selected ZyXEL device. |
| CPE Status | This link takes you to a screen where you can view the current settings (for example, the WLAN status) of the selected ZyXEL device. |
| ACS Management | |
| Import Devices | This link takes you to a screen where you can import devices and XML files to the Vantage Access. You must do this to register a ZyXEL device. |
| Files Management | This link takes you to a screen where you view and download backup log/ configuration files. |
| Maintenance | |
| Management | This link takes you to a screen where you can view a list of backup files. You can use this screen to delete the backup files from the Vantage Access database and the HTTP server. |
| Restore | This link takes you to a screen where you can restore configuration to the Vantage Access from a previous backup file. |
| Backup | This link takes you to a screen where you can back up the current Vantage Access to the HTTP server or to a computer. |
| HTTP Server | This link takes you to a screen where you can specify the HTTP server for file transfer. |
| Log Options | This link takes you to a screen where you can select the types of logs you want the Vantage Access to store. |
| Log Setting | This link takes you to a screen where you can specify how long the Vantage Access will keep the logs. Once the time is reached, the Vantage Access backs up the logs and remove it from the database. |
| Firmware | |
| Firmware Management | This link takes you to screens you use to view or add firmware files to the web server. |
| Firmware Upgrade | This link takes you to a screen where you can view the firmware list and set automatic firmware upgrade schedule. |
| Manual Upgrade List | This link takes you to a screen where you can view the list of manual device firmware upgrades. |
| Scheduled Upgrade List | This link takes you to a screen where you can view the list of scheduled device firmware upgrades. |
| Configuration | This link takes you to screens where you can view and edit configuration settings on the selected device or device group. |
| Group Configuration | This link takes you to screens where you can edit common configuration settings for all devices in a device group. |

### 3.8.1 Function Window Right-Click Menu

The right-click menu is available for the **Configuration** and the **GroupConfiguration** links under the **Configuration** menu. You can use the right-click options to backup or restore device configuration. Refer to Chapter 14 on page 107 for more information.

The following shows the right-click menu on the Configuration link for a single device.

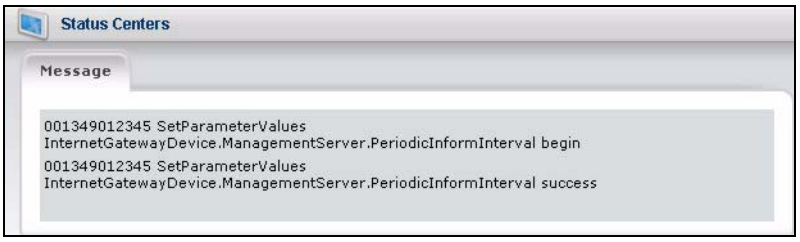
**Figure 29** Function Window: Right-click Menu




## 3.9 Message Window

Click the **Status Center** tab to display the message window. The message window shows real-time system and device configuration logs. You can also view the logs in the **ACS Log** and **CPE Log** screens.

**Figure 30** Message Window Example




## 3.10 About Vantage Access

The **About** screen is the first screen that displays every time you log into Vantage Access. Use this screen to check the version of your Vantage Access.

**Figure 31** About

To display the software version information in a pop-up screen, click the about icon in the title bar.

**Figure 32** About: Pop-up

# 4

# Initial Setup

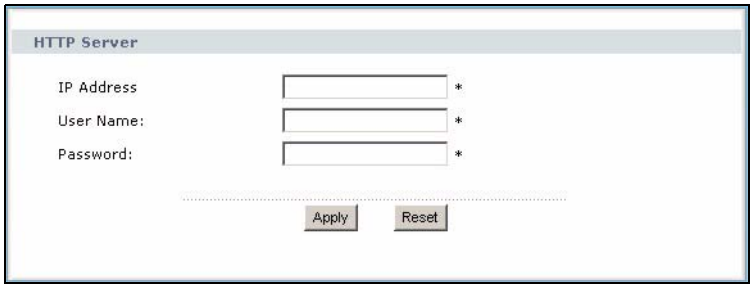
This chapter shows you how to set the HTTP server and register a ZyXEL device in Vantage Access.

## 4.1 Specifying an HTTP Server

You must specify an HTTP server to store device firmware files and perform automatic remote firmware upgrades on the ZyXEL devices.

1. Log into the web configurator as root (the default user name is “root” and the default password is “root”).
2. Click **ACS Management > HTTP Server** to display the configuration screen.

**Figure 33** ACS Management: HTTP Sever




3. In the **IP Address** field, enter the IP address of the HTTP server in dotted decimal notation.

**If the HTTP server and Vantage Access are installed on the same computer, you must use a different port number for the HTTP server and specify the port number. For example, if the HTTP server (192.168.100.1) is using port 8080, then enter “192.168.100.1:8080” in the IP Address field.**

4. Set the **User Name** and **Password** fields to access the HTTP server. If you have changed the default settings (“ZyXEL” and “1234”) during the installation process, enter the new account information. The account user name and password are case sensitive.
5. Click **Apply** to save the settings.

## 4.2 Registering a Device

You must register a ZyXEL device to Vantage Access to allow remote management.

To register a ZyXEL device, to do the following:

- Edit and import a device XML file to Vantage Access.
- Configure the ZyXEL device to allow remote management from Vantage Access.

### 4.2.1 Importing Device XML File

A device XML file contains basic information (such as the device type and MAC address) of the ZyXEL device. A device XML template file is included with the firmware that you download from www.zyxel.com.

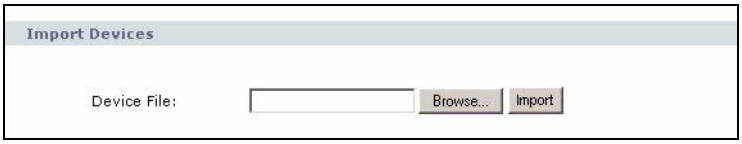
1. Edit the device XML file for your ZyXEL device. Specify the device name, device MAC address and device type. The following shows an example.

**Figure 34** Sample Device XML File

```
<?xml version="1.0" encoding="UTF-8"?>
<Template xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <Device>
    <deviceName>001349777777</deviceName>
    <MAC>001349777777</MAC>
    <deviceType>P-2602HW-D1A</deviceType>
  </Device>
</Template>
```

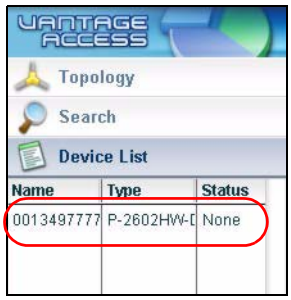
2. Log into Vantage Access and click **ACS Management > Import Devices**.

**Figure 35** ACS Management: Import Device




3. In the **Device File** field, specify the location and name of the XML file or click **Browse** to locate it. Then click **Import**.
4. When the file import is successful, you should see the new entry in the **Device List** panel.
5. If you cannot see the new entry, check the system logs and make sure the XML file format is correct.

**Figure 36** Device List: Check New Device




## 4.2.2 ZyXEL Device Setting

You must configure the ZyXEL device to allow remote management from Vantage Access. Refer to the user's guide that comes with your ZyXEL device for more information. The following shows how to enable TR-069 communication protocol between a ZyXEL DSL device and Vantage Access. Steps are similar on ZyXEL VoIP device.

1 To activate TR-069 on the ZyXEL device, access the CLI and enter the following commands.

| | |
|---|---|
| `wan tr load` | Enable TR-069 configuration. |
| `wan tr active 1` | Activate TR-069 remote management. |
| `wan tr acsUrl 172.25.21.174/TR069` | Sets the IP address of the Vantage Access server. For example, 172.25.21.174. |
| `wan tr periodicEnable 1` | Enable periodic information update to the server. |
| `wan tr informInterval 30` | Set the information update time. For example, 30 seconds. |
| `wan tr debug on` | Enable TR-069 debug mode to view logs. |
| `wan tr save` | Saves the settings. |
| `wan tr reset` | Set the device to register to the Vantage Access server. |

2 Once connected to the network, the ZyXEL device automatically locates and registers to the Vantage Access server.

**For initial setup, the registration process may take several minutes (depending on your network condition).**

3 Check the device status in the **Device List** panel. If the status is **Off**, this indicates that device registration is successful and that Vantage Access has stored the ZyXEL device information to its database.

**Figure 37** Device List: Check Registered Device

You can now select the device and use the **Configuration** screens in Vantage Access to remotely configure this ZyXEL device.

# PART II Management and Logs

This part contains the following chapters.


- Account Management (69)
- Log (75)
- Import Device (83)
- Files Management (87)
- System Maintenance (89)
- HTTP Server (93)
- Log Setup (95)

# 5

# Account Management

This chapters describes the **Management** screens you use to create and delete Vantage Access accounts.

## 5.1 Types of Accounts

Vantage Access provides three account types with different privilege levels. The web configurator screens vary depending on which account you use to log in. The following table describes and shows the default user name and password for the different accounts.

**Table 7** Types of Accounts

| TYPE | PRIVILEGE | DEFAULT SETTINGS |
|---|---|---|
| Root | • Create administrator and guest accounts.<br>• Easily log in as another account from within the web configurator.<br>• Associate/un-associate ZyXEL devices to administrator accounts.<br>• Import ZyXEL device information to Vantage Access.<br>• Log file management.<br>• General Vantage Access setup (such as HTTP server settings). | User name: root<br>Password: root |
| Administrator | • Create subscriber accounts.<br>• View and configure associated devices.<br>• Device firmware upgrade.<br>• Import ZyXEL device information to Vantage Access. | User name: admin<br>Password: admin |
| Guest | • View information of devices assigned to the administrator or the root who created this guest account. | User name: guest<br>Password: guest |

## 5.2 Account Management

You can view the list of accounts in the **Management** screen.

The root user can view and edit all accounts created on Vantage Access. Administrators can only view and edit their own accounts and the guest account(s) created.

Click **Administration** > **Management** to display the screen.

**Figure 38** Administration: Management

The following table describes the labels in this screen.

**Table 8** Administration: Management

| LABEL | DESCRIPTION |
|---|---|
| # | Select this box and click **Delete** to remove the login account. |
| Index | This field displays the index number of the entry. |
| Name | This field displays the name of the user. |
| Login ID | This field displays the login account user name.<br>Click the link to edit the account information. |
| Status | This field displays whether the login account is currently in use (**login**) or not (**logout**). |
| Entry | This field is available for the root user.<br>Click **Easy Login** to log into Vantage Access using the login account. You are not required to enter the user name or password. The system will automatically log out the root account. |
| Level | This field displays the type of the login account. |
| Description | This field displays additional information about the login account. |
| Next | Click **Next** to go to the next screen. |
| First | This link is not available in the first screen.<br>Click **First** to return to the first screen. |

**Table 8** Administration: Management (continued)

| LABEL | DESCRIPTION |
|---|---|
| Prev | Click **Prev** to go to the previous screen. |
| Last | This link is not available in the last screen.<br>Click **Last** to go to the last screen. |
| Go | Enter a page number and click **Go** to display the accounts in that screen. |
| Add | Click **Add** to create an account. |
| Delete | Click **Delete** to remove the selected account(s).<br>As a root, you cannot delete an administrator account with guest account(s). You must delete the associated guest account(s) before you can delete the administrator account.<br>**Note: You cannot delete an account that is currently in use.** |

## 5.3 Deleting an Account

The following lists the rules for deleting accounts from Vantage Access.

- The root account cannot be deleted.
- A root user can delete any account except the default “admin” and “guest” accounts.
- You cannot delete an account that is currently used to log into Vantage Access.
- An administrator cannot remove any guest accounts created by another administrator.

Follow the steps below to remove an account from Vantage Access.

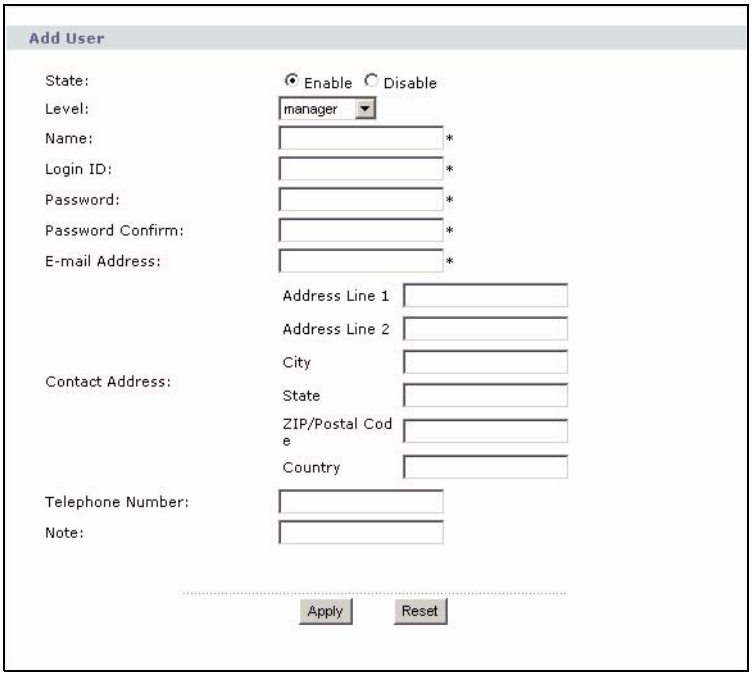
1. Log into the web configurator as root or administrator and click **Administration** > **Management**.
2. Select one or more accounts and click **Delete**.
3. A pop-up screen displays. Click **OK** to remove the account. Otherwise click **Cancel**.

**Figure 39** Administration: Management: Delete Account Prompt

## 5.4 Creating an Account Add User

To create an account, click **Add** in the **Management** screen. Fields with asterisks “*” are required information and cannot be left blank.

**Figure 40** Administration: Management: Add User




The following table describes the labels in this screen.

**Table 9** Administration: Management: Add User

| LABEL | DESCRIPTION |
|---|---|
| State | Select **Enable** to activate this account.<br>Select **Disable** to deactivate this account. In this case, you cannot log in using this account. |
| Level | Specify the account type. The available options vary depending on the type of your current account. Refer to Table 7 on page 69 for information on the account types.<br>Select **manager** to create an administrator account for device configuration.<br>Select **subscriber** to create a read-only guest account. |
| Name | Enter the name of the person using this login account. You can enter up to 250 characters (0-9, A-Z, a-z, -, _ with no spaces). |
| Login ID | Specify the user name for this administrator account. You can enter up to 32 characters (0-9, A-Z, a-z, -, _ with no spaces). |
| Password | Specify the password associated to this login account. You can enter up to 12 characters (0-9, A-Z, a-z, -, _ with no spaces). The characters are displayed as asterisks “*” in this field. |
| Password Retype | Specify the login password again for confirmation. |
| Email Address | Specify the e-mail address (up to 80 characters) of the person using this administrator account. You must enter a valid e-mail address in the format accountName@domain.com |
| Contact Address | Specify a mailing address of the person using this administrator account. This information is optional. |
| Address Line 1.. 2 | Specify the street address in these fields. You can enter up to 80 characters (0-9, A-Z, a-z, -, _ and spaces are allowed). |
| City | Specify the name of the city for the contact address. You can enter up to 80 characters (0-9, A-Z, a-z, -, _ and spaces are allowed). |
| State | Specify the name of the province or state. You can enter up to 80 characters (0-9, A-Z, a-z, -, _ and spaces are allowed). |

**Table 9** Administration: Management: Add User (continued)

| LABEL | DESCRIPTION |
|---|---|
| ZIP/Postal Code | Specify the ZIP or postal code. You can enter up to 80 characters (0-9, A-Z, a-z, -, _ and spaces are allowed). |
| Country | Specify the name of the country. You can enter up to 80 characters (0-9, A-Z, a-z, -, _ and spaces are allowed). |
| Telephone Number | Specify the complete telephone number (including the area code). You can enter up to 80 characters (0-9, -, (, ), # and + are allowed). |
| Note | Enter additional information about this login account. You can enter up to 80 characters (0-9, A-Z, a-z, -, _ and spaces are allowed). |
| Apply | Click **Apply** to save the settings and return to the main **Management** screen. |
| Reset | Click **Reset** to start configuring this screen again. |

## 5.5 Editing Account Information Update User

You can use the **Update User** screen to change the password or contact information of an account.

**You cannot change the account settings when a user is currently logged in using the account.**

1. Log into the web configuration and click **Administration > Management**.
2. Click the **Login ID** link of a login account not currectly in use. The **Update User** screen displays.
3. Change the information in the applicable fields. Refer to Table 9 on page 72 for field descriptions.

# 6

# Log

This chapters describes the **Log** screens you use to view logs, configure log settings and maintain log files.

## 6.1 Log Overview

Vantage Access stores two types of logs: device and system logs.

- Device logs contains configuration changes information and the status for the managed ZyXEL device. Every time you make device configuration changes and update to the device, Vantage Access checks the configuration status on the device and creates a device log. This allows you to review any configuration changes on the device.
- System logs relate to the configuration changes and login status in Vantage Access. For example, you can check the log to see if the device XML file import is successful.

You can configure log settings in the **Log Options** and **Log Setting** screens.

### 6.1.1 Purging Logs

The Vantage Access server automatically backs up device and system logs at midnight on a daily basis. You can still view the logs after the daily backup process until the specific time configured in the **Log Setting** screen (the default is seven days). After this time period, Vantage Access server compresses the logs in a ZIP file, saves the file to the HTTP server and removes the logs from the database.

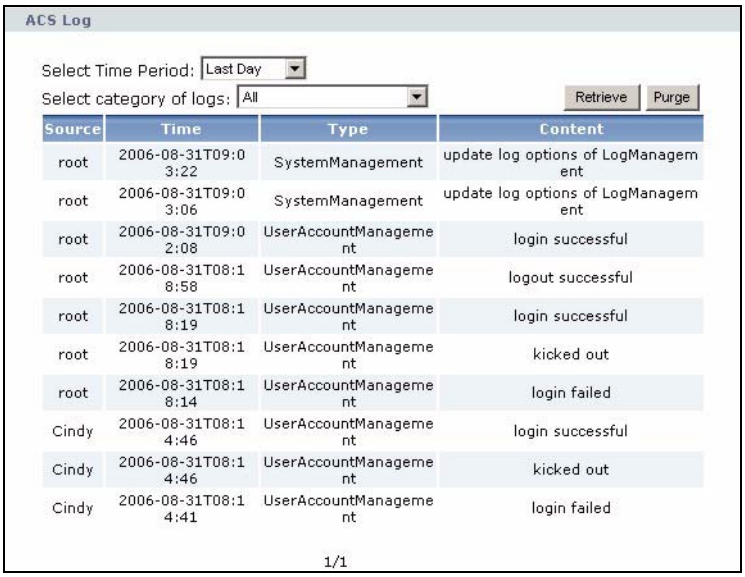
You can also manually save the logs retrieved from the system by clicking the **Purge** button in the **ACS Log** or **CPE Log** screen. Once you purge the logs, they are removed from the log screens.

When the HTTP server is down, the Vantage Access server automatically saves the backup log files to the HTTP server once it is available again.

## 6.2 Viewing ACS System Logs

View Vantage Access system logs in the **ACS Log** screen. Click **Monitor > Log > ACS Log**. The log screen displays up to 20 logs at a time.

**Figure 41** Monitor: Log: ACS Log




The following table describes the labels in this screen.

**Table 10** Monitor: Log: ACS Log

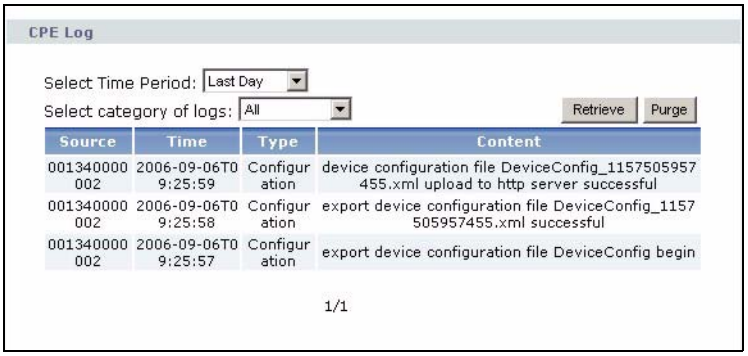
| LABEL | DESCRIPTION |
|---|---|
| Select Time Period | You can view the logs that were created since the time you specify here.<br>Select **All** to view all logs created since the last seven days. |
| Select category of logs | Select the type of logs to display or select **All** to display all logs. |
| Retrieve | Click **Retrieve** to display the logs based on your search criteria. |
| Purge | This button is available for the root account.<br>Click **Purge** to save the logs to the HTTP server and delete them from the database.<br>Once you purge the logs, you will not be able to see them in the log screens. To see purged logs, you need to open the backup log files. |
| Source | This field displays the name of the account that causes the log to be created. For example, this field displays **root** if the log event is triggered by the root account. |
| Type | This field displays the name of the log category. |
| Time | This field displays the time the log was created. |
| Content | This field displays the log message. |
| Next | Click **Next** to go to the next screen. |
| First | This link is not available in the first screen.<br>Click **First** to return to the first screen. |
| Prev | Click **Prev** to go to the previous screen. |
| Last | This link is not available in the last screen.<br>Click **Last** to go to the last screen. |
| Go | Enter a page number (1-9) and click **Go** to display the logs in that screen. |

# 6.3 Viewing CPE Device Logs

You can view the logs for the managed ZyXEL device(s) in the CPE Log screen. If you log in as the root, you can view logs for all managed ZyXEL devices.

Click a device or device group folder in the Device Window and then click **Monitor > Log > CPE Log** to display the log screen. The log screen displays up to 20 logs at a time.

**Figure 42** Monitor: Log: CPE Log




The following table describes the labels in this screen.

**Table 11** Monitor: Log: CPE Log

| LABEL | DESCRIPTION |
|---|---|
| Select Time Period | You can view the logs that were created since the time you specify here.<br>Select **All** to view all logs created since the last seven days. |
| Select category of logs | Select the type of logs to display or select **All** to display all logs. |
| Retrieve | Click **Retrieve** to display the logs based on your search criteria. |
| Purge | This button is available for the root account.<br>Click **Purge** to save the logs onto the HTTP server and delete them from the database.<br>Once you purge the logs, you will not be able to see them in the log screens. To see purged logs, you need to open the backup log files. |
| Source | This field displays the MAC address of the device causes the log to be created. |
| Type | This field displays the name of the log category. |
| Time | This field displays the time the log was created. |
| Content | This field displays the log message. |
| Next | Click **Next** to go to the next screen. |
| First | This link is not available in the first screen.<br>Click **First** to return to the first screen. |
| Prev | Click **Prev** to go to the previous screen. |
| Last | This link is not available in the last screen.<br>Click **Last** to go to the last screen. |
| Go | Enter a page number (1-9) and click **Go** to display the logs in that screen. |

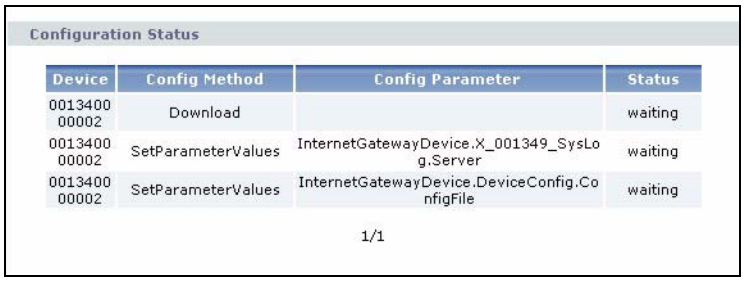
# 6.4 Configuration Status

Use the **Configuration Status** screen to view a list of configuration changes waiting to be applied and updated on the select ZyXEL device(s). You can display the list of configuration changes for one or a group of ZyXEL devices.

Only configuration changes that set the ZyXEL device to send the change status (or notification) to Vantage Access are displayed in the screen. When the ZyXEL device modifies a notification parameter, the log is removed from the **Configuration Status** screen and added to the **Notification** screen (see Section 6.5 on page 78).

Click a device or device group folder in the Device Window and then click **Monitor** > **Configuration Status** to display the screen.

**Figure 43** Monitor: Configuration Status




The following table describes the labels in this screen.

**Table 12** Monitor: Configuration Status

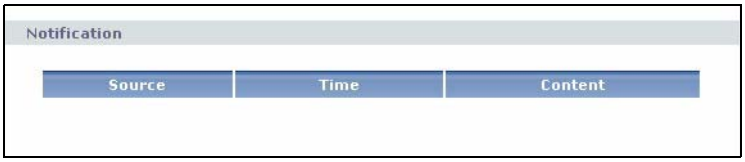
| LABEL | DESCRIPTION |
|---|---|
| Device | This field displays the MAC address of the managed ZyXEL device to which the configuration change is to be applied. |
| Config Method | This field displays the configuration action. |
| Config parameter | This field display the name of the parameter to be changed. |
| Status | This field displays the status of the configuration change. |
| Next | Click **Next** to go to the next screen. |
| First | This link is not available in the first screen.<br>Click **First** to return to the first screen. |
| Prev | Click **Prev** to go to the previous screen. |
| Last | This link is not available in the last screen.<br>Click **Last** to go to the last screen. |
| Go | Enter a page number (1-9) and click **Go** to display the logs in that screen. |

# 6.5 Notification

The **Notification** screen displays a list of change status from the managed ZyXEL device. You can display the list of change status for one or a group of ZyXEL devices.

Click a device or device group folder in the Device Window and then click **Monitor** > **Notification** to display the screen.

**Figure 44** Monitor: Notification




The following table describes the labels in this screen.

**Table 13** Monitor: Notification

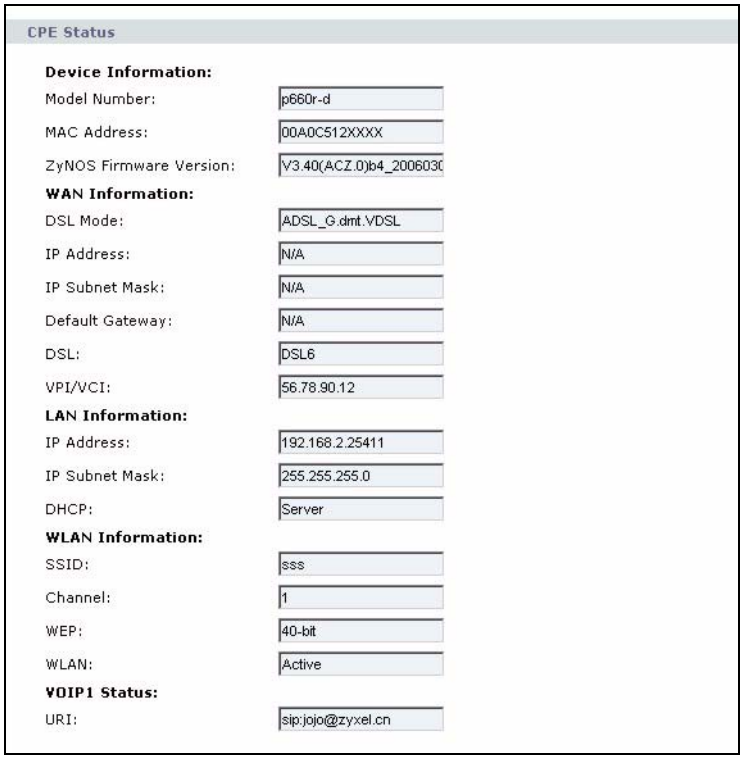
| LABEL | DESCRIPTION |
|---|---|
| Source | This field displays the MAC address of the managed ZyXEL device on which the configuration change is applied. |
| Time | This field displays the time the log was created. |
| Content | This field displays the information about the configuration change. |
| Next | Click **Next** to go to the next screen. |
| First | This link is not available in the first screen.<br>Click **First** to return to the first screen. |
| Prev | Click **Prev** to go to the previous screen. |
| Last | This link is not available in the last screen.<br>Click **Last** to go to the last screen. |
| Go | Enter a page number (1-9) and click **Go** to display the logs in that screen. |

## 6.6 CPE Status

Display the **CPE Status** screen to view the current configuration of a device. You can view information such as LAN/WAN IP addresses, the DHCP mode and WLAN status.

Click a device or device group folder in the Device Window and then click **Monitor > CPE Status** to display the screen.

**Figure 45** Monitor: CPE Status




The following table describes the labels in this screen.

**Table 14** Monitor: CPE Status

| LABEL | DESCRIPTION |
|---|---|
| Device Information | |
| Model Number | This field displays the model name of the device. |
| MAC Address | This field displays the MAC address of the device. |
| ZyNOS Firmware Version | This field displays the version of the firmware the device is currently using. |
| WAN Information | |
| DSL Mode | This field displays the WAN connection mode. |
| IP Address | This field displays the WAN IP address on the device. |
| IP Subnet Mask | This field displays the subnet mask for the WAN IP address. |
| Default Gateway | This field displays the IP address of the gateway device on the WAN. |
| DSL | This field displays whether the DSL connection is up or down. |
| VCI/VPI | This field displays the VCI and VPI numbers for the DSL connection. |
| LAN Information | |
| IP Address | This field displays the IP address on the LAN. |
| IP Subnet Mask | This field displays the subnet mask for the LAN IP address. |
| DHCP | This field displays the DHCP mode on the LAN. |
| WLAN Information | |
| SSID | This field displays WLAN network ID on the device. |
| Channel | This field displays the channel number the device uses for wireless transmission. |

**Table 14** Monitor: CPE Status (continued)

| LABEL | DESCRIPTION |
|---|---|
| WEP | This field displays the WEP key length used for wireless data encryption. |
| WLAN | This field displays whether the WLAN interface is enabled or disabled. |
| VOIP1 Status | |
| URI | This field displays the URI of the VoIP connection. |

# 7

# Import Device

This chapter describes the Import Device screen you use to import an XML file with basic device information.

## 7.1 Import Device Overview

To register a ZyXEL device, the first step is to import a device XML file to the Vantage Access first.

You must register a ZyXEL device to Vantage Access to allow remote management.

To register a ZyXEL device, to do the following:

- Edit and import a device XML file to Vantage Access.
- Configure the ZyXEL device to allow remote management from Vantage Access.

### 7.1.1 Device XML File

A device XML file contains basic information (such as the device type and MAC address) of the ZyXEL device. A device XML template file is included with the firmware that you download from www.zyxel.com.

Before you import a device XML file, enter the device information (for example, the device model and MAC address) in the XML file. The following shows an example.

**Figure 46** Sample Device XML File

```
<?xml version="1.0" encoding="UTF-8"?>
<Template xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <Device>
    <deviceName>001349777777</deviceName>
    <MAC>001349777777</MAC>
    <deviceType>P-2602HW-D1A</deviceType>
  </Device>
</Template>
```

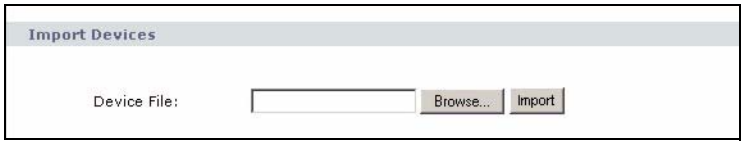
## 7.2 The Import Device Screen

Follow the steps below to import

1 Edit the device XML file for your ZyXEL device.

2 Log into Vantage Access and click **ACS Management > Import Devices**.

**Figure 47** ACS Management: Import Device




3 In the **Device File** field, specify the location and name of the XML file or click **Browse** to locate it. Then click **Import**.

4 When the file import is successful, you should see the new entry in the **Device List** panel.

5 If you cannot see the new entry, check the system logs and make sure the XML file format is correct.

**Figure 48** Device List: Check New Device

## 7.3 ZyXEL Device Setup For Registration

After you have uploaded the XML file for a ZyXEL device to the Vantage Access, you must then configure the ZyXEL device to allow remote management from the Vantage Access. This communication protocol is known as TR-069. Refer to the user's guide that comes with your ZyXEL device for more information.

Follow the steps below to set up the ZyXEL device.

1 To activate TR-069 on the ZyXEL device, access the CLI and enter the following commands.

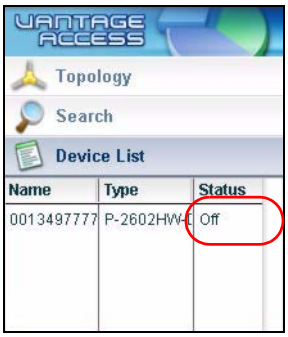
| | |
|---|---|
| `wan tr load` | Enable TR-069 configuration. |
| `wan tr active 1` | Activate TR-069 remote management. |
| `wan tr acsUrl 172.25.21.174/TR069` | Sets the IP address of the Vantage Access server. For example, 172.25.21.174. |
| `wan tr periodicEnable 1` | Enable periodic information update to the server. |
| `wan tr informInterval 30` | Set the information update time. For example, 30 seconds. |
| `wan tr debug on` | Enable TR-069 debug mode to view logs. |
| `wan tr save` | Saves the settings. |
| `wan tr reset` | Set the device to register to the Vantage Access server. |

2 Once connected to the network, the ZyXEL device automatically locates and registers to the Vantage Access server.

**For initial setup, the registration process may take several minutes (depending on your network condition).**

3 Check the device status in the **Device List** panel. If the status is **Off**, this indicates that device registration is successful and that Vantage Access has stored the ZyXEL device information to its database.

**Figure 49** Device List: Check Registered Device




You can now select the device and use the **Configuration** screens in Vantage Access to remotely configure this ZyXEL device.

# 8

# Files Management

This chapter describes the File Management screen which you use to view or download backup device configuration files or logs.

## 8.1 The Files Management Screen

Use the **Files Management** screen to view a list of purged device configuration files and/or log files. When you back up or purge a device configuration or device/system logs, an entry is created in this screen. You can click a link to download the device configuration file or log file from the HTTP server to your computer.

Log into Vantage Access as root and click **ACS Management > Files Management** to display the screen.

**Figure 50** ACS Management: Files Management

The following table describes the labels in this screen.

**Table 15** ACS Management: Files Management

| LABEL | DESCRIPTION |
|---|---|
| # | Select this option and click **Delete** to remove the device configuration file or log file from the Vantage Access server.<br>Click **Select All** to select all entries in this screen. |
| Index | This field displays the index number. |
| Name | This field displays the name of a file.<br>Device configuration files have the ".xml" file extension.<br>Log files have the ".zip" file extension.<br>Click on a name to download the file to your computer. |
| Type | This field displays the model name for which this file is intended or the type of logs. |
| Description | This field displays additional information for this file. |
| Delete | Click **Delete** to remove the selected file(s). |

### 8.1.1 Downloading a File

Follow the steps below to download a file from the HTTP server to your computer.

1. Log into Vantage Access as root or administrator and click **ACS Management > Files Management**.
2. In the **Files Management** screen, click on a file you want to download.
3. A screen displays. Click **Save**.
4. Specify the location and name for the file and click **Save** again.
5. After the file transfer process is complete, click **OK**.

### 8.1.2 Viewing a File

To view a log file, un-compress the file and open it using Microsoft Excel.

To view a device configuration file, un-compress the file and open it using a text editor or web browser that supports XML.

### 8.1.3 Deleting a File

1. Log into Vantage Access as root and click **ACS Management > Files Management**.
2. In the **Files Management** screen, select the file(s) you want to remove from the HTTP server and click **Delete**
3. A screen displays. Click **OK** to delete the selected file(s). Otherwise click **Cancel** and close the screen.

# 9

# System Maintenance

This chapter describes the **Maintenance** screens the root user can use to back up and restore Vantage Access settings and manage the backup configuration files.

## 9.1 System Maintenance Overview

**The Maintenance screens are available for the root user only.**

When you make system changes in Vantage Access (such as login account creation, device imports and device configuration changes), Vantage Access keeps track of the changes and update to its database.

It is recommended that you back up the Vantage Access system configuration on a regular basis. In case when the server fails or if you want to roll back to a previous system configuration, you can restore data from the backup file to the Vantage Access server.

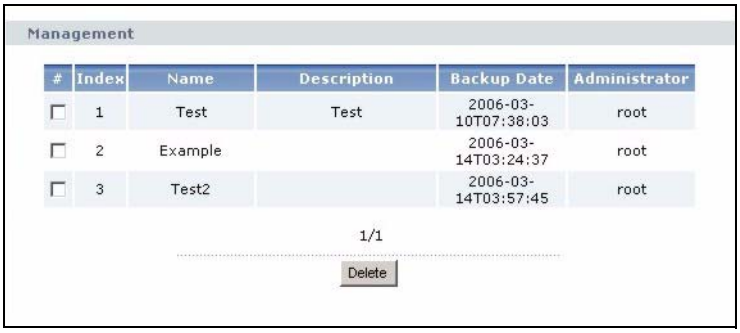
You can also use the same configuration file to set all Vantage Access servers in your network to the same settings.

## 9.2 Back up System File Management

The **Management** screen shows a list of backup configuration files store on the Vantage Access server.

Log into Vantage Access as root and click **ACS Management > Maintenance > Management** to display the screen.

**Figure 51** ACS Management: Maintenance: Management




The following table describes the labels in this screen.

**Table 16** ACS Management: Maintenance: Management

| LABEL | DESCRIPTION |
|---|---|
| # | Select this box and click **Delete** to remove the backup file from the Vantage Access server. |
| Index | This field displays the index number of the entry. |
| Name | This field displays the name of the backup file. |
| Description | This field displays additional notes about the backup file. |
| Backup Date | This field displays the time and date this backup file was created. |
| Administrator | This field displays the account that created this backup file. |
| Next | Click **Next** to go to the next screen. |
| First | This link is not available in the first screen.<br>Click **First** to return to the first screen. |
| Prev | Click **Prev** to go to the previous screen. |
| Last | This link is not available in the last screen.<br>Click **Last** to go to the last screen. |
| Go | Enter a page number and click **Go** to display the backup files in that screen. |
| Delete | Click **Delete** to remove the selected backup file(s) from the Vantage Access server. |

## 9.3 Vantage Access System Configuration Restore

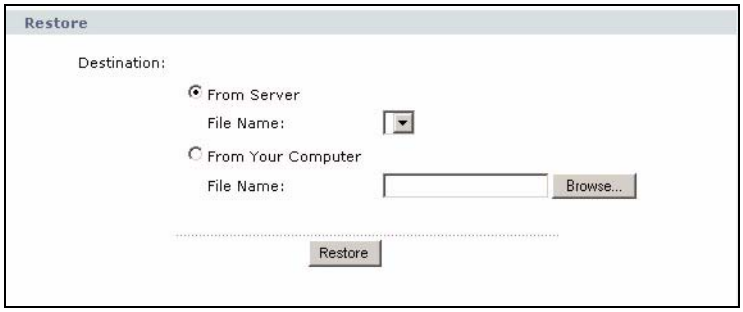
Once you have backed up your Vantage Access configuration, you can restore data to the Vantage Access server in the **Restore** screen. You can restore data from a backup file on your computer or on the HTTP server.

**Restoring configuration replaces current system settings and the ZyXEL device list.**

Follow the steps below to restore configuration.

1 Log into the Vantage Access as root and click **ACS Management** > **Maintenance** > **Restore** to display the screen.

**Figure 52** ACS Management: Maintenance: Restore




2 Specify the location and name of the backup file you want to restore.

Select **From Server** if the backup file is located on the HTTP server. Then select a file name in the **FileName** field.

Select **From your computer** if the backup file is located on your computer. Specify the name (up to 128 characters, 0-9, A-Z, a-z, - and _) of the file or click **Browse** to locate it. You do not have to include the file extension or file location.

3 Click **Restore** start the process.

4 After the restore process is complete successfully, restart Vantage Access as prompted.

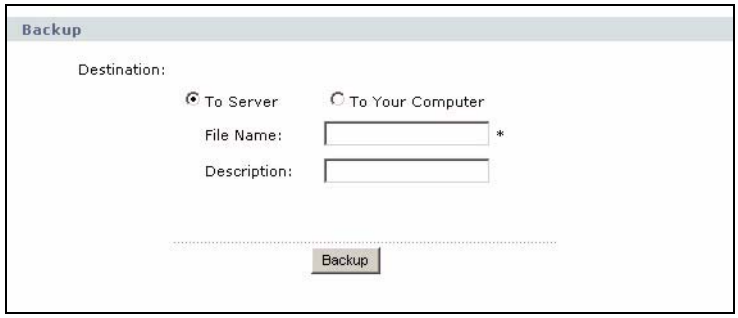
## 9.4 Vantage Access System Configuration Backup

You can the **Backup** screen to save current system configuration in a file and store it on your computer or the Vantage Access server.

Follow the steps below to back up current configuration.

1 Log into the Vantage Access as root and click **ACS Management > Maintenance > Backup** to display the screen.

**Figure 53** ACS Management: Maintenance: Backup




2 Specify the location to which the you want to save the backup file.

Select **To Server** to store the backup file on the HTTP server. Select **To your computer** to save the file on your computer. Then enter a name (up to 128 characters, 0-9, A-Z, a-z, - and _) for the backup file in the **FileName** and a description (up to 250 characters) in the **Description** field.

3 Click **Backup** to start the backup process. After the file transfer is complete, check that the new backup file is created with the file name and location specified.

# 10

# HTTP Server

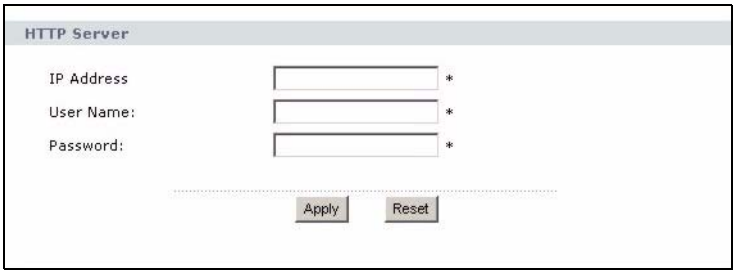
This chapter describes the **HTTP Server** screen you use to specify the Vantage Access HTTPD server.

## 10.1 The HTTP Server Screen

When you first install and log into Vantage Access, you must specify the server IP address and account information to access the Vantage Access HTTPD server for file upload and download.

Log into Vantage Access as root and click **ACS Management > Maintenance > HTTP Server** to display the configuration screen.

**Figure 54** ACS Management: Maintenance: HTTP Server




The following table describes the labels in this screen.

**Table 17** ACS Management: Maintenance: HTTP Server

| LABEL | DESCRIPTION |
|---|---|
| IP Address | Enter the IP address of the HTTP server in dotted decimal notation. For example, 10.10.10.1.<br>You must specify the port number with a preceding colon ":", if your HTTP server is not using the standard port number of 80. For example, if your HTTP server is on port 8080, then enter 10.10.10.1:8080 in this field. |
| User Name | Set the account user name for Vantage Access to log into the HTTP server for file upload and download.<br>Enter up to 31 characters (0-9, A-Z, a-z, - and _). No spaces are allowed. |
| Password | Enter the password associated with the user name above.<br>Enter up to 31 characters (0-9, A-Z, a-z, - and _). No spaces are allowed. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

# 11

# Log Setup

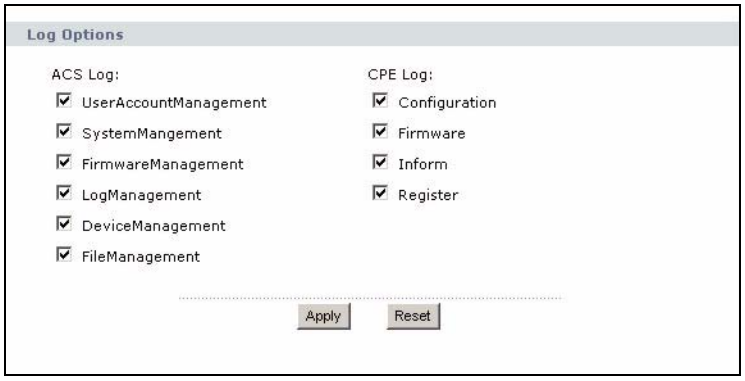
This chapter describes the Log Options and Log Setting screens you use to configure log settings.

## 11.1 Log Options

Use the **Log Options** screen to specify the types of logs you want Vantage Access to store.

Log into Vantage Access as root and click **ACS Management > Log Options** to display the configuration screen.

**Figure 55** ACS Management: Log Options




The following table describes the labels in this screen.

**Table 18** ACS Management: Log Options

| LABEL | DESCRIPTION |
|---|---|
| ACS Logs | These logs are related to the settings for the Vantage Access server. |
| UserAccount Management | Select this option to log changes in login accounts. For example, when you create or delete accounts or change account settings in Vantage Access. |
| SystemManagement | Select this option to log any system changes in Vantage Access. |
| FirmwareManagement | Select this option to create a log when you add or delete device firmware files. |
| LogManagement | Select this option to create a log when one of the following actions is performed<br>• purge logs (manually or automatically)<br>• upload logs to the HTTP server<br>• restore backup log files from the HTTP server<br>• configure log settings in the **Log Setting** or **Log Options** screen. |

**Table 18** ACS Management: Log Options (continued)

| LABEL | DESCRIPTION |
|---|---|
| DeviceManagement | Select this option to create a log when you import or delete a device from the Vantage Access server. |
| File Management | Select this option to create a log when you delete or download a pre-configuration or log file for a managed device in the Vantage Access server. |
| CPE Log | These logs are related to the settings for a managed ZyXEL device. |
| Configuration | Select this log to create a log when a configuration change is made and sent to a ZyXEL device. |
| Firmware | Select this option to create a log when you enable, disable or delete a firmware upgrade schedule entry. |
| Inform | Select this option to create a log when a device sends an inform message to the Vantage Access server. |
| Register | Select this option to create a log for the ZyXEL device registration process. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

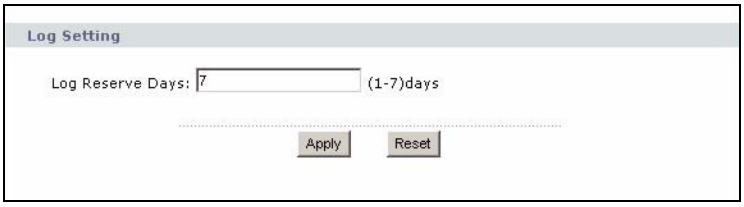
## 11.2 Log Setting

Use the **Log Setting** screen to set how long Vantage Access is to store the logs. You can view the logs in the **CPE Log** or **ACS Log** screens.

Once the time is reached, Vantage Access backs up the logs and removes them from the database. To view the backup logs, you need to download the file from the Vantage Access server and uncompress the files.

Log into Vantage Access as root and click **ACS Management > Log Setting** to display the configuration screen.

**Figure 56** ACS Management: Log Setting




The following table describes the labels in this screen.

**Table 19** ACS Management: Log Setting

| LABEL | DESCRIPTION |
|---|---|
| Log Reserve Days | Enter the number of days (1 - 7) Vantage Access is to store the logs in the database. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

# PART III
# Device Configuration

This part contains the following chapters.


- Device Firmware File Maintenance (99)
- Device Firmware Upgrade (103)
- Introducing Device Configuration (107)
- General Device Setup (115)
- WAN Device (127)
- LAN Device (151)
- Voice Service (165)
- Syslog (177)

# 12

# Device Firmware File Maintenance

This chapter shows you how to manage the device firmware files on the HTTP server and how to perform remote device firmware upgrade through the Vantage Access server.

## 12.1 Device Firmware File Maintenance Overview

**The Firmware screens are available to administrators only.**

You can update the firmware on the managed ZyXEL device(s) remotely via the Vantage Access server. You can update the firmware to one or more ZyXEL devices (of the same model). The firmware upgrade process can be automatic based on a pre-configured schedule or manually at any time.

To upgrade device firmware remotely via the Vantage Access server, do the following:

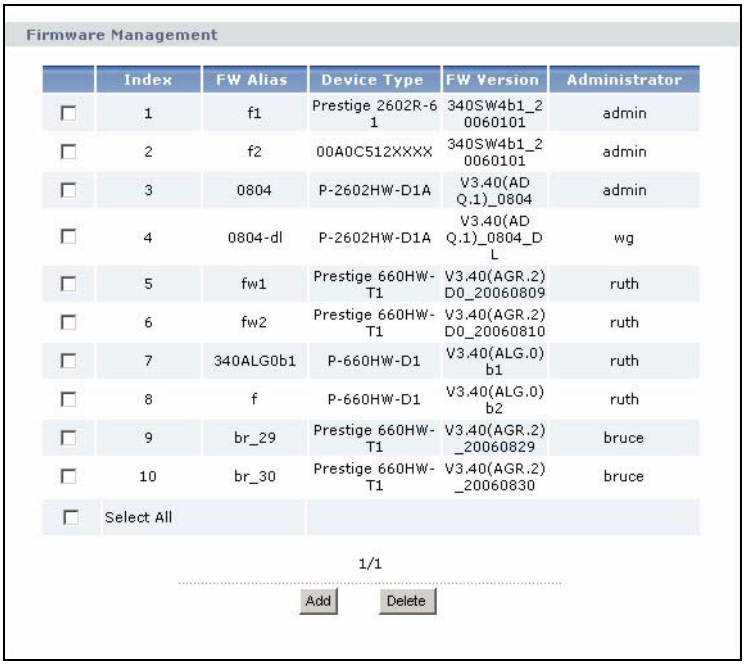
1. Use the **Firmware Management** screen to add or delete device firmware files on the HTTP server.
2. Use the **Firmware Upgrade** screen to update the new device firmware file to the selected ZyXEL device(s). See Chapter 13 on page 103 for more information.

## 12.2 Firmware Management

Use the **Firmware Management** screen to upload device firmware files to the HTTP server. You can also use this screen to display the list of firmware files on the HTTP server or delete a firmware file.

Log into Vantage Access as an administrator and click **Firmware > Firmware Management** in the function window.

**Figure 57** Firmware: Firmware Management




The following table describes the labels in this screen.

**Table 20** Device: Firmware: Firmware Management

| LABEL | DESCRIPTION |
|---|---|
| # | Select this option and click **Delete** to remove the device firmware file from the HTTP server.<br>Click **Select All** to select all entries in this screen. |
| Index | This field displays the index number. |
| FW Alias | This field displays the descriptive firmware name for identification purposes. |
| Device Type | This field displays the model name for which this firmware is intended. |
| Administrator | This field displays the login user account that saves this firmware file on the HTTP server. |
| Add | Click **Add** to save a firmware file. |
| Delete | Click **Delete** to remove the selected firmware file(s). |

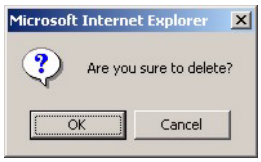
## 12.2.1 Deleting a Device Firmware File

You cannot delete a firmware file that is currently being used to perform firmware upgrade on a ZyXEL device.

Follow the steps below to delete a device firmware from the HTTP server.

1. Log into Vantage Access as an administrator and click **Firmware > Firmware Management** to display the **Firmware Management** screen.
2. Select one or more than one firmware files in the same screen and click **Delete**.
3. A pop-up screen displays. Click **OK** to start the file removal process.

**Figure 58** Firmware: Firmware Management: Delete

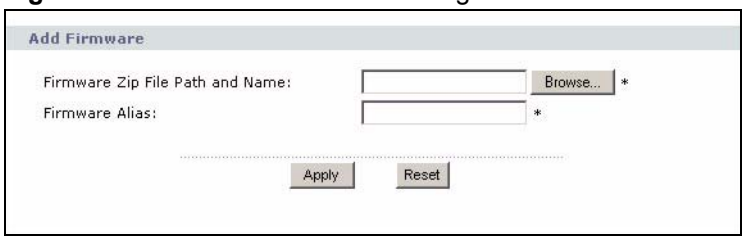



## 12.2.2 Adding a New Device Firmware

Follow the steps below to add a new device firmware to the HTTP server.

1. Log into Vantage Access as an administrator and click **Firmware > Firmware Management** to display the configuration screen.
2. Click the **Add** button to display the **Add Firmware** screen.
3. Specify the path and name of the device firmware file in the **Firmware Zip File Path and Name** field, or click Browse to locate it.
4. In the **Firmware Alias** field, enter a descriptive name for the firmware file. You can enter up to 250 characters (using 0-9, a-z, A-Z, _ or -). No spaces are allowed.

**Figure 59** Firmware: Firmware Management: Add Firmware




5. Click **Apply** to save the firmware file to the HTTP server.

# 13

# Device Firmware Upgrade

This chapter shows you how to upgrade firmware on the managed ZyXEL device(s) through Vantage Access and view a list of pending firmware upgrades.

## 13.1 The Firmware Upgrade Screen

You must first upload and store new device firmware files on the HTTP server using the **Firmware Management** screen. Refer to Chapter 12 on page 99.

After you have stored device firmware files on the HTTP server, you can perform remote firmware upgrade on one or a group of managed ZyXEL device (of the same type) in the **Firmware Upgrade** screen.

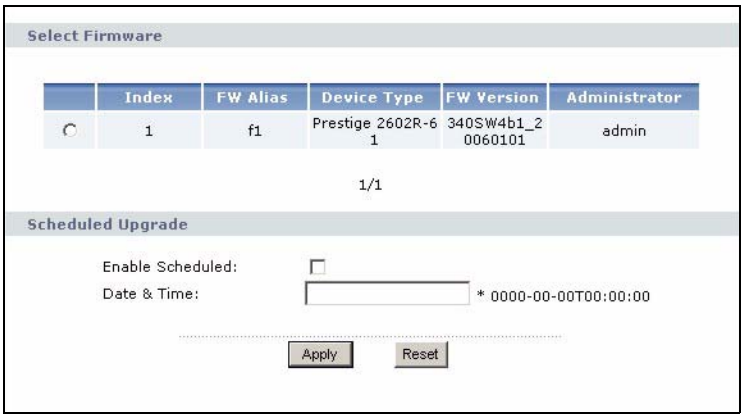
You can use this screen to can manually update the device firmware or set a schedule for Vantage Access to automatically update the firmware.

### 13.1.1 Manual Firmware Upgrade

1. Log into Vantage Access as an administrator and select a device in the Device List windows.

   To upgrade firmware on a group of devices, select a device group folder in the Topology window.
2. Click **Firmware > Firmware Upgrade** to display the **Firmware Upgrade** screen.

**Figure 60** Firmware: Firmware Upgrade




3. In **Select Firmware**, select a firmware file that you want to update to the ZyXEL device(s). This part of the screen only shows the firmware file(s) for the ZyXEL device model. Refer to Table 20 on page 100 for field descriptions.

4 Click **Apply** to start the firmware upgrade process. Click **Reset** to start configuring this screen again.

If the ZyXEL device(s) is on the network, Vantage Access sends the firmware file to the ZyXEL device(s) immediately.

If the ZyXEL device(s) is off the network, Vantage Access saves the firmware upgrade request. Once the ZyXEL device(s) is available, the request is immediately carried out.

You can view a list of manual firmware requests in the **Manual Upgrade List** screen.

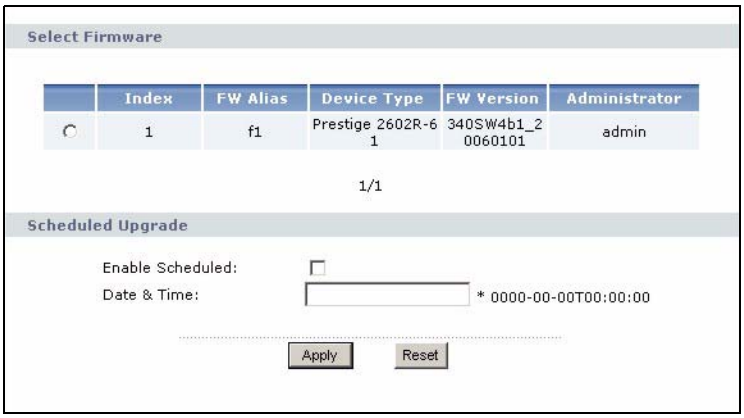
### 13.1.2 Scheduled Firmware Upgrade

1 Log into Vantage Access as an administrator and select a device in the Device List windows.

To upgrade firmware on a group of devices, select a device group folder in the Topology window.

2 Click **Firmware > Firmware Upgrade** to display the **Firmware Upgrade** screen.

**Figure 61** Firmware: Firmware Upgrade




3 In **Select Firmware**, select a firmware file that you want to update to the ZyXEL device(s). This part of the screen only shows the firmware file(s) for the ZyXEL device model. Refer to Table 20 on page 100 for field descriptions.

4 Select **Enable Scheduled** to configure a schedule for the firmware upgrade.

5 In the **Date & Time** field, specify the time. Enter the time in the format yyyy-mm-ddThh:mm:ss. For example, 2006-09-20T05:30:00 means 5:30 AM on September 20th in 2006.

6 Click **Apply** to save the settings or click **Reset** to start configuring this screen again. You can view a list of scheduled firmware upgrade settings in the **Scheduled Upgrade List** screen.

## 13.2 Device Firmware Upgrade Request

After you have set the **Firmware Upgrade** screen, you can view the list of manual or scheduled firmware upgrade requests in the **Manual Upgrade List** or the **Scheduled Upgrade List** screens.

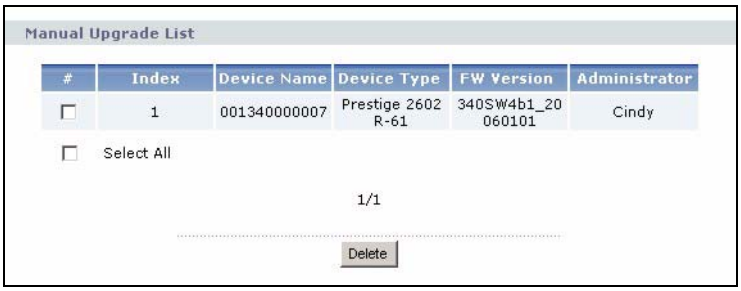
## 13.2.1 Manual Upgrade List

You can see the list of firmware upgrade request(s) that is still pending in the **Manual Upgrade List** screen.

1. Log into Vantage Access as an administrator and select a device in the Device List windows.

   To view pending manual firmware requests for a group of devices, select a device group folder in the Topology window.
2. Click **Firmware > Manual Upgrade List** to display the screen.

**Figure 62** Firmware: Manual Upgrade List




The following table describes the labels in this screen.

**Table 21** Firmware: Manual Upgrade List

| LABEL | DESCRIPTION |
|---|---|
| # | Select this option and click **Delete** to remove the entry.<br>Choose **Select All** to select all entries. |
| Index | This field displays the index number. |
| Device Name | This field displays the name or MAC address of the managed ZyXEL device. |
| Device Type | This field displays the model name for which this firmware is intended. |
| FW Version | This field displays the version of the firmware. |
| Administrator | This field displays the login user account that saves this firmware file on the HTTP server. |
| Delete | Click **Delete** to remove the selected firmware upgrade request. Do this if the firmware upgrade process is complete. You can check the status and result in the **CPE Log** screen. |

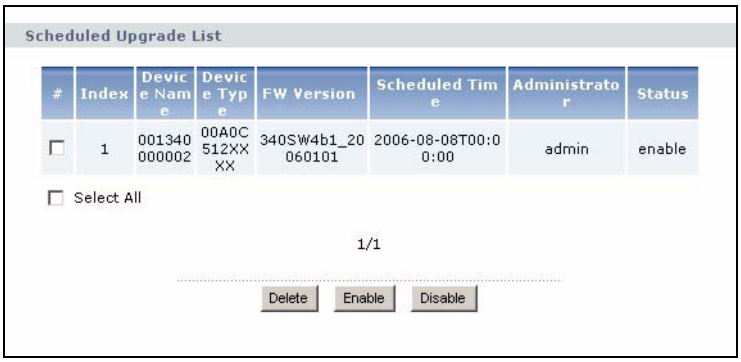
## 13.2.2 Scheduled Upgrade List

You can see the list of configured firmware upgrade schedule(s) in the **Scheduled Upgrade List** screen.

1. Log into Vantage Access as an administrator and select a device in the Device List windows.

   To view pending manual firmware requests for a group of devices, select a device group folder in the Topology window.
2. Click **Firmware > Scheduled Upgrade List** to display the screen.

**Figure 63** Firmware: Scheduled Upgrade List




The following table describes the labels in this screen.

**Table 22** Firmware: Scheduled Upgrade List

| LABEL | DESCRIPTION |
|---|---|
| # | Select this option and click **Delete** to remove the entry.<br>Choose **Select All** to select all entries. |
| Index | This field displays the index number. |
| Device Name | This field displays the name or MAC address of the managed ZyXEL device. |
| Device Type | This field displays the model name for which this firmware is intended. |
| FW Version | This field displays the version of the firmware. |
| Scheduled Time | This field displays the time Vantage Access will perform remote firmware upgrade on the device. The time in the format yyyy-mm-ddThh:mm:ss. For example, 2006-09-20T05:30:00 means 5:30 AM on September 20th in 2006. |
| Administrator | This field displays the login user account that saves this firmware file on the HTTP server. |
| Status | This field displays whether the automatic firmware upgrade schedule is active (**enable**) or inactive (**disable**). |
| Delete | Click **Delete** to remove the selected firmware upgrade schedule(s). Do this if the firmware upgrade process is complete. You can check the status and result in the **CPE Log** screen. |
| Enable | Click **Enable** to activate the selected schedule. |
| Disable | Click **Disable** to de-activate the selected schedule. |

# 14

# Introducing Device Configuration

This chapter introduces the Configuration screen and shows you how to perform device configuration backup and restore.

## 14.1 Device Configuration Overview

**The Configuration screens are available for administrators only.**

You can use the Vantage Access to configure device in one of the following ways.

- Single device configuration
- Device group configuration

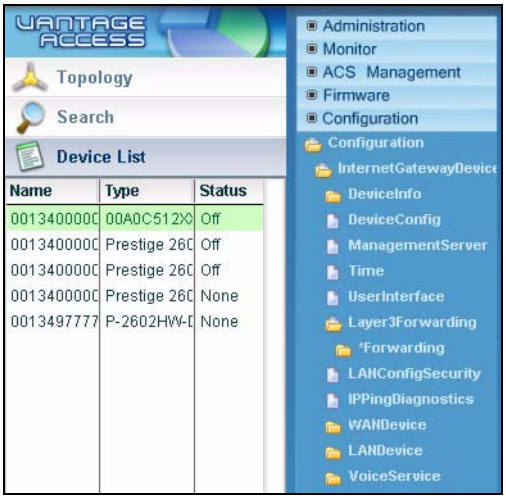
### 14.1.1 Single Device Configuration

Use this method to configure a device one at a time.

To display the configuration screens for a device, select the device in the Device List window and click **Configuration > Configuration**.

The configuration screens display both read-only and editable fields.

**Figure 64** Device Configuration Menu: Single Device



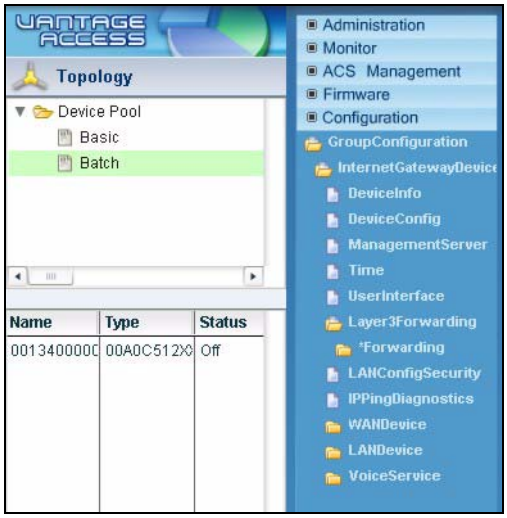

## 14.1.2 Device Group Configuration

Use this method to configure multiple devices in a device group.

To display group configuration screens, select a device group name in the Topology window and click **Configuration > GroupConfiguration**.

The screens display editable fields only. No read-only fields are available. To view read-only information of a device, select the device in the Device List window and click **Configuration**.

**Figure 65** Device Configuration Menu: Device Group




## 14.1.3 Device Configuration Update

When you change the device settings in Vantage Access, a configuration update request is generated for the ZyXEL device(s). At specified intervals, the Vantage Access server sends the request to the ZyXEL device(s) which then updates its configuration based on the parameter information received.

# 14.2 Device Configuration File Maintenance

You can right-click on the top-level Configuration link to back up or restore device configuration.

Two device configuration maintenance methods are provided:

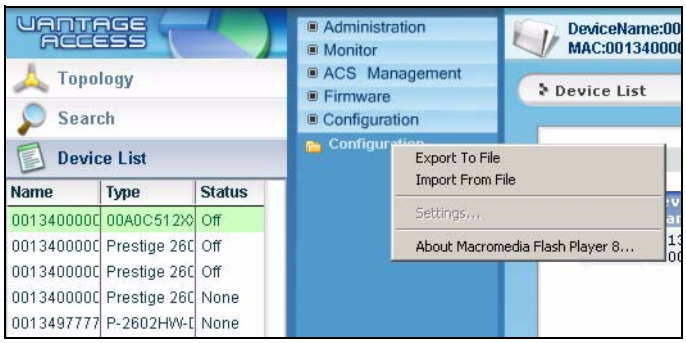
- Single device configuration backup/restore
  This method allows you to back up configuration from and restore configuration to a single device you select in the Device List panel. One configuration file used in this method.
- Multiple device configuration backup/restore
  This method allows you to back up configuration from and restore configuration to a a group of devices in the device group you select in the Topology panel.

## 14.2.1 Single Device Configuration Backup

Use the **Export to File** screen to back up the current configuration of a selected device to the Vantage Access server. The following describes the procedure.

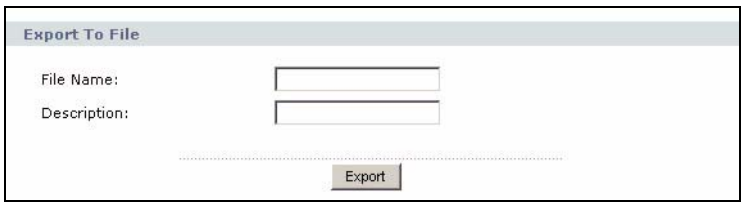
1. Log into Vantage Access as an administrator and select a device in the Device List.
2. Click **Configuration**, right-click on **Configuration** and click **Export To File**.

**Figure 66** Backup Device Configuration: Right-Click Menu




3. In the **Export To File** screen, specify the file name and description in the fields provided. You can enter up to 128 characters (0-9, a-z, A-Z, _ or - with no spaces) in the **File Name** field and up to 250 characters (0-9, a-z, A-Z, _ or - with no spaces) in the **Description** field.
4. Click **Export** to backup the configuration.

**Figure 67** Backup Device Configuration: Export To File




After the backup process is complete, an entry is created in the **Files Management** screen. Refer to Chapter 8 on page 87 for more information. You can then download the backup file from the Vantage Access server to your computer and restore it to the device later.

## 14.2.2 Single Device Configuration Restore

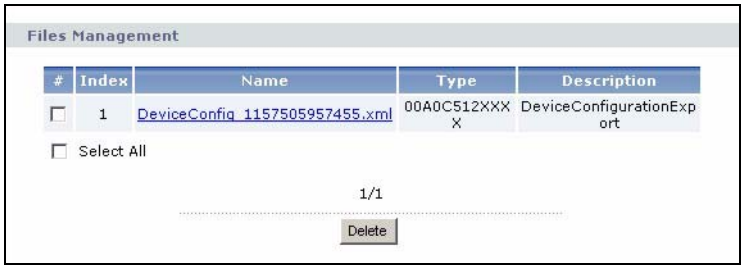
**Restoring configuration replaces current configuration on a device.**

You can use the **Import From File** screen to restore configuration on a selected device. You must first download the backup device configuration file from the **File Management** screen.

Follow the steps below to restore configuration from a backup file on your computer to a selected ZyXEL device.

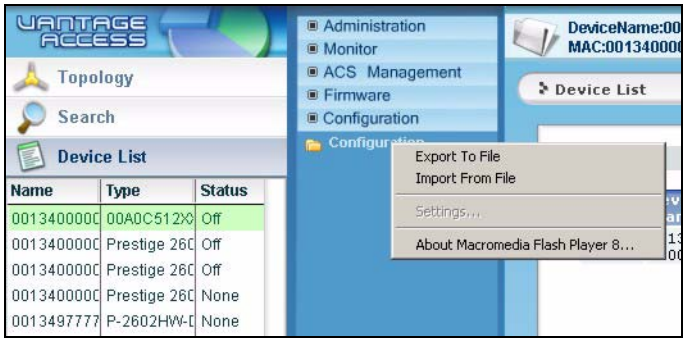
1. Log into Vantage Access as an administrator and click **ACS Management > Files Management**.
2. Click on the backup configuration file (with the ".xml" file extension) for your device and download it to your computer.

**Figure 68** Restore Device Configuration: Download File



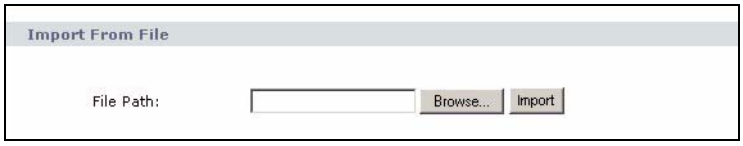

3. Select a device in the Device List and click **Configuration**.
4. Right-click on **Configuration** and click **Import From File**.

**Figure 69** Restore Device Configuration: Right-Click Menu



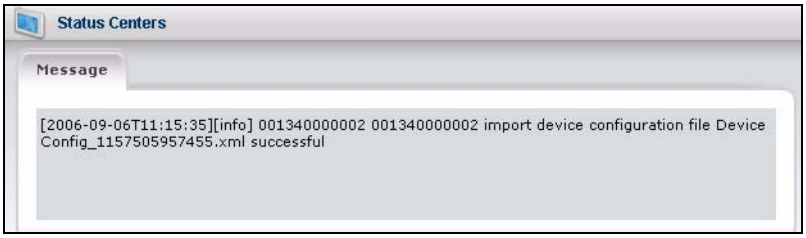

5. In the **Import From File** screen, specify the location and name of a backup file (with the ".xml" file extension) in the **File Path** field or click **Browse** to locate it.
6. Click **Import** to restore the configuration.

**Figure 70** Restore Device Configuration: Import From File



7 Check the logs in the **CPE Log** screen or the message in Status Center to see whether the device configuration restore is successful. The following figure shows an example log message.

**Figure 71** Restore Device Configuration: Log Message




## 14.2.3 Batch Device Configuration Backup

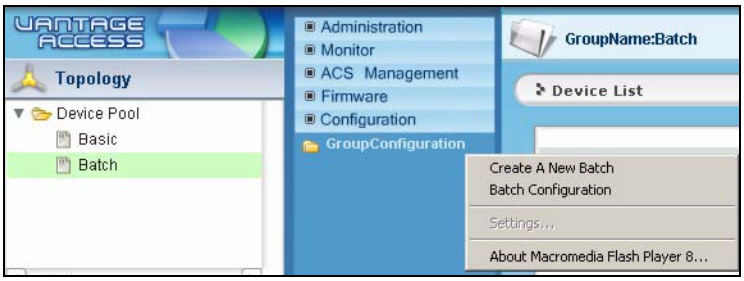
When you back up configuration from a group of devices, two configuration files may be created: common and device-specific. The common configuration file contains configuration settings that are the same across all devices in the group while configuration settings in a device-specific configuration file are applicable to a device only.

Follow the steps below to back up the current configuration of a selected device group to the Vantage Access server.

1 Log into Vantage Access as an administrator and select a device group in Topology.

2 Click **Configuration**, right-click on **Group Configuration** and click **Create A New Batch**.

**Figure 72** Backup Device Configuration: Right-Click Menu

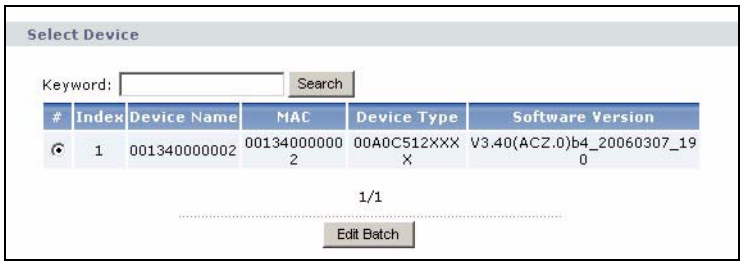



3 You can select the device whose configuration you want to back up in the **Select Device** screen. To search for a specific device, enter a descriptive name (up to 250 characters containing 0-9, a-z, A-Z, _ or - with no spaces) In the **Keyword** field. To display all device in this screen, click **Search**.

4 Select a device displayed in the table below.

5 Click **Edit Batch** to set up the batch configuration file(s).

**Figure 73** Group Configuration: Create a New Batch: Select Device



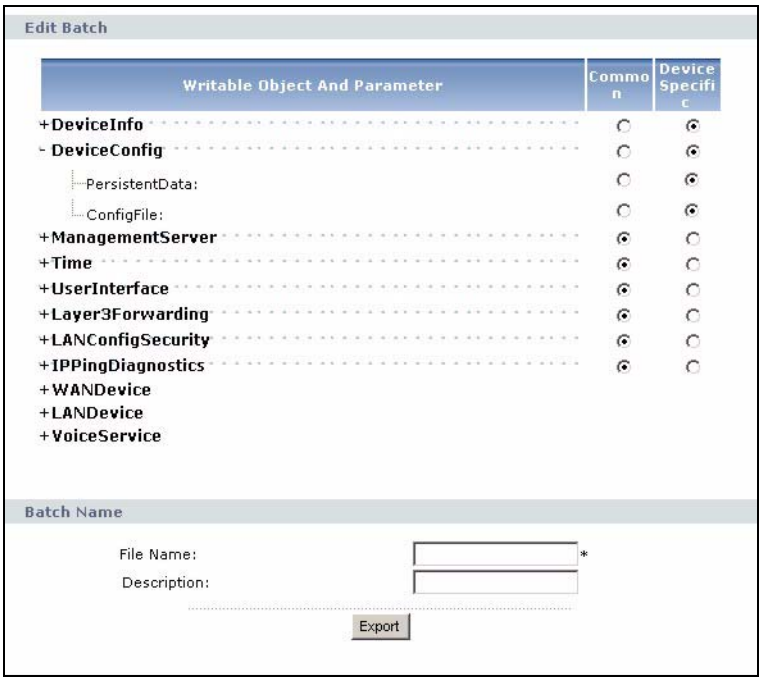

6 In the **Edit Batch** screen, you can select the parameter settings to belong to either the common or device-specific configuration file. You can also expand the option list by clicking on the link and select the field-level option(s).

**If you select Common or Device Specific for all options, then only one backup configuration file is created.**

7 In the **File Name** field, enter a file name (up to 128 characters (0-9, a-z, A-Z, _ or - with no spaces)). Enter a short description (up to 256 characters (0-9, a-z, A-Z, _ or - with no spaces)) in the **Description** field.

8 Click **Export** to backup the batch configuration file(s).

**Figure 74** Group Configuration: Create a New Batch: Edit Batch




9 After the backup process is complete, the **Select Device** screen displays. You can check the backup file(s) in the **Files Management** screen (click **ACS Management > File Management**).

## 14.2.4 Batch Device Configuration Restore

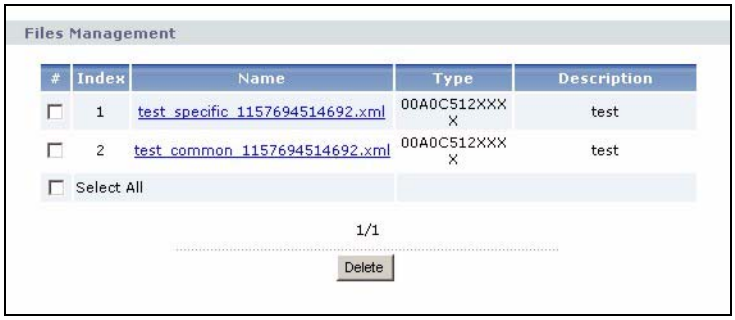
**Restoring configuration replaces current configuration on all devices in a device group.**

Use the **Batch Configuration** screen to restore configuration to all device in a group. You must obtain backup configuration files from the **File Management** screen first. You can restore configuration from a common configuration file, device-specific configuration file or both.

Follow the steps below to restore configuration from a backup file on your computer to all devices in the selected device group.

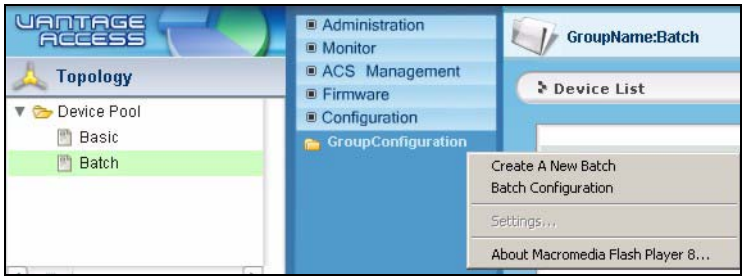
1. You must first download the previous backup configuration file from the **File Management** screen. Log into Vantage Access as an administrator and click **ACS Management > Files Management**.
2. Click on a common or device-specific backup configuration file (with the ".xml" file extension) for the device group and download it to your computer.

**Figure 75** Batch Device Configuration Restore: Download File



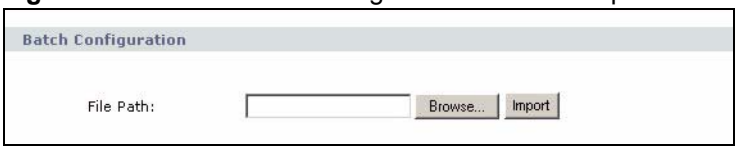

3. Select a device group in Topology and click **Configuration**.
4. Right-click on **Group Configuration** and click **Batch Configuration**.

**Figure 76** Batch Device Configuration Restore: Right-Click Menu



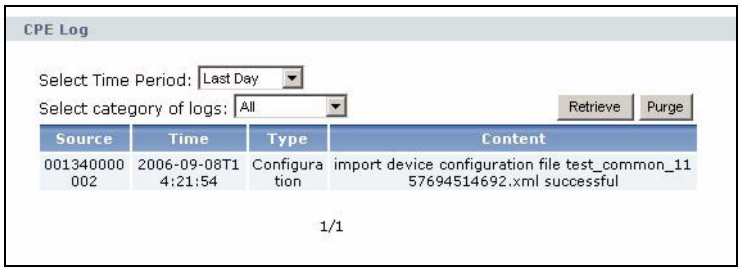

5. In the **Batch Configuration** screen, specify the location and name of a backup file (with the ".xml" file extension) in the **File Path** field or click **Browse** to locate it.
6. Click **Import** to restore the configuration.

**Figure 77** Batch Device Configuration Restore: Import From File




7 Check the logs in the **CPE Log** screen to see whether the device configuration restore is successful. The following figure shows an example log message.

**Figure 78** Batch Device Configuration Restore: CPE Log



# 15

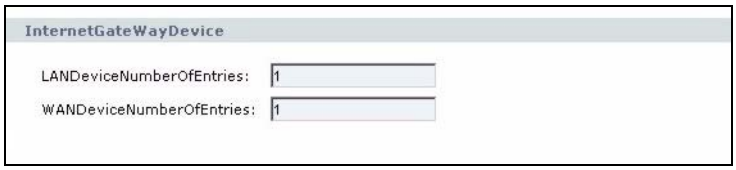
# General Device Setup

This chapter describes the general **Configuration** screens you display to view and set basic device settings.

## 15.1 Internet Gateway Device

You can view the number of interface on the selected ZyXEL device in the first configuration screen. Click **Configuration > InternetGatewayDevice**.

**Figure 79** Configuration: InternetGatewayDevice




The following table describes the labels in this screen.

**Table 23** Configuration: InternetGatewayDevice

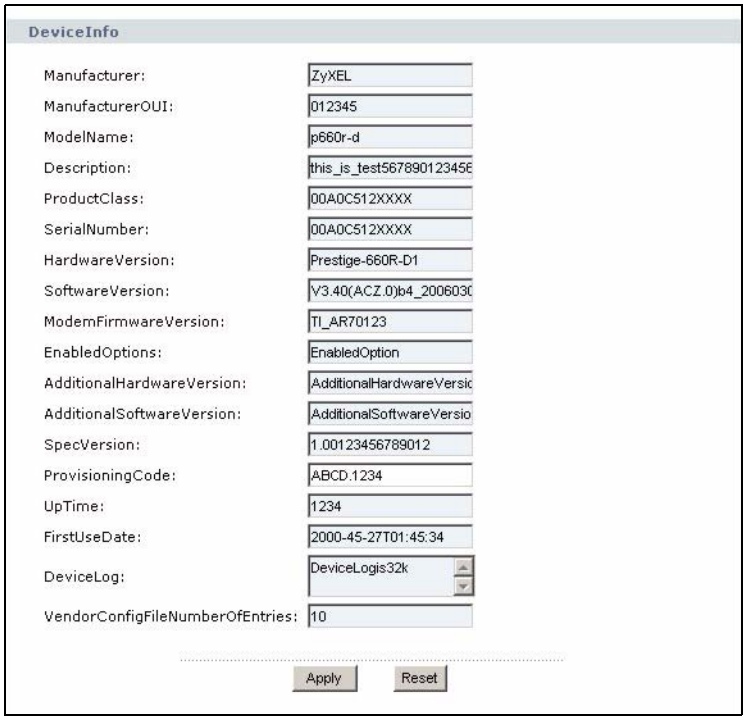
| LABEL | DESCRIPTION |
|---|---|
| LANDeviceNumberOfEntries | This field displays the number of the LAN interface on the selected ZyXEL device. |
| WANDeviceNumberOfEntries | This field displays the number of the WAN interface on the selected ZyXEL device. |

### 15.1.1 Device Information

Click **Configuration > InternetGatewayDevice > DeviceInfo** to display the general information of the selected ZyXEL device.

Most fields in this screens are read-only.

**Figure 80** Configuration: DeviceInfo




The following table describes the labels in this screen.

**Table 24** Configuration: DeviceInfo

| LABEL | DESCRIPTION |
|---|---|
| Manufacturer | This field displays the name of the company that produced this ZyXEL device. |
| ManufacturerOUI | This field displays the six-hexidecimal-digit OUI (Organization Unit Identifier) of the company. The OUI is a unique number assigned by the IANA. Devices produced by the same company have the same hard-wired OUI. |
| ModelName | This field displays the device model name. |
| Description | This field displays additional information about the ZyXEL device. |
| ProductClass | This field identifies the product or class of product class of product over which the **SerialNumber** parameter is unique. |
| SerialNumber | This field displays the device serial number. |
| HardwareVersion | This field displays the hardware model name. |
| SoftwareVersion | This field displays the firmware version number. |
| ModemFirmware Version | This field displays the modem firmware version number. |
| EnabledOptions | This field displays the name of the options enabled on the device. |
| AdditionalHardwa reVersion | This field displays the available information of the additional hardware version. |
| AdditionalSoftwar eVersion | This field displays the available information of the additional software version. |
| SpecVersion | This field displays the specification version implemented on the ZyXEL device. |
| ProvisioningCode | The provisioning code is used by the service provider to identify specific parameter settings for the device.<br>Enter the identifier of the DSL service provider or provisioning information. You can enter up to 64 characters (use only A-Z, 0-9 and “.” with no spaces allowed). |

**Table 24** Configuration: DeviceInfo (continued)

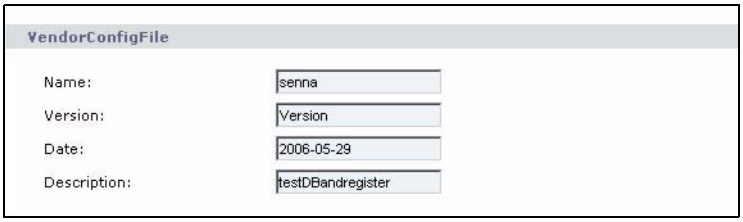
| LABEL | DESCRIPTION |
|---|---|
| Uptime | This field displays the time (in seconds) since the ZyXEL device was last restarted. |
| FirstUseDate | This field displays the time and date the ZyXEL device first established a network connection. |
| DeviceLog | Enter additional information for this ZyXEL device. |
| VendorConfigFile NumberOfEntries | This field displays the number of configuration files. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 15.1.2 Vendor Configuration File

Display the **VendorConfigFile** screen to view the settings of the vendor configuration file on the device.

Select a registered ZyXEL device in the Device List window and click **Configuration > InternetGatewayDevice > DeviceInfo > VendorConfigFile** and then click a file number.

**Figure 81** Configuration: VendorConfigFile




The following table describes the labels in this screen.

**Table 25** Configuration: VendorConfigFile

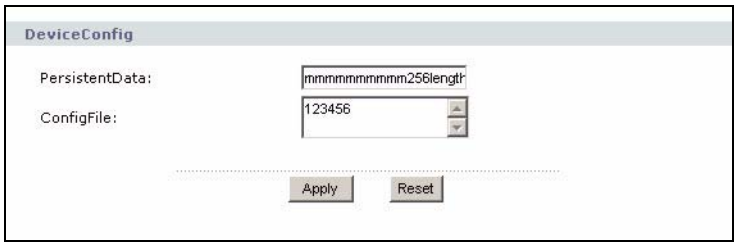
| LABEL | DESCRIPTION |
|---|---|
| Name | This field displays the name of the vendor configuration file. |
| Version | This field displays the version number of the vendor configuration file. |
| Date | This field displays the date (yyyy-mm-dd) the vendor configuration file was applied to the device. |
| Description | This field displays additional information about the vendor configuration file. |

# 15.2 Device Configuration

Display the **DeviceConfig** screen to view the configuration file information on a device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > DeviceConfig**.

**Figure 82** Configuration: DeviceConfig




The following table describes the labels in this screen.

**Table 26** Configuration: DeviceConfig

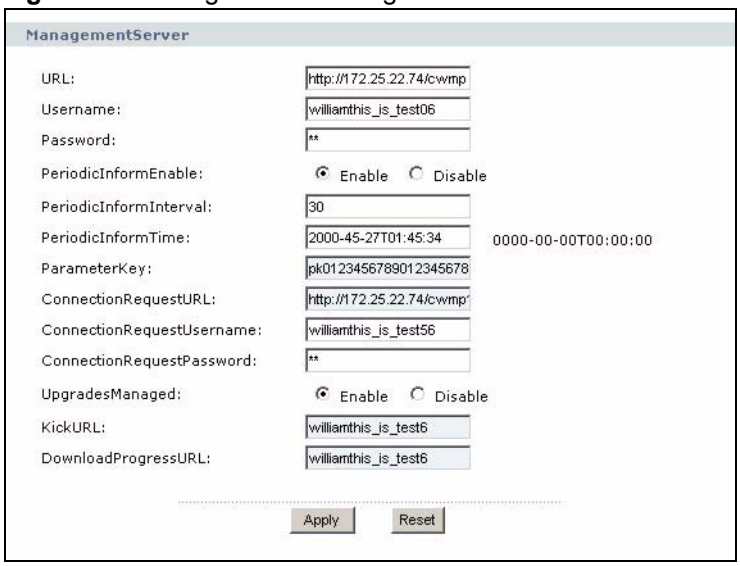
| LABEL | DESCRIPTION |
|---|---|
| PersistentData | You can specify the user data that must stay unchanged after a device reboot.<br>Enter up to 256 characters |
| ConfigFile | This field displays the name of the configuration file on the device. Enter up to 32k of characters. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 15.3 Management Server

Use the **Management Server** screen to configure settings on the device to connect to the Vantage Access server.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > ManagementServer**.

**Figure 83** Configuration: ManagementServer



The following table describes the labels in this screen.

**Table 27** Configuration: ManagementServer

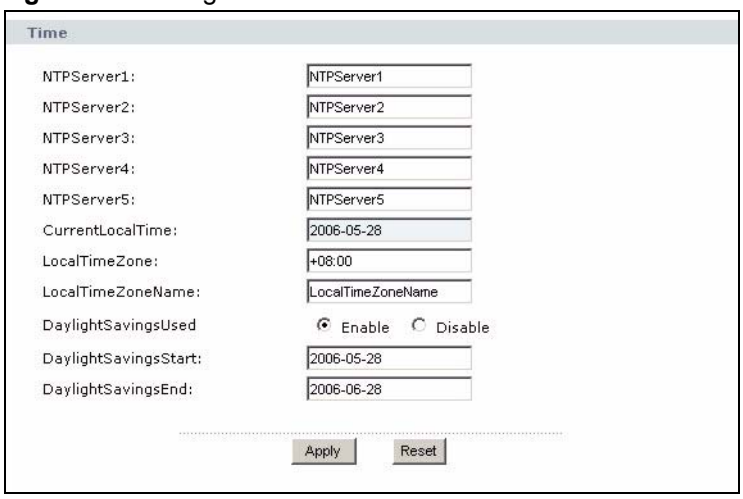
| LABEL | DESCRIPTION |
|---|---|
| URL | Enter the address of the Vantage Access server to which the device connects for remote management. You must enter the address (up to 256 characters) in valid URL format. For example, “http://www.zyxel.com”. |
| UserName | Specify the user name the device uses to access Vantage Access. Enter up to 256 alphanumerical characters. |
| Password | Enter the password (up to 256 alphanumerical characters) associated with the user name above.<br>**Note: You must configure the same access user name and password on the device and the Vantage Access server.** |
| PeriodicInformEnable | Select **Enable** to set the device to regularly send device information updates to Vantage Access. Set the time interface in the **PerodicInformInterval** field.<br>Select **Disable** to deactivate this feature. You must then manually update device information changes. |
| PeriodicInformInterval | This field is applicable when you select **Enable** in the **PeriodicInformEnable** field.<br>Specify the time (in seconds) the device is to wait before sending device request information updates to Vantage Access. |
| PeriodicInformTime | This field is applicable when you select **Enable** in the **PeriodicInformEnable** field.<br>Specify the reference time and date the device is to initiate the information updates. You must set the time in the format yyyy-mm-ddThh:mm:ss. |
| ParameterKey | This field displays the parameter that is changed from the most recent information update. |
| ConnectionRequestURL | This field displays the URL of the device to which Vantage Access sends a connection request. |
| ConnectionRequestUsername | Enter the user name Vantage Access uses to access the device.<br>This is required if you want Vantage Access to initiate a connection and access the device. |
| ConnectionRequestPassword | Enter the password associated with the user name above. |
| UpgradesManaged | Select **Enable** to allow Vantage Access to upgrade firmware on the device. Select **Disable** to deactivate this feature. You will not be able to upgrade firmware on the device through Vantage Access. |
| KickURL | This field displays the URL on the LAN from which the device can initiate a Kick request. |
| DownloadProgressURL | This field displays the URL of a web site on the LAN to which a user’s web browser is redirect to display the file transfer progress of the device. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 15.4 Time

Use the **Time** screen to set the system time for the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > Time**.

**Figure 84** Configuration: Time




The following table describes the labels in this screen.

**Table 28** Configuration: Time

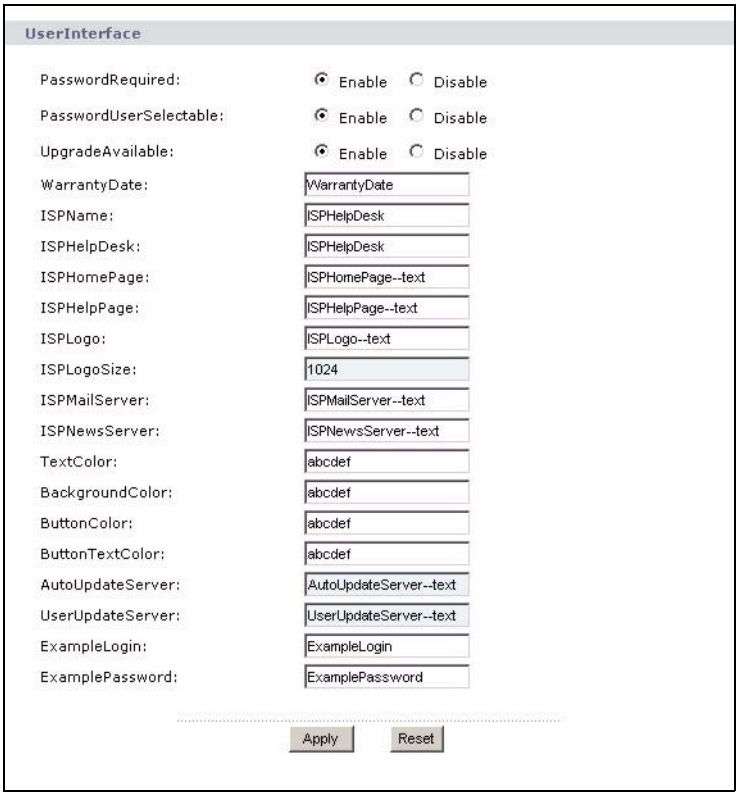
| LABEL | DESCRIPTION |
|---|---|
| NTPServer1 .. 5 | Enter the IP address or host name of a time server the device is to use to update the system time. You must enter the address (up to 64 characters) in valid URL format. For example, “http://www.zyxel.com”. |
| CurrentLocalTime | This field displays the current system time on the device. |
| LocalTimeZone | Specify the time offset from the UTC (Universal Time Coordinate). Enter the offset in the form +hh:mm or -hh:mm. For example, +08:00. |
| LocalTimeZoneName | Specify the name of the local time zone. You can enter up to 64 characters. |
| DayLightSavingsUsed | Select **Enable** if your local time zone uses daylight savings time.<br>Select **Disable** to deactivate this feature. |
| DayLightSavingsStart | This field is applicable when you select **Enable** in the **DayLightSavingsUsed** field.<br>Specify the starting date of the daylight savings time. Enter the time in the format 0000-00-00T00:00:00. |
| DayLightSavingsEnd | This field is applicable when you select **Enable** in the **DayLightSavingsUsed** field.<br>Specify the end date of the daylight savings time. Enter the time in the format 0000-00-00T00:00:00. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 15.5 User Interface

Use the **UserInterface** screen to configure remote management settings to access the web configurator on the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > UserInterface**.

**Figure 85** Configuration: UserInterface




The following table describes the labels in this screen.

**Table 29** Configuration: UserInterface

| LABEL | DESCRIPTION |
|---|---|
| PasswordRequired | Select **Enable** if a password is required to log into the web configurator on the device.<br>Select **Disable** if a password is not required to access the web configurator on the device. |
| PasswordUserSelectable | Select **Enable** if a user can specify a different the password for Auto-configuration on the device.<br>Select **Disable** if a use must use the same password for auto-configuration to access the web configurator on the device. |
| UpgradeAvailable | Select **Enable** to allow a user to view the upgrade information on the device.<br>Select **Disable** to not display upgrade information for the user. |
| WarrantyDate | Specify the time the warranty on the device expires. |
| ISPName | Specify the name of your Internet Service Provider (ISP). Enter up to 64 characters. |
| ISPHelpDesk | Specify the telephone number of your ISP's help desk. Enter up to 32 characters. |
| ISPHomePage | Specify the web site address of your ISP's home page. Enter up to 256 characters. |
| ISPHelpPage | Specify the address of your ISP's online support web page. Enter up to 256 characters. |
| ISPLogo | Specify the base64 encoded character for your ISP's logo graphic. The graphic must be a GIF or JEPG file smaller than 4095 bytes. |

**Table 29** Configuration: UserInterface (continued)

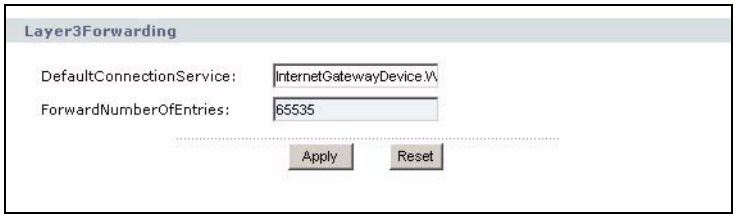
| LABEL | DESCRIPTION |
|---|---|
| ISPLogoSize | Specify the size of the logo graphic file. This number can be used to verify the file transfer and the conversion process. Enter a number between 0 and 4095.<br>If you enter 0, the graphic file is cleared. |
| ISPMailServer | Specify the address of your ISP's mail server. Enter up to 256 characters. |
| ISPNewsServer | Specify the address of your ISP's news server. Enter up to 256 characters. |
| TextColor | Specify the color of the text in the web configurator. Enter a six-character RGB number to set the color. For example, FFFFFF means white. |
| BackgroundColor | Specify the color of the background in the web configurator. Enter a six-character RGB number to set the color. For example, FFFFFF means white. |
| ButtonColor | Specify the color of the buttons in the web configurator. Enter a six-character RGB number to set the color. For example, FFFFFF means white. |
| ButtonTextColor | Specify the color of the text on the buttons in the web configurator. Enter a six-character RGB number to set the color. For example, FFFFFF means white. |
| AutoUpdateServer | This field is applicable if you select **Disable** in the **UpgradesManaged** field in the **ManagementServer** screen (see Section 15.3 on page 118).<br>Specify the address (up to 256 characters) of the server the device is to check for and update to a new firmware automatically. |
| UserUpdateServer | This field is applicable if you select **Disable** in the **UpgradesManaged** field in the **ManagementServer** screen (see Section 15.3 on page 118).<br>Specify the address (up to 256 characters) of the server a user can check for new firmware updates available for the device. |
| ExampleLogin | Specify an example login user name (up to 40 characters). This is to show users the correct format to enter. |
| ExamplePassword | Specify an example login password (up to 30 characters). This is to show users the correct format to enter. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 15.6 Layer3 Forwarding

Use the **Layer3Forwarding** screen to view the current layer 3 forwarding status and settings on the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > Layer3Forwarding**.

**Figure 86** Configuration: Layer3Forwarding



The following table describes the labels in this screen.

**Table 30** Configuration: Layer3Forwarding

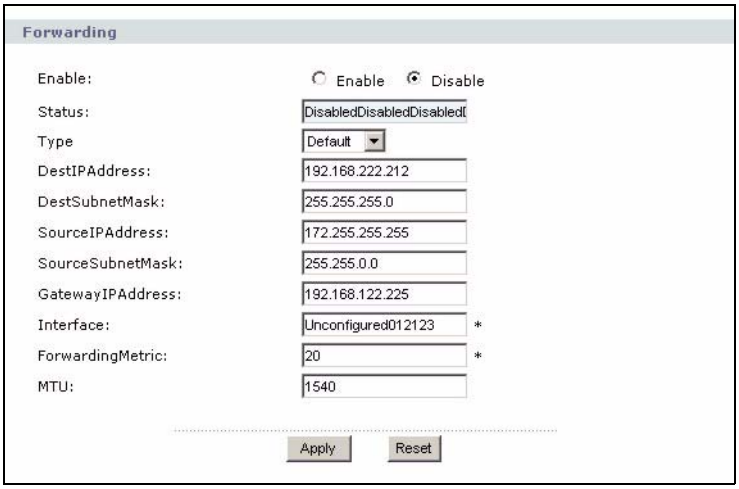
| LABEL | DESCRIPTION |
|---|---|
| Default ConnectionService | Specify the complete hierarchical name for the default WAN interface. You can enter up to 256 characters. |
| ForwardNumberofEntries | This field displays the number of forwarding entries. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 15.6.1 Layer3 Forwarding Table Setup

Use the **Forwarding** screen to configure the layer 3 forwarding table on the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > Layer3Forwarding** > **Forwarding** and click on an index number.

**Figure 87** Configuration: Layer3 Forwarding: Forwarding




The following table describes the labels in this screen.

**Table 31** Configuration: Layer3 Forwarding: Forwarding

| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the entry in the forwarding table.<br>Select **Disable** to deactivate the entry in the forwarding table. When the new entry is created, it is deactivated. |
| Status | This field displays the status of the forwarding entry. |
| Type | Specify the route type.<br>Select **Default** to route packets with any destination.<br>Select **Host** to route packets to a specific destination IP address.<br>Select **Network** to route packets to an IP network. |
| DestIPAddress | Enter the destination IP address in dotted decimal notation for the route entry. |
| DestSubnetMask | Enter the destination subnet mask in dotted decimal notation for the route entry. |
| SourceIPAddress | Enter the source IP address in dotted decimal notation for the route entry. |
| SourceSubnetMask | Enter the source subnet mask in dotted decimal notation for the route entry. |

**Table 31** Configuration: Layer3 Forwarding: Forwarding (continued)

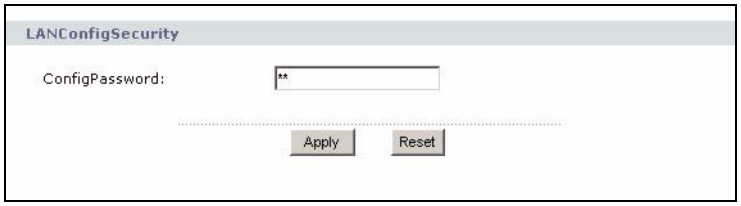
| LABEL | DESCRIPTION |
|---|---|
| GatewayIPAddress | Enter the IP address of the gateway in dotted decimal notation for the route entry. |
| Interface | Enter the hierarchical name of the WAN interface associated to this route entry. For example, “InternetGatewayDevice.WANDevice.1.-WANConnectionDevice.1.WANPPPConnection.1” |
| ForwardingMetric | Specify the number of hops to the destination. This is associated to the cost of the route. Enter -1 to not use this route to forward traffic. |
| MTU | Specify the maximum Ethernet packet size allowed on this route. Enter a number between 1 and 1540. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

# 15.7 LAN Configuration Security

Use the **LANConfigSecurity** screen to specify a password to allow LAN access for auto-configuration settings.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANConfigSecurity**.

**Figure 88** Configuration: LANConfigSecurity




The following table describes the labels in this screen.

**Table 32** Configuration: LANConfigSecurity

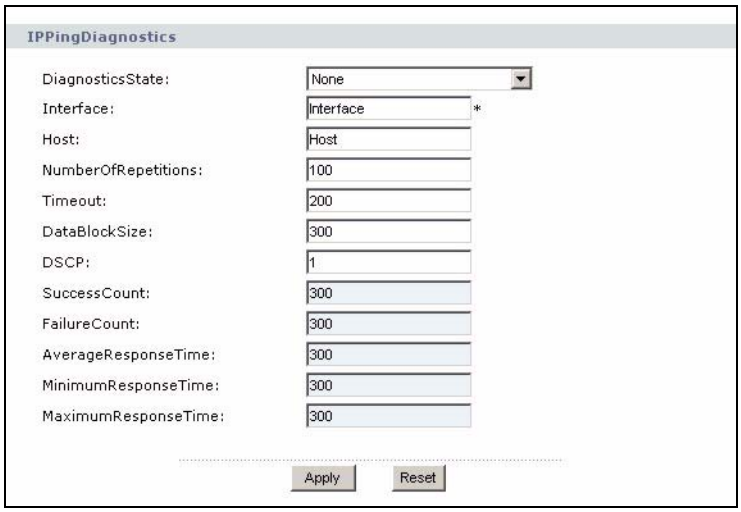
| LABEL | DESCRIPTION |
|---|---|
| ConfigPassword | Specify a password required to access the LAN interface for protected device auto-configuration. Enter a password up to 64 characters ( '0-9', 'a-z', 'A-Z', '-' and '_') . |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

# 15.8 IP Ping Diagnostics

Use the **IPPingDiagnostics** screen to set the ping test settings on a device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > IPPingDiagnostics**.

**Figure 89** Configuration: IPPingDiagnostics




The following table describes the labels in this screen.

**Table 33** Configuration: IPPingDiagnostics

| LABEL | DESCRIPTION |
|---|---|
| DiagnosticsState | Specify the availability of the ping test result. To initial a ping test, select **Requested**. |
| Interface | Enter the hierarchical name of the interface for the Ping diagnostics. For example, “InternetGatewayDevice.WANDevice.1.-WANConnectionDevice.1.WANPPPConnection.1”<br>You can enter up to 256 characters for the interface name. |
| Host | Enter the IP address or domain name of the host the device is to ping to test the connection. You can enter up to 256 characters for the host name. |
| NumberOfRepetitors | Specify the number of ping test before displaying the result. Enter a number between 1 and 4294967295. |
| Timeout | Specify the timeout (in milli-seconds) for a ping test. Enter a number between 1 and 4294967295. |
| DataBlockSize | Specify the size of the packet to send for each ping test. Enter a number between 1 and 65535. |
| DSCP | Specify the DiffServ Code Point (DSCP) to use for the test packets. The default is 0. Enter a number between 0 and 64. |
| SuccessCount | This field displays the number of ping tests that are successful before the timeout. |
| FailureCount | This field displays the number of ping tests that failed. |
| AverageResponseCount | This field displays the average response time (in milli-seconds) of successful ping tests. If there is no successful responses, this field displays 0. |
| MinimumResponseCount | This field displays the minimum response time (in milli-seconds) of successful ping tests. If there is no successful responses, this field displays 0. |
| MaximumResponse Count | This field displays the maximum response time (in milli-seconds) of successful ping tests. If there is no successful responses, this field displays 0. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

# 16

# WAN Device

This chapter describes the screens you use to configure and view WAN settings.

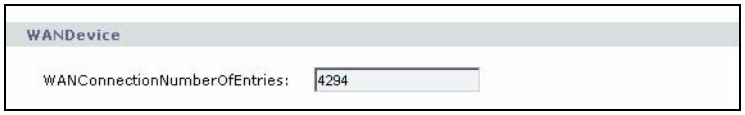
## 16.1 WAN Device Screen Overview

Use the WAN Device screens to configure or view the WAN interface settings on the selected device. The number of screens and field labels available vary depending on your device model.

The **WANDevice** screen displays the maximum number of sessions allowed on the WAN interface.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice** and click on an index number.

**Figure 90** Configuration: WANDevice




The following table describes the labels in this screen.

**Table 34** Configuration: WANDevice

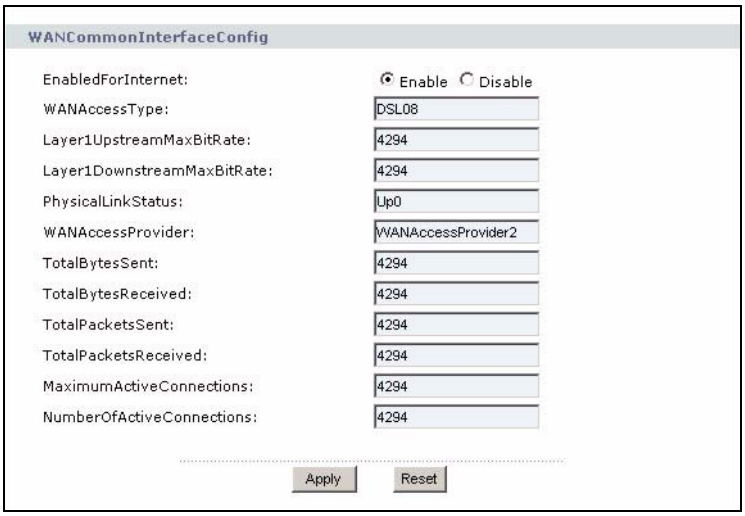
| LABEL | DESCRIPTION |
|---|---|
| WANConnectionNumberOfEntries | This field displays the maximum number of sessions allowed on the WAN interface. |

## 16.2 WAN Common Interface Configuration

You can view basic common connection status in the **WANCommonInterfaceConfig** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANCommonInterfaceConfig**.

**Figure 91** Configuration: WAN Device: WANCommonInterfaceConfig




The following table describes the labels in this screen.

**Table 35** Configuration: WAN Device: WANCommonInterfaceConfig

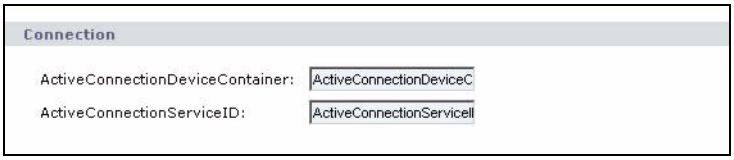
| LABEL | DESCRIPTION |
|---|---|
| EnabledForInternet | Select **Enable** to activate the WAN interface for Internet access.<br>Select **Disable** to deactivate the WAN Interface. |
| WANAccessType | This field displays the type of connection for Internet access on the WAN interface. |
| Layer1UpstreamMaxBitRate | This field displays the maximum upstream transmission rate in bits per second. |
| Layer1DownstreamMaxBitRate | This field displays the maximum download transmission rate in bits per second. |
| PhysicalLinkStatus | This field displays the link status. Possible states are **Up**, **Down**, **Initializing** and **Unavailable**. |
| WANAccessProvider | This field displays the name of the ISP providing the Internet access service. |
| TotalBytesSent | This field displays the total number of bytes transmitted. |
| TotalBytesReceived | This field displays the total number of bytes received. |
| TotalPacketsSent | This field displays the total number of packets transmitted. |
| TotalPacketsReceived | This field displays the total number of packets received. |
| MaximumActiveConnections | This field displays the maximum number of connections allowed on the device for Internet access. |
| NumberOfActiveConnections | This field displays the number of active connections on the device for Internet access. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 16.2.1 Connection

Use the **Connection** screen to view the interface name for the Internet connection.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANCommonInterfaceConfig** > **Connection** and click on an index number.

**Figure 92** Configuration: WAN Device: Connection




The following table describes the labels in this screen.

**Table 36** Configuration: WAN Device: Connection

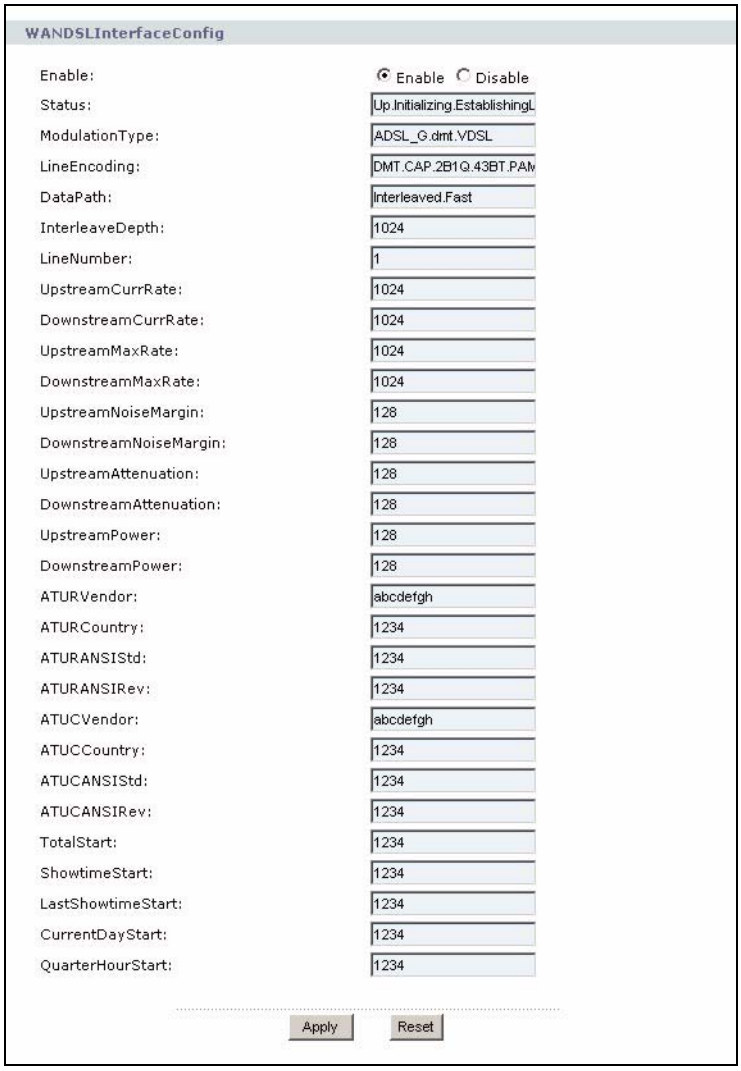
| LABEL | DESCRIPTION |
|---|---|
| ActiveConnectionDeviceContainer | This field displays the hierarchical name of the WAN interface associated with the connection. For example, “InternetGatewayDevice.WANDevice.1.-WANConnectionDevice.1.WANPPPConnection.1” |
| ActiveConnectionServiceID | This field displays the hierarchical name of the interface object for this connection. |

## 16.3 WAN DSL Interface Configuration

Use the **WANDSLInterfaceConfig** to configure the DSL connection for Internet access. DSL connection setup is independent of other WAN interface parameter settings.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANDSLInterfaceConfig**.

**Figure 93** Configuration: WAN Device: WANDSLInterfaceConfig




The following table describes the labels in this screen.

**Table 37** Configuration: WAN Device: WANDSLInterfaceConfig

| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the link.<br>Select **Disable** to deactivate the link. |
| Status | This field displays the link status. |
| ModulationType | This field displays the modulation method used on the link. |
| LineEncoding | This field displays the line encoding method used to establish a connection to the ISP. |
| DataPath | This field displays whether the link uses fast (lower latency) or interleave (lower error rate) data path. |
| InterleaveDepth | This field is applicable when the **DataPath** field is Interleave.<br>This field displays the interleave depth. |
| LineNumber | This field displays the number of the line pair used for the connection. For example, 1 means the inner most pair. |

**Table 37** Configuration: WAN Device: WANDSLInterfaceConfig (continued)

| LABEL | DESCRIPTION |
|---|---|
| UpstreamCurrRate | This field displays the current payload bandwidth (in kbps) of the upstream DSL channel. |
| DownstreamCurrRate | This field displays the current payload bandwidth (in kbps) of the downstream DSL channel. |
| UpstreamMaxRate | This field displays the attainable bandwidth (in kbps) for the upstream DSL channel. |
| DownstreamMaxRate | This field displays the attainable bandwidth (in kbps) for the downstream DSL channel. |
| UpstreamNoiseMargin | This field displays the current upstream Noise-to-Signal ratio (in 0.1 dB) for the upstream DSL channel. |
| DownstreamNoiseMargin | This field displays the current upstream Noise-to-Signal ratio (in 0.1 dB) for the downstream DSL channel. |
| UpstreamAttenuation | This field displays the current upstream signal loss (in 0.1 dB). |
| DownstreamAttenuation | This field displays the current downstream signal loss (in 0.1 dB). |
| UpstreamPower | This field displays the output power (in 0.1dBmV). |
| DownstreamPower | This field displays the received power (in 0.1dBmV). |
| ATURVendor | This field displays the ATU-R vendor identifier. |
| ATURCountry | This field displays the ATU-R country code. |
| ATURANSIStd | This field displays the ATU-R T1.413 version number. |
| ATURANSIRev | This field displays the ATU-R vendor revision number. |
| ATUCVendor | This field displays the ATU-C vendor identifier. |
| ATUCCountry | This field displays the ATU-C country code. |
| ATUCANSIStd | This field displays the ATU-C T1.413 version number. |
| ATUCANSIRev | This field displays the ATU-C vendor revision number. |
| TotalStart | This field displays the number of seconds that elapsed since the start of the statistics information collection. |
| ShowtimeStart | This field displays the number of seconds since the beginning of the period used for collecting first ShowTime statistics. |
| LastShowtimeStart | This field displays the number of seconds since the beginning of the second most recent period used for collecting the ShowTime statistics. |
| CurrentDayStart | This field displays the number of seconds since the beginning of the period used for collecting CurrentDayStart statistics. |
| QuarterHourStart | This field displays the number of seconds since the beginning of the period used for collecting QuarterHour statistics. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 16.3.1 WAN DSL Line Statistics

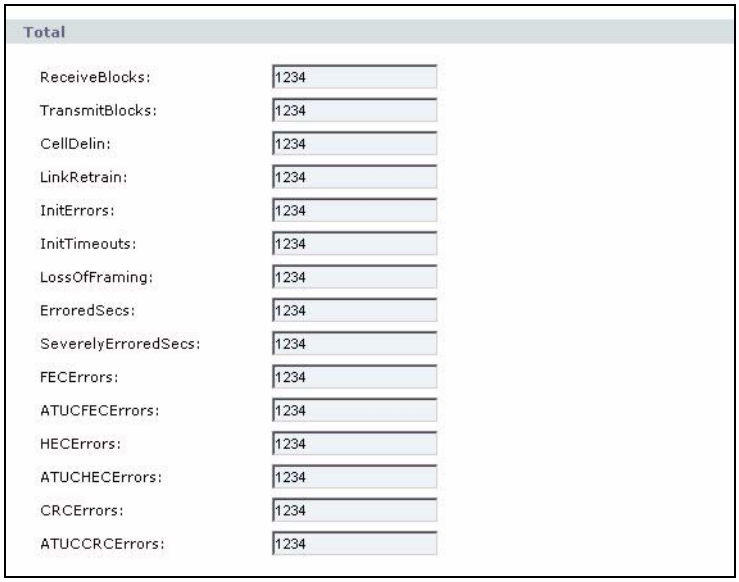
You can view the line statistics in the **Stats**screens. The following statistics screens are available. Field labels are the same in all the screens.

- **Total**: This screen displays the statistics with the totals.
- **Showtime**: This screen displays the statistics since the most recent DSL Showtime.

- **LastShowtime**:This screen displays the statistics since the second most recent DSL Showtime.
- **CurrentDay**: This screen displays the statistics accumulated during the current day.
- **QuaterHour**: This screen displays the statistics accumulated during the current 15 minutes.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANDSLInterfaceConfig** > **Stats** and click on the type of statistics you want to see.

**Figure 94** Configuration: WAN Device: WANDSLInterfaceConfig: Stats (Total)




The following table describes the labels in this screen.

**Table 38** Configuration: WAN Device: WANDSLInterfaceConfig: Stats

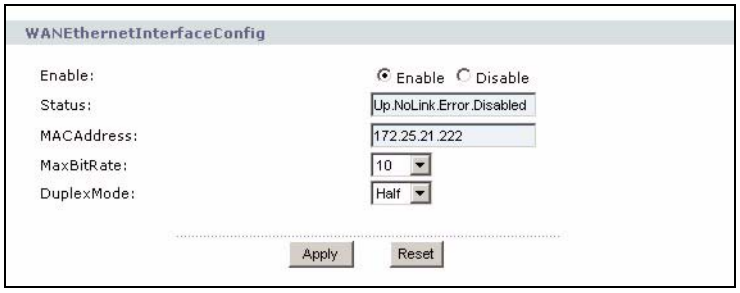
| LABEL | DESCRIPTION |
|---|---|
| ReceiveBlocks | This field displays the number of blocks received. |
| TransmitBlocks | This field displays the number of blocks sent. |
| CellDelin | This field displays the number of cell-delineation errors. |
| LinkRetrain | This field displays the number to link retrain errors. |
| InitErrors | This field displays the number of initialization errors. |
| InitTimeouts | This field displays the number of initialization timeout errors. |
| LossOfFraming | This field displays the number of Loss Of Framing errors. |
| ErroredSecs | This field displays the number of Errored Seconds. |
| SeverelyErroredSecs | This field displays the number of Severely Errored Seconds. |
| FECErrors | This field displays the number of FEC errors. |
| ATUCFECErrors | This field displays the number of FEC errors detected by the ATU-C. |
| HECErrors | This field displays the number of HEC errors. |
| ATUCHECErrors | This field displays the number of HEC errors detected by the ATU-C. |
| CRCErrors | This field displays the number of CRC errors. |
| ATUCCRCErrors | This field displays the number of CRC errors detected by the ATU-C. |

# 16.4 WAN Ethernet Interface Configuration

You can set the Ethernet settings on the WAN interface in the **WANEthernetInterfaceConfig** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANEthernetInterfaceConfig**.

**Figure 95** Configuration: WAN Device: WANEthernetInterfaceConfig




The following table describes the labels in this screen.

**Table 39** Configuration: WAN Device: WANEthernetInterfaceConfig

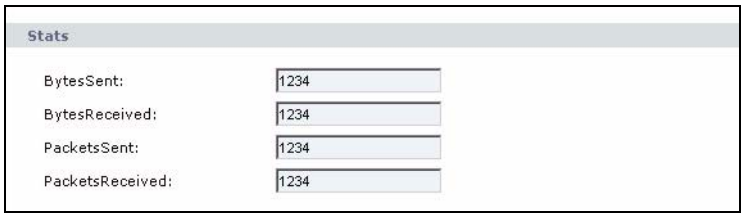
| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate this interface.<br>Select **Disable** to deactivate it. |
| Status | This field displays the status of this interface. |
| MACAddress | This field displays the MAC address of the interface. |
| MaxBitRate | Specify the maximum link speed on the interface. Select **10**, **100** or **Auto**. |
| DuplexMode | Specify the duplex mode for the interface. Select **Half**, **Full** or **Auto**. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 16.4.1 WAN Ethernet Statistics

View the Ethernet statistics for the WAN interface in the **Stats** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANEthernetInterfaceConfig> Stats** to display the statistics screen.

**Figure 96** Configuration: WAN Device: WANEthernetInterfaceConfig: Stats



The following table describes the labels in this screen.

**Table 40** Configuration: WAN Device: WANEthernetInterfaceConfig: Stats

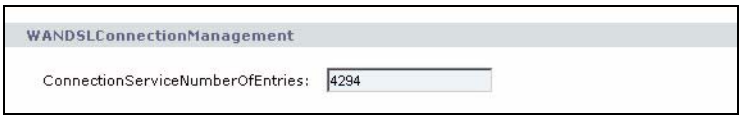
| LABEL | DESCRIPTION |
|---|---|
| BytesSent | This field displays the total number of bytes sent through the WAN since the device was last reset. |
| BytesReceived | This field displays the total number of bytes received on the WAN since the device was last reset. |
| PacketsSent | This field displays the total number of packets sent through the WAN since the device was last reset. |
| PacketsReceived | This field displays the total number of packets received on the WAN since the device was last reset. |

## 16.5 WAN DSL Connection Management

The **WANDSLConnectionManagement** screen displays the number of WAN connection services on the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANDSLConnectionManagement** to display the screen.

**Figure 97** Configuration: WAN Device: WANDSLConnectionManagement

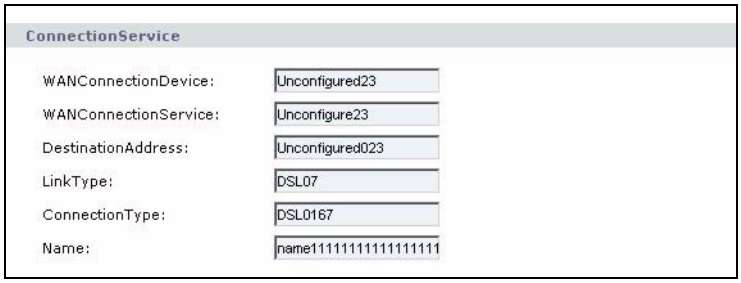



### 16.5.1 WAN DSL Connection Service Information

You can view detailed DSL connection service information in the **ConnectionService** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANDSLConnectionManagement > ConnectionService** and click on an index number.

**Figure 98** Configuration: WAN Device: ConnectionService



The following table describes the labels in this screen.

**Table 41** Configuration: WAN Device: ConnectionService

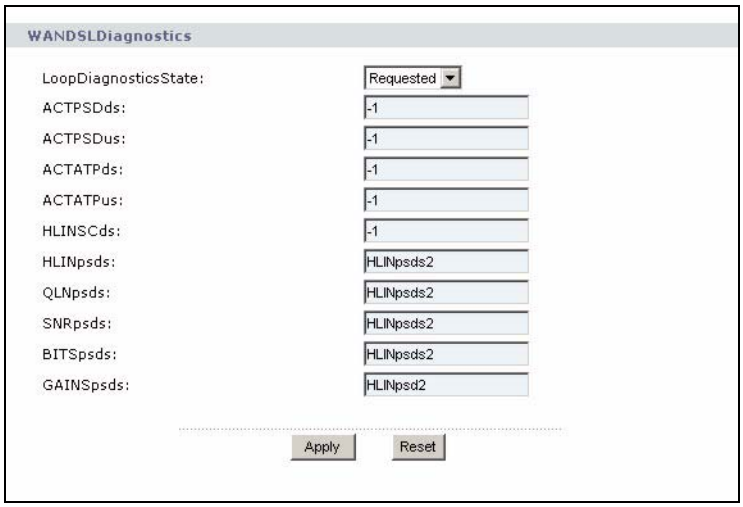
| LABEL | DESCRIPTION |
|---|---|
| WANConnectionDevice | This field displays the hierarchical name of the WAN connection device object associated with the connection. For example, “InternetGatewayDevice.WANDevice.1.WANConnectionDevice.2” |
| WANConnectionService | This field displays the hierarchical name of the WAN connection device object associated with the connection service. For example, “InternetGatewayDevice.WANDevice.1.WANConnectionDevice.2.WANPPPConnection.1”. |
| DestinationAddress | This field shows the destination address of the connection. The address displayed varies depending on the connection type.<br>This field displays VCI/VPI for a PVC connection.<br>This field displays an ATM connection name or ATM address for an SVC connection. |
| LinkType | This field displays the type of the link. |
| ConnectionType | This field displays the name of the connection type. |
| Name | This field displays the descriptive name for this connection. |

# 16.6 WAN DSL Diagnostics

You can view the DSL connection diagnostics data in the **WANDSLDiagnostics** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANDSLDiagnostics** to display the screen as shown.

**Figure 99** Configuration: WAN Device: WANDSLDiagnostics



The following table describes the labels in this screen.

**Table 42** Configuration: WAN Device: WANDSLDiagnostics

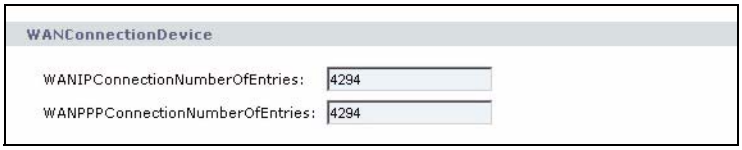
| LABEL | DESCRIPTION |
|---|---|
| LoopDiagnosticsState | Specify the availability of the link diagnostic test result. To initial a test, select **Requested**. |
| ACTPSDds | This field displays the actual power spectral density for the downstream traffic. |
| ACTPSDus | This field displays the actual power spectral density for the upstream traffic. |
| ACTATPds | This field displays the actual aggregate transmitter power for the downstream traffic. |
| ACTATPus | This field displays the actual aggregate transmitter power for the upstream traffic. |
| HLINSCds | This field displays the linear representation scale for the downstream traffic. |
| HLINpsds | This field displays the linear channel characteristics per subcarrier for the upstream traffic. |
| QLNpsds | This field displays the quiet line noise per subcarrier for the downstream traffic in comma-separated list of numbers.<br>Maximum list of numbers is 256 for an ADSL/ADSL2 connection and 512 for an ADSL2+ connection. |
| SNRpsds | This field displays the Signal-to-Noise ratio per subcarrier for the downstream traffic. |
| BITSpsds | This field displays the bit allocation per subcarrier for the downstream traffic. |
| GAINSpsds | This field displays the gain allocation per subcarrier for the downstream traffic. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

# 16.7 WAN Connection Device

For DSL connections, you can view the number of connection instances associated to an ATM VC in the **WANConnectionDevice** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice** and click on an index to display the screen as shown.

**Figure 100** Configuration: WAN Device: WANConnectionDevice




The following table describes the labels in this screen.

**Table 43** Configuration: WAN Device: WANConnectionDevice

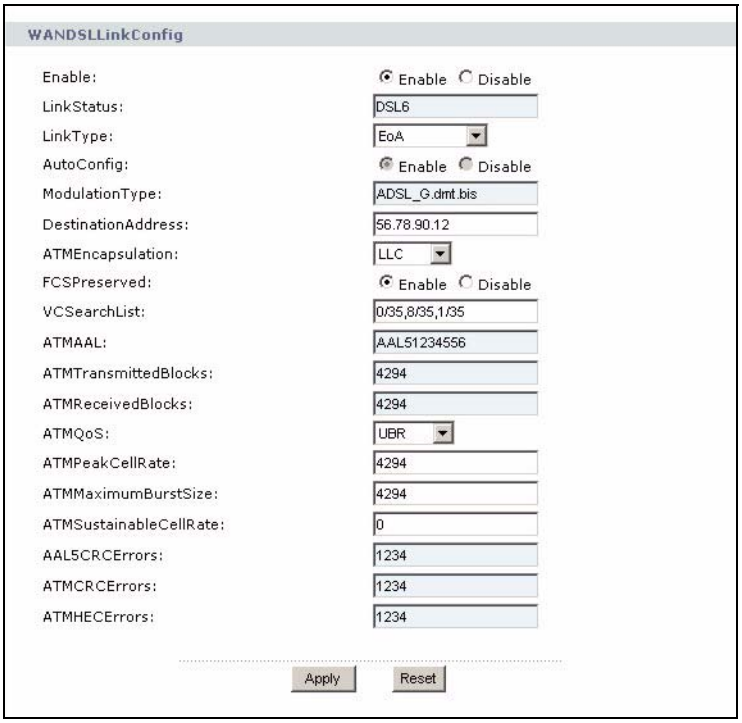
| LABEL | DESCRIPTION |
|---|---|
| WANIPConnectionNumberOfEntries | This field displays the number of WANIPConnection entries associated to the WANConnectionDevice. |
| WANPPPConnectionNumberOfEntries | This field displays the number of WANPPPConnection entries associated to the WANConnectionDevice. |

## 16.7.1 WAN DSL Link Configuration

Use the **WANDSLLinkConfig** screen to set the ATM layer properties for the physical DSL connection.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANDSLLinkConfig** to display the screen as shown.

**Figure 101** Configuration: WAN Device: WANDSLLinkConfig




The following table describes the labels in this screen.

**Table 44** Configuration: WAN Device: WANDSLLinkConfig

| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the DSL link.<br>Select **Disable** to deactivate the DSL link. |
| LinkStatus | This field displays the link status (**Up**, **Down**, **Initializing** or **Unavailable**). |
| LinkType | Specify the type for this DSL link.<br>Select **EoA** to use the bridged Ethernet over ATM (RFC2684) link type.<br>Select **IPoA** to use the routed IP over ATM (RFC2684) link type.<br>Select **PPPoA** to use the PPP over ATM (RFC2364) link type.<br>Select **PPPoE** to use the PPP over Ethernet on bridged Ethernet over ATM (RFC2516, RFC2684) link type.<br>Select **CIP** to use the Classical IP over ATM (RFC1577) link type.<br>Select **Unconfigured** for an unknown link type. |
| AutoConfig | This field displays whether the auto-configuration feature is enabled or disable for this DSL link. |
| ModulationType | This field displays the type of modulation used on the interface associated to this DSL link. |

**Table 44** Configuration: WAN Device: WANDSLLinkConfig (continued)

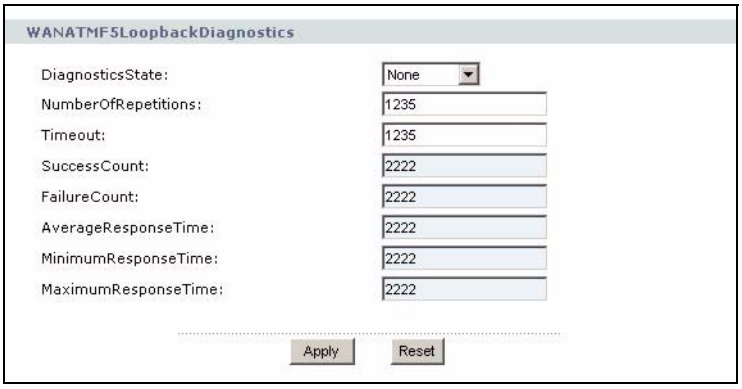
| LABEL | DESCRIPTION |
|---|---|
| DestinationAddress | Enter the destination address for the DSL link. The type of address you entry varies depending on the connection type.<br>Enter the VCI/VPI for a PVC connection.<br>Enter an ATM connection name or ATM address for an SVC connection. |
| ATMEncapsulation | Select the encapsulation (**LLC** or **VCMUX**) to use for this DSL link. |
| FCSPreserved | Select **Enable** to include a checksum in the ATM payload for error correction.<br>Select **Disable** to not include a checksum in the ATM payload. No error correction is available. |
| VCSearchList | This field displays the VCI/VPI number pairs (separated by a comma) the link uses to establish a connection if the destination address specified cannot be reached. |
| ATMAAL | This field displays the ATM Adapation Layer (AAL) the link uses. |
| ATMTransmittedBlocks | This field displays the number of ATM blocks transmitted successfully. |
| ATMReceivedBlocks | This field displays the number of ATM blocks received successfully. |
| ATMQoS | Select the ATM Quality of Service (QoS) method to use on this link. |
| ATMPeakCellRate | Enter the peak cell rate (between 0 and 4294967295) for the upstream traffic in cells per second. |
| ATMMaximumBurstSize | Enter the maximum burst rate (between 0 and 4294967295) for the upstream traffic in cells. |
| ATMSustainableCellRate | Enter the sustainable cell rate (between 0 and 4294967295) for the upstream traffic in cells per second. This value is used for traffic shaping. |
| AAL5CRCErrors | This field displays the number of AAL5 layer cyclic redundancy check errors. |
| ATMCRCErrors | This field displays the number of ATM layer cyclic redundancy check errors. |
| ATMHECErrors | This field displays the number of Header Error Check related errors at the ATM layer. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 16.7.2 WAN ATM F5 Loopback Diagnostics

Use the **WANATMF5LoopbackDiagnostics** screen to view loopback diagnostic (ping) test results and to configure timeout settings for the ping test on the ATM layer.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANATMF5LoopbackDiagnostics** to display the screen as shown.

**Figure 102** Configuration: WAN Device: WANATMF5LoopbackDiagnostics




The following table describes the labels in this screen.

**Table 45** Configuration: WAN Device: WANATMF5LoopbackDiagnostics

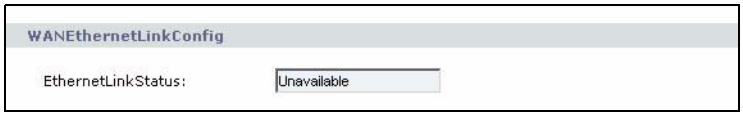
| LABEL | DESCRIPTION |
|---|---|
| DiagnosticsState | Specify the availability of the ping test result. To initial a test, select **Requested**. |
| NumberOfRepetitions | Enter the number of ping tests (between 1 and 4294967295) to perform before displaying the test results. |
| Timeout | Enter the timeout (between 1 and 4294967295 milliseconds) for the ping test. |
| SuccessCount | This field displays the number of pings that received a successful response within the timeout in the most recent ping test. |
| FailureCount | This field displays the number of pings that failed to receive a successful response within the timeout in the most recent ping test. |
| AverageResponseTime | This field displays the average response time (in milliseconds) of all pings that received a successful response in the most recent ping test.<br>If there is no successful response from the ping test, this field displays zero. |
| MinimumResponseTime | This field displays the minimum response time (in milliseconds) of the ping that received a successful response in the most recent ping test.<br>If there is no successful response from the ping test, this field displays zero. |
| MaximumResponseTime | This field displays the maximum response time (in milliseconds) of the ping that received a successful response in the most recent ping test.<br>If there is no successful response from the ping test, this field displays zero. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 16.7.3 WAN Ethernet Link Configuration

You can view the WAN Ethernet connection status in the **WANEthernetLinkConfig** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANEthernetLinkConfig** to display the screen as shown.

**Figure 103** Configuration: WAN Device: WANEthernetLinkConfig




The following table describes the labels in this screen.

**Table 46** Configuration: WAN Device: WANEthernetLinkConfig

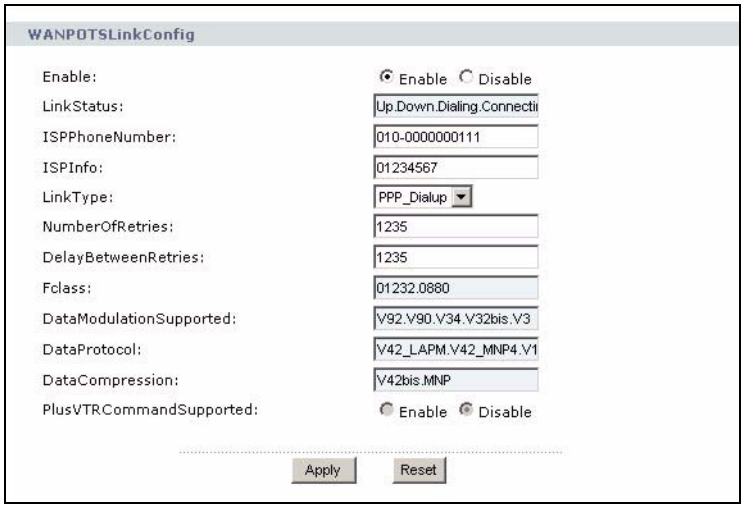
| LABEL | DESCRIPTION |
|---|---|
| EthernetLinkStatus | This field displays the Ethernet link status (**Up**, **Down** or **Unavailable**). |

## 16.7.4 WAN POTS Link Configuration

You can view the WAN POTS connection status in the **WANPOTSLinkConfig** screen. The POST connection is used for dialing to the ISP for Internet access.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANPOTSLinkConfig** to display the screen as shown.

**Figure 104** Configuration: WAN Device: WANPOTSLinkConfig




The following table describes the labels in this screen.

**Table 47** Configuration: WAN Device: WANPOTSLinkConfig

| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the POTS link.<br>Select **Disable** to deactivate the POTS link. |
| LinkStatus | This field displays the link status (**Up**, **Down**, **Dialing**, **Connecting** or **Unavailable**). |
| ISPPhoneNumber | Specify the phone number (up to 64 digits) to dial to connect to the ISP.<br>Enter the phone number in the format countryCode-areaCode-phone number. For example, +86-10-62618501.<br>To enter more than one phone number, separate the number with a semicolon(:). Brackets in the numbers are ignored. |
| ISPInfo | Enter a descriptive name (up to 64 characters) to identify this ISP. |
| LinkType | The default link type is **PPP_Dialup**. |

**Table 47** Configuration: WAN Device: WANPOTSLinkConfig

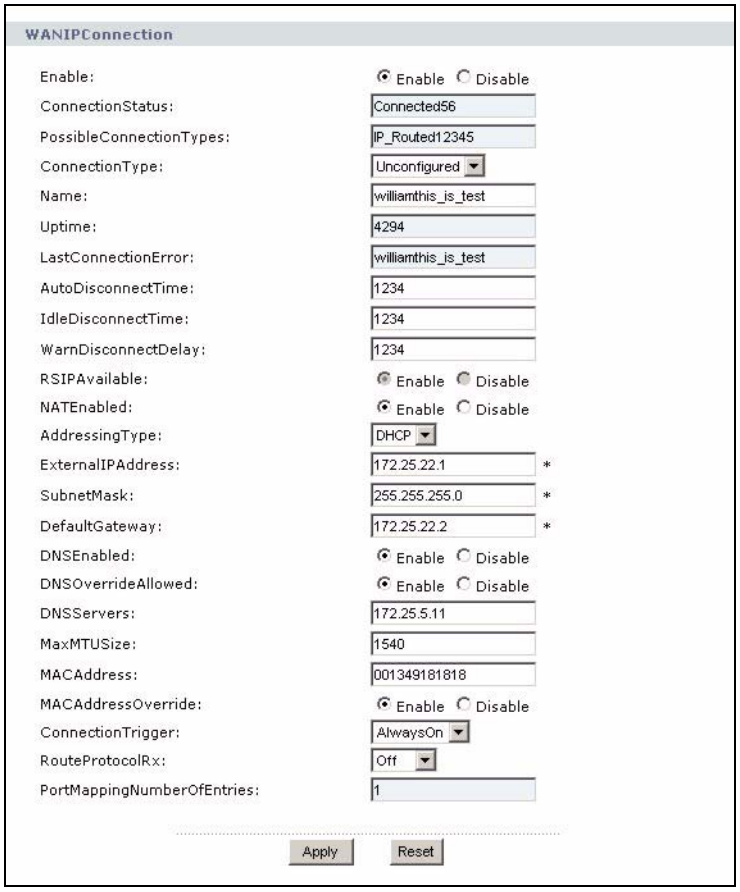
| LABEL | DESCRIPTION |
|---|---|
| NumberOfRetries | Enter the number of times (between 0 and 4294967295) the CPE device is to re-dial for Internet connection. |
| DelayBetweenRetries | Specify the time (in milliseconds) the CPE device is to wait before attempting to connect to the ISP again. Enter a number between 0 and 4294967295. |
| Fclass | This field indicates the transmission functions the CPE device is capable of.<br>0:data<br>1, 2, 2.0: fax<br>8: voice<br>80: DSVD |
| DataModulationSupported | This field displays the modulation method(s) supported for data transfer. |
| DataProtocol | This field displays the protocol(s) supported for data transfer. |
| DataCompression | This field displays the compression method used for data transfer. |
| PlusVTRCommandSupported | This field indicates whether full-duplex mode is activated on the link or not. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 16.7.5 WAN IP Connection

You can configure and view basic IP settings for the WAN connection in the **WANIPConnection** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANIPConnection** to display the screen as shown.

**Figure 105** Configuration: WAN Device: WANIPConnection




The following table describes the labels in this screen.

**Table 48** Configuration: WAN Device: WANIPConnection

| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the link.<br>Select **Disable** to deactivate the link. |
| ConnectionStatus | This field displays the link status (**Unconfigured**, **Connecting**, **Connected**, **PendingDisconnect**, **Disconnecting**, **Disconnected**). |
| PossibleConnectionTypes | This field displays the connection type(s) this link supports. |
| ConnectionType | Select a connection type for this link. |
| Name | Enter a descriptive name (up to 256 characters) for this link. |
| Uptime | This field displays the number of seconds the link has been up. |
| LastConnectionError | This field displays the cause for the last failed connection attempt. |
| AutoDisconnectTime | Specify the number of seconds (between 0 and 4294967295) the device is to wait before disconnecting the link.<br>Enter zero if you do not want the device to disconnect the link automatically. |
| IdleDisconnectTime | Specify the number of seconds (between 0 and 4294967295) of inactivity timeout for a link. When the time is reached without any network activity through the link, the device automatically disconnect the link.<br>Enter zero if you do not want the device to disconnect the link automatically. |

**Table 48** Configuration: WAN Device: WANIPConnection (continued)

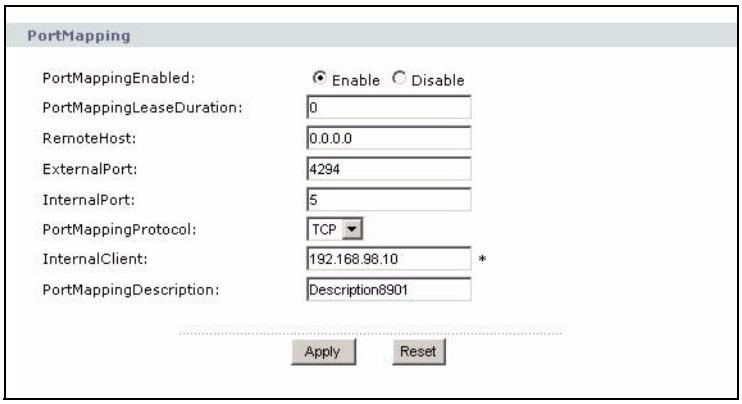
| LABEL | DESCRIPTION |
|---|---|
| WarnDisconnectDelay | Specify the number of seconds (between 0 and 4294967295) before the device change the state of the link to the disconnecting state. |
| RSIPAvailable | This field displays whether the Realm-specific IP (RSIP) feature is supported on the device. |
| NATEnabled | Select **Enable** to activate the NAT (Network Address Translation) feature for this link.<br>Select **Disable** to deactivate the NAT feature for this link. |
| AddressingType | Select **DHCP** to set the device to obtain a dynamic IP address from the ISP for this link on the WAN.<br>Select **Static** to set the link to use a fixed WAN IP address. Then configure the fields below. |
| ExternalIPAddress | This field is applicable when you select **Static** in the **AddressingType** field.<br>Enter the WAN IP address provided by your ISP. |
| SubnetMask | This field is applicable when you select **Static** in the **AddressingType** field.<br>Enter the subnet mask as provided by your ISP. |
| DefaultGateway | This field is applicable when you select **Static** in the **AddressingType** field.<br>Enter the IP address of the default gateway device. |
| DNSEnabled | Select **Enable** to set the device to resolve domain names through this link.<br>Select **Disable** to deactivate DNS queries through this link. |
| DNSOverrideAllowed | Select **Enable** to allow a non-empty DNS address to be replaced by a DNS entry received on the WAN.<br>Select **Disable** to deactivate this feature. |
| DNSServers | Enter the IP address(es) of the DNS server(s). Separate the IP addresses using a comma (, ). |
| MaxMTUSize | Enter the maximum size (between 1 and 1540) for the Ethernet frames allowed on this link. |
| MACAddress | This field is applicable when you select **Enable** in the **MACAdddressOverride** field.<br>Enter the MAC address of this interface on the device. |
| MACAddressOverride | Select **Enable** to change the MAC address of this interface in the **MACAddress** field.<br>Select **Disable** if you do not allow MAC address modification. |
| ConnectionTrigger | Select how the device will establish a connection for Internet access. Choices are **AlwaysOn**, **OnDemand** and **Manual**. |
| RouteProtocolRx | Select the routing protocol (**RIP1**, **RIP2** or **OSPF**) the link is to use. Select **Off** to disable the routing feature. |
| PortMappingNumberOfEntries | This field displays the number of port mappings on this link. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

### 16.7.5.1 Port Mapping Table

Use the **PortMapping** screen to configure the port mapping settings for the WAN IP connection.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANIPConnection**. Then click **PortMapping** and an index number to display the screen as shown.

**Figure 106** Configuration: WAN Device: PortMapping




The following table describes the labels in this screen.

**Table 49** Configuration: WAN Device: PortMapping

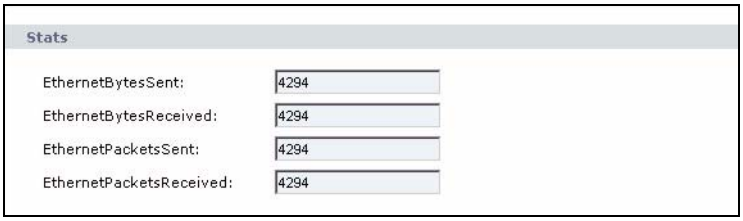
| LABEL | DESCRIPTION |
|---|---|
| PortMappingEnabled | Select **Enable** to activate the port mapping entry on this link.<br>Select **Disable** to deactivate the port mapping entry. |
| PortMappingLeaseDuration | Specify the time (between 1 to 4294967295 seconds) the device stores the port mapping entry. After this, the entry is removed from the port mapping table.<br>Entering 0 means that a port mapping entry is static and cannot be removed from the port mapping table. |
| RemoteHost | Specify the IP address of the remote host device.<br>If you leave this field blank, it indicates a wildcard which the device must support. In this case, when a packet is sent to the external port on the WAN, the device will forward the packet to the internal port. |
| ExternalPort | Enter a port number (between 0 and 4294967295) the device listens on for NAT connection requests.<br>Enter 0 to indicate a wildcard. This sets the device to forward a wildcard packet to the internal port. |
| InternalPort | Enter a port number for the internal port (between 1 and 4294967295) to which the device forwards packets with wildcard.<br>A port number of zero (0) is not allowed. |
| PortMappingProtocol | Select the protocol (**UDP** or **TCP**) used for port mapping. |
| InternalClient | Enter the IP address or domain name of a host on the LAN.<br>To allow UDP port mapping or multiple NAT clients to use the same port number, enter the broadcast address of 255.255.255.255 for the internal client. |
| PortMappingDescription | Enter a descriptive name (up to 256 characters) to identify this port mapping entry. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

#### 16.7.5.2 WAN IP Connection Statistics

Display the **Stats** screen to view the statistics of all connections on the WAN interface.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANIPConnection**. Then click **Stats** to display the screen as shown.

**Figure 107** Configuration: WAN Device: WANIPConnection: Stats




The following table describes the labels in this screen.

**Table 50** Configuration: WAN Device: WANIPConnection: Stats

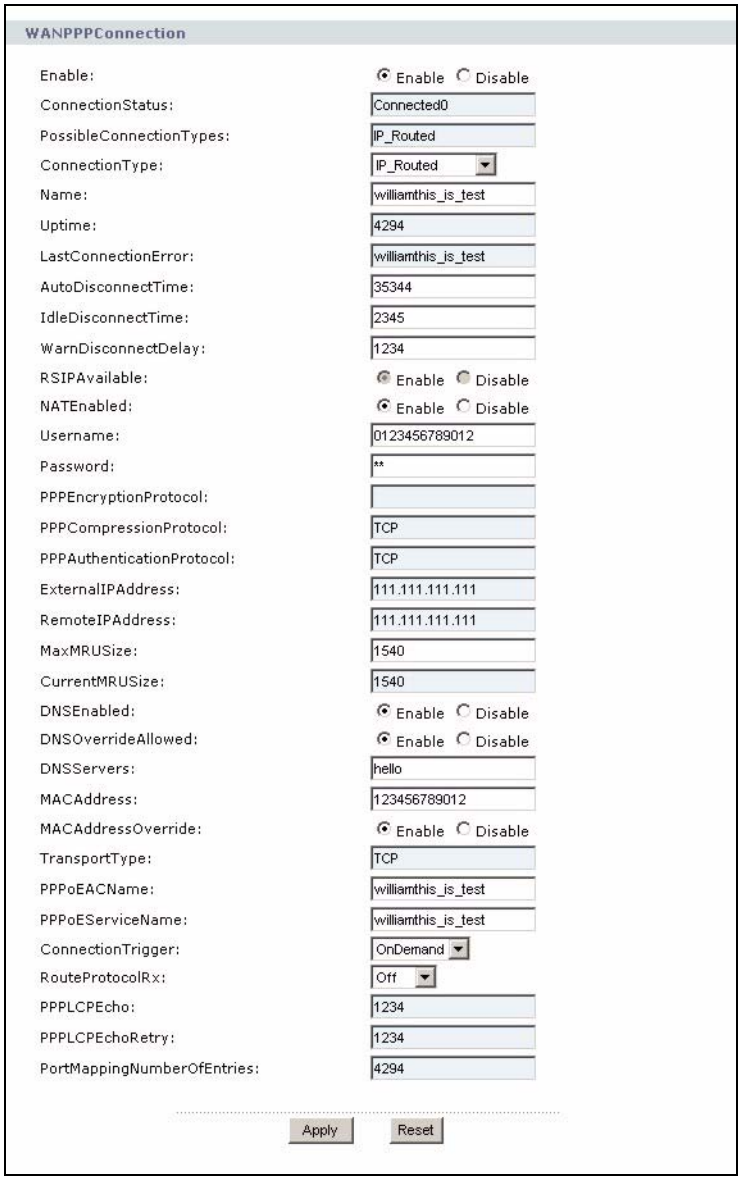
| LABEL | DESCRIPTION |
|---|---|
| EthernetBytesSent | This field displays the total number of bytes sent through the WAN since the device was last reset. |
| EthernetBytesReceived | This field displays the total number of bytes received on the WAN since the device was last reset. |
| EthernetPacketsSent | This field displays the total number of packets sent through the WAN since the device was last reset. |
| EthernetPacketsReceived | This field displays the total number of packets received on the WAN since the device was last reset. |

### 16.7.6 WAN PPP Connection

Display the **WANPPPConnection** screen to configure and view basic PPP settings for the Internet access on the WAN interface.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANPPPConnection** to display the screen as shown.

**Figure 108** Configuration: WAN Device: WANPPPConnection




The following table describes the labels in this screen.

**Table 51** Configuration: WAN Device: WANPPPConnection

| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the link.<br>Select **Disable** to deactivate the link. |
| ConnectionStatus | This field displays the link status |
| PossibleConnectionTypes | This field displays the connection type(s) this link supports. |
| ConnectionType | Select a connection type for this link. |
| Name | Enter a descriptive name (up to 256 characters) for this link. |
| Uptime | This field displays the number of seconds the link has been up. |
| LastConnectionError | This field displays the cause for the last failed connection attempt. |

**Table 51** Configuration: WAN Device: WANPPPConnection (continued)

| LABEL | DESCRIPTION |
|---|---|
| AutoDisconnectTime | Specify the number of seconds (between 0 and 4294967295) the device is to wait before disconnecting the link.<br>Enter zero if you do not want the device to disconnect the link automatically. |
| IdleDisconnectTime | Specify the number of seconds (between 0 and 4294967295) of inactivity timeout for a link. When the time is reached without any network activity through the link, the device automatically disconnect the link.<br>Enter zero if you do not want the device to disconnect the link automatically. |
| WarnDisconnectDelay | Specify the number of seconds (between 0 and 4294967295) before the device change the state of the link to the disconnecting state. |
| RSIPAvailable | This field displays whether the Realm-specific IP (RSIP) feature is supported on the device. |
| NATEnabled | Select **Enable** to activate the NAT (Network Address Translation) feature for this link.<br>Select **Disable** to deactivate the NAT feature for this link. |
| Username | Enter the Internet access account user name (up to 64 characters) provided by the ISP for authentication. |
| Password | Enter the Internet access account password (up to 64 characters) provided by the ISP for authentication. |
| PPPEncryptionProtocol | This field displays the protocol used for PPP encryption between the device and the ISP's network. |
| PPPCompressionProtocol | This field displays the protocol used for PPP traffic compression between the device and the ISP's network. |
| PPPAuthenticationProtocol | This field displays the protocol used for PPP connection authentication between the device and the ISP's network. |
| ExternalIPAddress | This field displays the IP address used by NAT for this connection. |
| RemoteIPAddress | This field displays the remote IP address for this connection. |
| MaxMRUSize | Enter the maximum size (between 1 and 1540) for the Ethernet frames allowed on this link. |
| CurrentMRUSize | This field displays the current configured maximum frame size allowed from a remote host. |
| DNSEnabled | Select **Enable** to set the device to resolve domain names through this link.<br>Select **Disable** to deactivate DNS queries through this link. |
| DNSOverrideAllowed | Select **Enable** to allow a non-empty DNS address to be replaced by a DNS entry received on the WAN.<br>Select **Disable** to deactivate this feature. |
| DNSServers | Enter the IP address(es) of the DNS server(s). Separate the IP addresses using a comma (, ). |
| MACAddress | This field is applicable when you select **Enable** in the **MACAdddressOverride** field.<br>Enter the MAC address of this interface on the device. |
| MACAddressOverride | Select **Enable** to change the MAC address of this interface in the **MACAddress** field.<br>Select **Disable** if you do not allow MAC address modification. |
| TransportType | This field displays the transport protocol for the PPP connection. |
| PPPoEACName | This field displays the descriptive name for the PPPoE Access Concentrator (AC). |
| PPPoEServiceName | This field displays the descriptive name for the PPPoE service. |

**Table 51** Configuration: WAN Device: WANPPPConnection (continued)

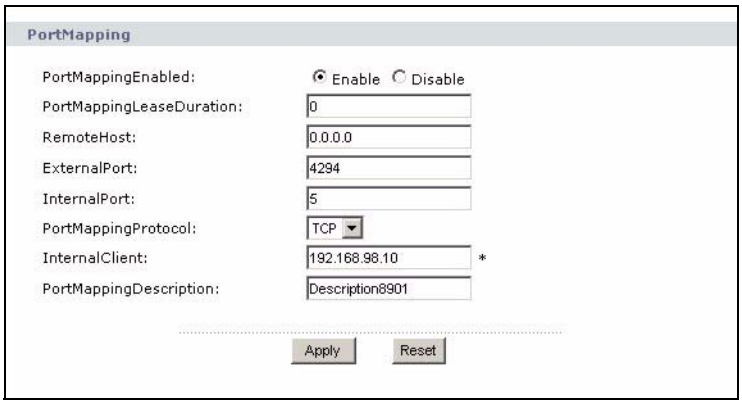
| LABEL | DESCRIPTION |
|---|---|
| ConnectionTrigger | Select how the device will establish a connection for Internet access. Choices are **AlwaysOn**, **OnDemand** and **Manual**. |
| RouteProtocolRx | Select the routing protocol (**RIP1**, **RIP2** or **OSPF**) the link is to use. Select **Off** to disable the routing feature. |
| PPPLCPEcho | This field displays the time (in seconds) for PPP Link Control Protocol (LCP) echo. |
| PPPLCPEchoRetry | This field displays the time (in seconds) for PPP Link Control Protocol (LCP) echo retry. |
| PortMappingNumberOfEntries | This field displays the number of port mappings on this link. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

### 16.7.6.1 Port Mapping Table

Use the **PortMapping** screen to configure the port mapping settings for the WAN PPP connection.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANPPPConnection**. Then click **PortMapping** and an index number to display the screen as shown.

**Figure 109** Configuration: WAN Device: WANPPPConnection: PortMapping




The following table describes the labels in this screen.

**Table 52** Configuration: WAN Device: WANPPPConnection: PortMapping

| LABEL | DESCRIPTION |
|---|---|
| PortMappingEnabled | Select **Enable** to activate the port mapping entry on this link.<br>Select **Disable** to deactivate the port mapping entry. |
| PortMappingLeaseDuration | Specify the time (between 1 to 4294967295 seconds) the device stores the port mapping entry. After this, the entry is removed from the port mapping table.<br>Entering 0 means that a port mapping entry is static and cannot be removed from the port mapping table. |

**Table 52** Configuration: WAN Device: WANPPPConnection: PortMapping (continued)

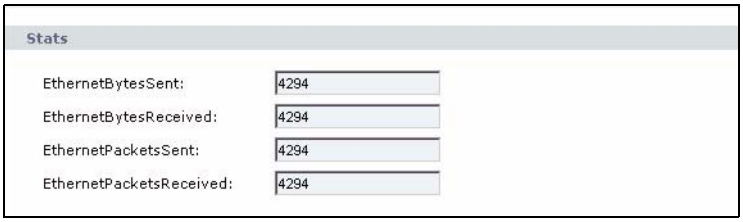
| LABEL | DESCRIPTION |
|---|---|
| RemoteHost | Specify the IP address of the remote host device.<br>If you leave this field blank, it indicates a wildcard which the device must support. In this case, when a packet is sent to the external port on the WAN, the device will forward the packet to the internal port. |
| ExternalPort | Enter a port number (between 0 and 4294967295) the device listens on for NAT connection requests.<br>Enter 0 to indicate a wildcard. This sets the device to forward a wildcard packet to the internal port. |
| InternalPort | Enter a port number for the internal port (between 1 and 4294967295) to which the device forwards packets with wildcard.<br>A port number of zero (0) is not allowed. |
| PortMappingProtocol | Select the protocol (**UDP** or **TCP**) used for port mapping. |
| InternalClient | Enter the IP address or domain name of a host on the LAN.<br>To allow UDP port mapping or multiple NAT clients to use the same port number, enter the broadcast address of 255.255.255.255 for the internal client. |
| PortMappingDescription | Enter a descriptive name (up to 256 characters) to identify this port mapping entry. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

### 16.7.6.2 WAN PPP Connection Statistics

Display the **Stats** screen to view the statistics of all PPP connections on the WAN interface.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > WANDevice > WANConnectionDevice**, click on an index and **WANPPPConnection**. Then click **Stats** to display the screen as shown.

**Figure 110** Configuration: WAN Device: WANPPPConnection: Stats




The following table describes the labels in this screen.

**Table 53** Configuration: WAN Device: WANPPPConnection: Stats

| LABEL | DESCRIPTION |
|---|---|
| EthernetBytesSent | This field displays the total number of bytes sent through the WAN since the device was last reset. |
| EthernetBytesReceived | This field displays the total number of bytes received on the WAN since the device was last reset. |
| EthernetPacketsSent | This field displays the total number of packets sent through the WAN since the device was last reset. |
| EthernetPacketsReceived | This field displays the total number of packets received on the WAN since the device was last reset. |

# 17

# LAN Device

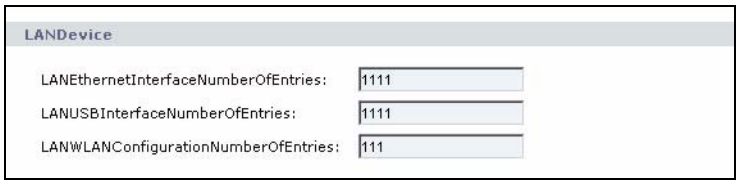
This chapter describes the screens you use to configure and view WAN settings.

## 17.1 LAN Device Screen

Use the **LANDevice** screens to configure or view the LAN interface settings on the selected device. The number of screens and field labels available vary depending on your device model.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice** to display the screen.

**Figure 111** Configuration: LANDevice




The following table describes the labels in this screen.

**Table 54** Configuration: LANDevice

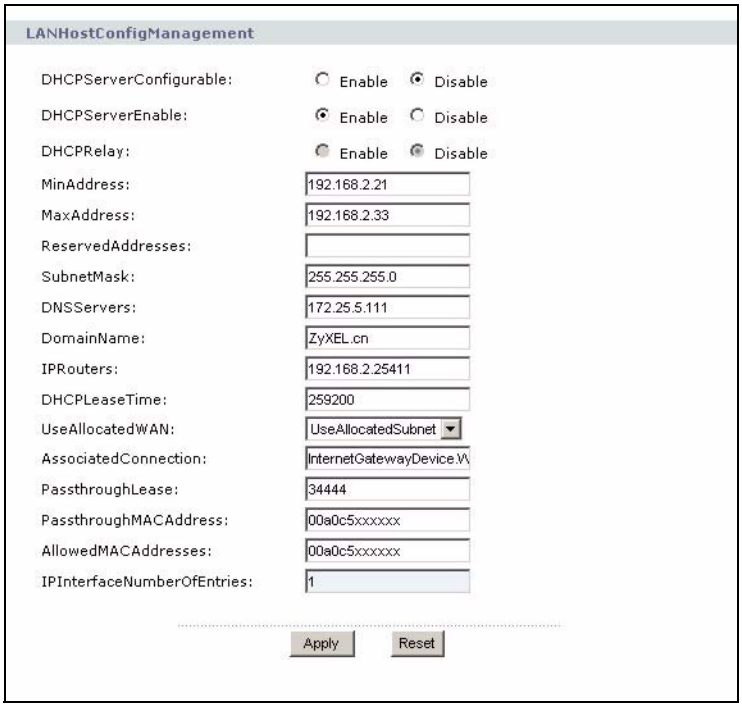
| LABEL | DESCRIPTION |
|---|---|
| LANEthernetInterfaceNumberOfEntries | This field displays the number of instances on the LAN interface. |
| LANUSBInterfaceNumberOfEntries | This field displays the number of instances on the USB interface. |
| LANWLANConfigurationNumberOfEntries | This field displays the number of instances on the WLAN interface. |

## 17.2 LAN Host Configuration Management

Use the **LANHostConfigManagement** screen to view and set LAN DHCP settings.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > LANHostConfigManagement** to display the screen.

**Figure 112** Configuration: LAN Device: LANHostConfigManagement




The following table describes the labels in this screen.

**Table 55** Configuration: LAN Device: LANHostConfigManagement

| LABEL | DESCRIPTION |
|---|---|
| DHCPServerConfigurable | Select **Enable** if you want to allow changes to the default DHCP server setting on the LAN interface.<br>Select **Disable** to have the device use the default DHCP server settings on the LAN. No changes are allowed. |
| DHCPServerEnable | Select **Enable** to activate the DHCP server on the LAN interface.<br>Select **Disable** to deactivate the DHCP server on the LAN interface. |
| DHCPRelay | Select **Enable** to set the device to act as a DHCP relay on the LAN. The device will forward DHCP requests from the clients to the actual DHCP server on the LAN. In this case, you must set up a DHCP server.<br>Select **Disable** to deactivate this feature. In this case, the device acts as a DHCP server. |
| MinAddress | Enter the first IP address in the DHCP IP pool the DHCP server assigns to a DHCP client on the LAN. |
| MaxAddress | Enter the last IP address in the DHCP IP pool the DHCP server assigns to a DHCP client on the LAN. |
| ReservedAddresses | Enter the IP address(es) in the DHCP IP pool that is reserved and not assigned to a DHCP client on the LAN.<br>You can specify more than one reserved IP address separated by a comma (,). |
| SubnetMask | Enter the subnet mask for the DHCP clients. |
| DNSServers | Enter the IP address of the DNS server whose information the device sends to the DHCP clients.<br>You can specify more than one DNS server IP address separated by a comma (,). |
| DomainName | Enter the domain name the device is to assign to DHCP clients. |

**Table 55** Configuration: LAN Device: LANHostConfigManagement (continued)

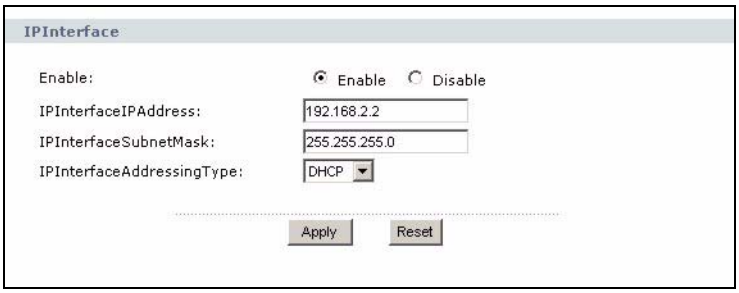
| LABEL | DESCRIPTION |
|---|---|
| IPRouters | Enter the IP address of the default gateway on the LAN.<br>You can specify more than one IP address separated by a comma (,). |
| DHCPLeaseTime | Specify the lease time (in seconds) for the assigned IP address to DHCP client(s).<br>Enter a number between -1 and 2147483647. Enter -1 to set a lease time that never times out. |
| UseAllocatedWAN | Specify how the device is to assign DHCP client IP address(es).<br>Select **Normal** to assign IP address from the DHCP IP pool configured.<br>Select **UserAllocatedSubnet** to assign IP address from the range of WAN IP addresses provided by your ISP.<br>Select **Passthrough** to assign IP address to the DHCP client whose MAC address is marked for passthrough. |
| AssociatedConnection | This field is applicable if you select **UseAllocatedSubnet** or **Passthrough** in the **UseAllocatedWAN** field.<br>Enter the complete hierarchical name for the default WAN interface to which this connection is associated. You can enter up to 256 characters. |
| PassthroughLease | Specify the lease time (in seconds) to DHCP clients when the WAN IP address is passthrough.<br>Enter a number between 0 and 4294967295. |
| PassthroughMACAddress | This field is applicable if you select **Passthrough** in the **UseAllocatedWAN** field.<br>Enter the MAC address of a host on the LAN allowed to passthrough the WAN. |
| AllowedMACAddresses | This field displays the MAC address(es) allowed to pass through the LAN. |
| IPInterfaceNumberOfEntries | This field displays the number of IP subnets on the LAN.<br>This field is 1 if IP alias is not supported on the LAN. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 17.2.1 IP Interface

Configure the IP settings (such as the IP address and subnet mask) on the LAN in the **IPInterface** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > LANHostConfigManagement > LANInterface** and click on an index number to display the screen.

**Figure 113** Configuration: LAN Device: IPInterface



The following table describes the fields in this screen.

**Table 56** Configuration: LAN Device: IPInterface

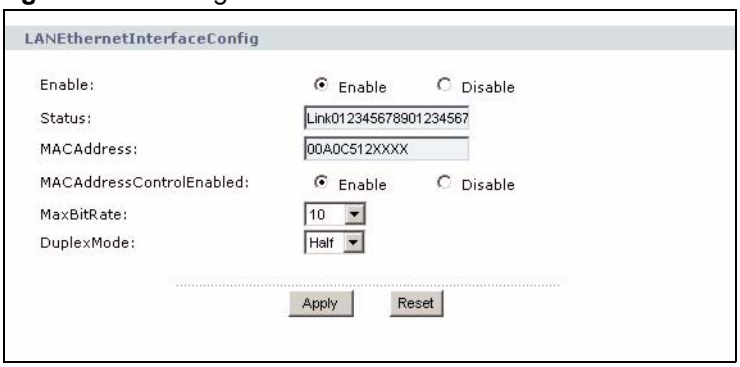
| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the LAN interface.<br>Select **Disable** to deactivate the LAN interface on the device. No traffic is allowed through the LAN interface. |
| IPInterfaceIPAddress | Enter the LAN IP address of the device in dotted decimal notation, for example, 192.168.1.1. |
| IPInterfaceSubnetMask | Type the subnet mask on the LAN. For example, 255.255.255.0. |
| IPInterfaceAddressingType | Specify the method to assign IP address on the LAN interface.<br>Select **DHCP** to assign IP address from a DHCP server.<br>Select **Static** if you want to manually set a device on the LAN interface to use a fixed IP address configured in the field above.<br>Select **AutoIP** to set the device to use the default IP settings on the LAN interface. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 17.3 LAN Ethernet Interface Configuration

You can use the **LANEthernetInterfaceConfig** screen to enable or disable the LAN Ethernet interface, configure the port speed and duplex mode. You can also use this screen to enable or disable static MAC address learning.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > LANEthernetInterfaceConfig**, click on an index and **Stats** to display the screen as shown.

**Figure 114** Configuration: LAN Device: LANEthernetInterfaceConfig




The following table describes the fields in this screen.

**Table 57** Configuration: LAN Device: LANEthernetInterfaceConfig

| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the LAN Ethernet interface.<br>Select **Disable** to deactivate the LAN Ethernet interface. In this case, no connection is allowed. |
| Status | This field displays the connection status of the Ethernet interface. |

**Table 57** Configuration: LAN Device: LANEthernetInterfaceConfig (continued)

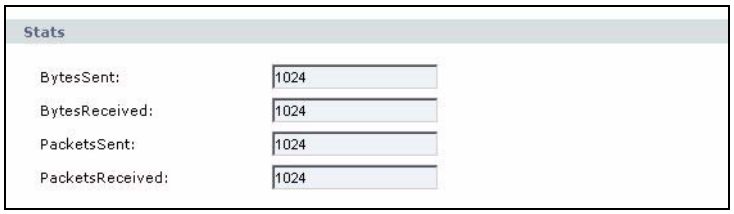
| LABEL | DESCRIPTION |
|---|---|
| MACAddress | This field displays the MAC address of the Ethernet interface. |
| MACAddress ControlEnabled | Select **Enable** to allow traffic with the specified MAC addresses on this port. You can specify the MAC addresses in the **LANHostConfigManagement** screen (refer to Section 17.2 on page 151).<br>Select **Disable** to deactivate this feature. All traffic is allowed through the LAN interface. |
| MaxBitRate | Select the connection speed in mega bits per second (Mbps).<br>Select **Auto** (auto-negotiation) allows the port to negotiate with a peer port automatically to obtain the connection speed that both ends support. |
| DuplexMode | Select the duplex mode for the connection.<br>Select **Auto** allows the port to negotiate with a peer port automatically to obtain the duplex mode that both ends support. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

### 17.3.1 Ethernet Interface Statistics

Display the **Stats** screen to view the statistics on the LAN interface.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > LANEthernetInterfaceConfig**, click on an index and **Stats** to display the screen as shown.

**Figure 115** Configuration: LAN Device: LANEthernetInterfaceConfig: Stats




The following table describes the fields in this screen.

**Table 58** Configuration: LAN Device: LANEthernetInterfaceConfig: Stats

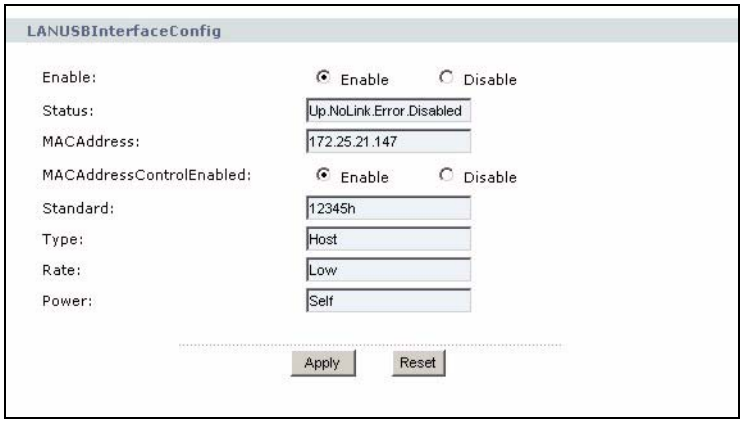
| LABEL | DESCRIPTION |
|---|---|
| BytesSent | This field displays the number of transmitted bytes on this interface. |
| BytesReceived | This field displays the number of received bytes on this interface. |
| PacketsSent | This field displays the number of transmitted packets on this interface. |
| PacketsReceived | This field displays the number of received packets on this interface. |

## 17.4 LAN USB Interface Configuration

The **LANUSBInterfaceConfig** screen is applicable when your device comes with a USB port. Use this screen to activate the USB interface and/or enable MAC address learning control.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > LANUSBInterfaceConfig** and click on an index to display the screen as shown.

**Figure 116** Configuration: LAN Device: LANUSBInterfaceConfig




The following table describes the fields in this screen.

**Table 59** Configuration: LAN Device: LANUSBInterfaceConfig

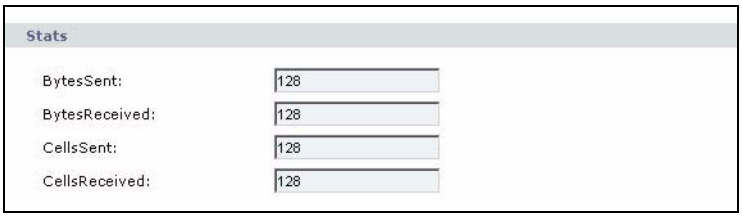
| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the USB interface on the LAN<br>Select **Disable** to deactivate the USB interface. In this case, no connection is allowed. |
| Status | This field displays the connection status of the USB interface on the LAN. |
| MACAddress | This field displays the MAC address of the USB interface on the LAN. |
| MACAddress ControlEnabled | Select **Enable** to allow traffic with the specified MAC addresses on this port. You can specify the MAC addresses in the **LANHostConfigManagement** screen (refer to Section 17.2 on page 151).<br>Select **Disable** to deactivate this feature. All traffic is allowed through the USB interface on the LAN. |
| Standard | This field displays version of the USB standard supported on the device. |
| Type | This field displays the type of USB interface on the device. |
| Rate | This field displays the speed of the USB interface. |
| Power | This field displays how the USB interface is to obtain power. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 17.4.1 USB Interface Statistics

Display the **Stats** screen to view the statistics of the USB interface on the LAN.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > LANEthernetInterfaceConfig**, click on an index and **Stats** to display the screen as shown.

**Figure 117** Configuration: LAN Device: LANUSBInterfaceConfig: Stats




The following table describes the fields in this screen.

**Table 60** Configuration: LAN Device: LANUSBInterfaceConfig: Stats

| LABEL | DESCRIPTION |
|---|---|
| BytesSent | This field displays the number of transmitted bytes on this interface. |
| BytesReceived | This field displays the number of received bytes on this interface. |
| CellsSent | This field displays the number of transmitted cells on this interface. |
| CellsReceived | This field displays the number of received cells on this interface. |

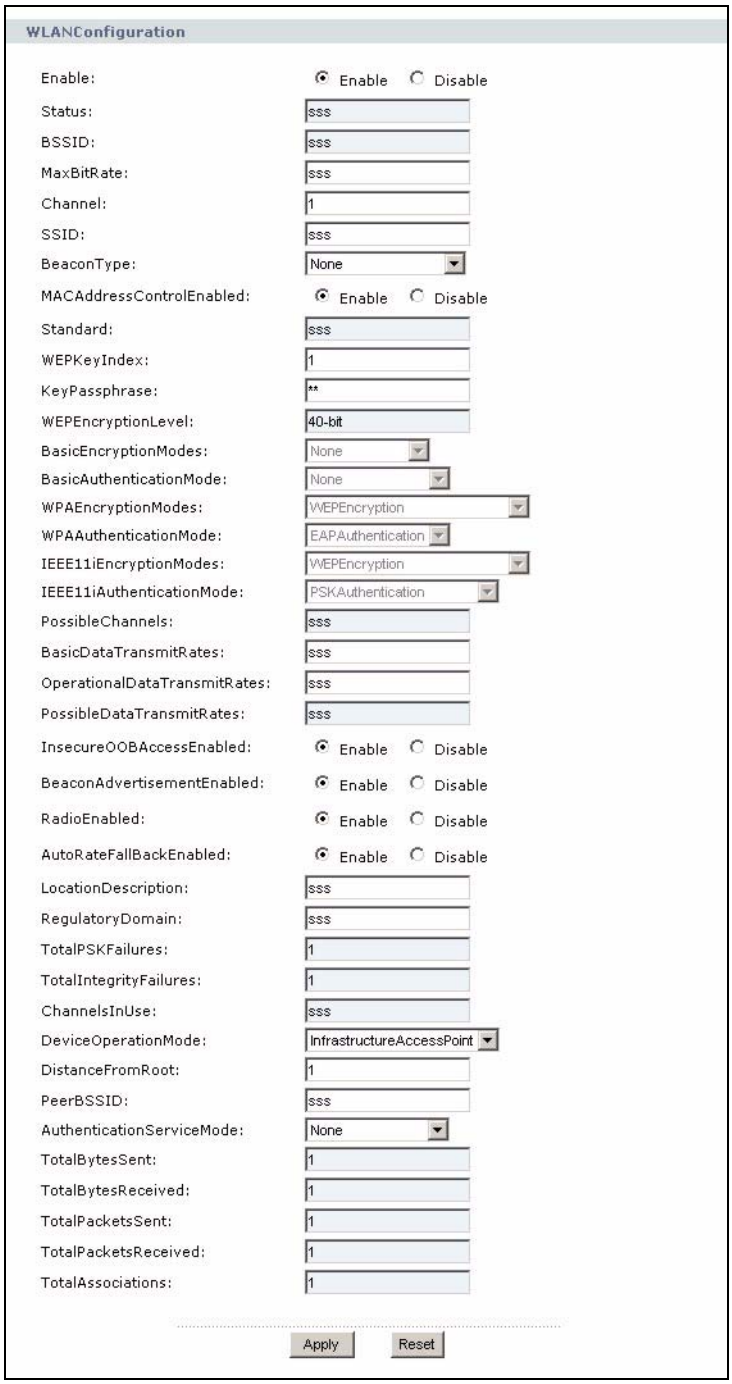
## 17.5 WLAN Configuration

The settings in the **WLANConfiguration** screen is applicable to a device with built-in wireless capabilities.

Use the **WLANConfiguration** screen to set wireless LAN settings on the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > WLANConfiguration** and click on an index to display the screen as shown.

**Figure 118** Configuration: LAN Device: WLANConfiguration




The following table describes the fields in this screen.

**Table 61** Configuration: LAN Device: WLANConfiguration

| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the WLAN interface on the LAN<br>Select **Disable** to deactivate the WLAN interface. In this case, no connection is allowed. |
| Status | This field displays the connection status of the WLAN interface. |

**Table 61** Configuration: LAN Device: WLANConfiguration (continued)

| LABEL | DESCRIPTION |
|---|---|
| BSSID | This field displays identification (usually the MAC address) of the wireless interface. |
| MaxBitRate | Enter the maximum bit rate (in Mbps) allowed on the WLAN interface. You can enter up to 4 characters in this field.<br>Enter “auto” to have the device automatically use the highest transmission rate in the **OperationalDataTransmitRates** field. |
| Channel | Enter the wireless channel number (0 to 255) to use for transmission. |
| SSID | Enter the name (up to 32 characters) to identify the wireless network. |
| BeaconType | This field set the WLAN security mode for wireless transmission.<br>Select **None** to disable wireless security. |
| MACAddressControlEnabled | Select **Enable** to allow traffic with the specified MAC addresses on this port. You can specify the MAC addresses in the **LANHostConfigManagement** screen (refer to Section 17.2 on page 151).<br>Select **Disable** to deactivate this feature. All traffic is allowed through the USB interface on the LAN. |
| Standard | This field displays the wireless standard in which the device is currently operating. |
| WEPKeyIndex | Enter the index number (between 1 to 4) of the WEP key the device is to use for data encryption. |
| KeyPassphrase | To have the device automatically generate the WEP keys, enter a passphrase (up to 63 characters). |
| WEPEncryptionLevel | This field displays the wireless encryption level supported on the device. |
| BasicEncryptionModes | This field is applicable when you select a basic security option in the **BeaconType** field.<br>Select **WEPEncryption** to enable basic WEP encryption for wireless transmission.<br>Select **None** to disable this feature. In this case, traffic sent through the wireless network is not secure. |
| BasicAuthenticationMode | This field is applicable when you select a basic security option in the **BeaconType** field.<br>Select **EAPAuthentication** to enable user authentication before wireless connection is allowed for the WLAN clients.<br>Select **None** to deactivate this feature. In this case, your wireless network may be assessable by anyone. |
| WPAEncryptionModes | This field is applicable when you select a WPA security option in the **BeaconType** field.<br>Select an encryption method to secure traffic over the wireless network. |
| WPAAuthenticationMode | This field is applicable when you select a WPA security option in the **BeaconType** field.<br>Select an authentication method to control access to your wireless network. |
| IEEE11iEncryptionModes | This field is applicable when you select an 11i security option in the **BeaconType** field.<br>Select an encryption method to secure traffic over the wireless network. |
| IEEE11iAuthenticationMode | This field is applicable when you select an 11i security option in the **BeaconType** field.<br>Select an authentication method to control access to your wireless network. |
| PossibleChannels | This field displays wireless channels available for your device as defined by the regulatory body. |

**Table 61** Configuration: LAN Device: WLANConfiguration (continued)

| LABEL | DESCRIPTION |
|---|---|
| BasicDataTransmitRates | Enter the wireless transmission rate (Mbps) for broadcast, multicast and unicast frames on the device.<br>You can enter more than one rate separated by a comma (,). For example, “1,2” means the device is able to send at 1 Mbps or 2 Mbps. |
| OperationalDataTransmitRates | Enter the maximum transmission rate (in Mbps) allowed for unicast frames on the device.<br>You can enter more than one transmission rate separated by a comma (,). For example, if you enter “1,2” in the **BasicDataTransmitRates** field and enter “1,2,5.5,11” in this field, then the device can transmit unicast frames at the maximum rates of 5.5 Mbps or 11 Mbps. |
| PossibleDataTransmitRates | This field displays the transmission rates for unicast frames WLAN clients are allowed to connect to the device.<br>For example, if this field displays “1,2,5.5”. This means that the device allows a wireless connection of up to 5.5 Mbps even though it is capable of connecting at 11 Mbps. |
| InsecureOOBAccessEnabled | Select **Enable** to allow configuration changes through insecure management methods other than the WAN CPE Management Protocol.<br>Select **Disable** to disallow configuration changes through insecure management method. |
| BeaconAdvertisementEnabled | Select **Enable** to set the device to send beacons to advertise its presence.<br>Select **Disable** to stop regular beacon sending. WLAN clients will not be able to locate the device using a site survey tool. |
| RadioEnabled | Select **Enable** to activate the wireless transmission on the device.<br>Select **Disable** to stop wireless transmission. No traffic is allowed on the WLAN. |
| AutoRateFallBackEnabled | Select **Enable** to set the device to automatically reduce wireless transmission rate due to noise or contention.<br>Select **Disable** to deactivate this feature. |
| LocationDescription | Specify the location of the device for identification purposes. You can enter up to 4096 characters. |
| RegulatoryDomain | Specify the name of the regulatory body in your geographical area.<br>You can enter up to 3 characters. The first two characters are the country code as defined in ISO/IEC 3166-1. For the third character, enter “ “ (all environment), “I” (inside) or “O” (outside). |
| TotalPSKFailures | This field is applicable for WPA and 802.11i authentication methods.<br>This field displays the number of times pre-shared key authentication has failed. |
| TotalIntegrityFailures | This field is applicable for WPA and 802.11i authentication methods.<br>This field displays the number of times MICHEAL integrity check has failed. |
| ChannelsInUse | This field displays the channel number(s) that is currently used on the device for wireless transmission. |
| DeviceOperationMode | Select the wireless operation mode for the device. |
| DistanceFromRoot | Specify the number of hops between this device and the wireless bridge/repeater. Enter a number between 0 and 4294967295. |
| PeerBSSID | Specify the MAC address of the peer wireless bridge/repeater. |
| AuthenticationServiceMode | If user authentication is enabled, select the location of the user database the device is to check. |
| TotalBytesSent | This field displays the number of transmitted bytes on this interface. |
| TotalBytesReceived | This field displays the number of received bytes on this interface. |

**Table 61** Configuration: LAN Device: WLANConfiguration (continued)

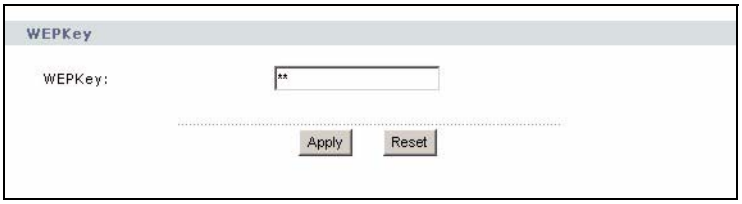
| LABEL | DESCRIPTION |
|---|---|
| TotalPacketsSent | This field displays the number of transmitted packets on this interface. |
| TotalPacketsReceived | This field displays the number of received packets on this interface. |
| TotalAssociations | This field displays the number of wireless clients associated to this device. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 17.5.1 WEP Key Setup

In the **WEPKey** screen, you can configure the WEP key the device is to use for data encryption.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > WLANConfiguration** > **WEPKey** and click on an index to display the screen as shown.

**Figure 119** Configuration: LAN Device: WLANConfiguration: WEPKey




The following table describes the fields in this screen.

**Table 62** Configuration: LAN Device: WLANConfiguration: WEPKey

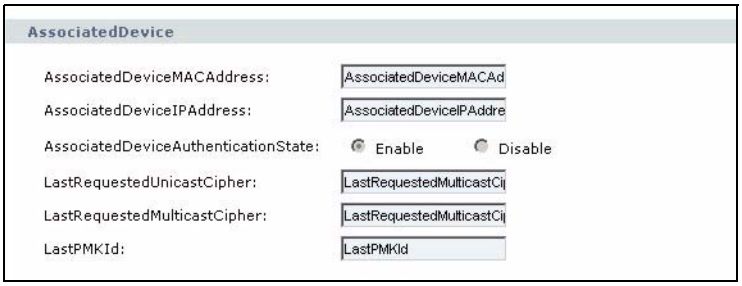
| LABEL | DESCRIPTION |
|---|---|
| WEPKey | Specify the WEP key depending on the encryption level in the **WEPEncryptionLevel** field in the **WLANConfiguration** screen.<br>For 40-bit encryption level, enter 10 hexadecimal characters ("0-9", “a-z”, "A-F").<br>For 104-bit encryption level, enter 26 hexadecimal characters ("0-9", “a-z”, "A-F").<br>The WEP key content is not sent when requested. An empty string is returned. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 17.5.2 Associated Device

Display the **AssociatedDevice** screen to view information on a wireless client currently connected to the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > WLANConfiguration** > **AssociatedDevice** and click on an index to display the screen.

**Figure 120** Configuration: LAN Device: WLANConfiguration: AssociatedDevice




The following table describes the fields in this screen.

**Table 63** Configuration: LAN Device: WLANConfiguration: AssociatedDevice

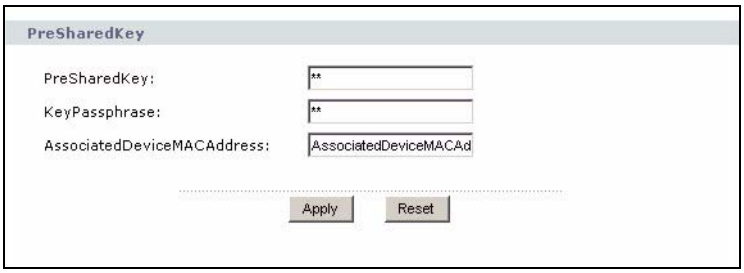
| LABEL | DESCRIPTION |
|---|---|
| AssociatedDeviceMACAddress | This field displays the MAC address of an associated device. |
| AssociatedDeviceIPAddress | This field displays the IP address or domain name of an associated device. |
| AssociatedDeviceAuthenticationState | This field displays whether the associated device is authenticated (**Enable**) or not (**Disable**). |
| LastRequestedUnicastCipher | This field is applicable for 802.11i authentication methods.<br>This field displays the last unicast cipher used for a device with the specified MAC address. |
| LastRequestedMulticastCipher | This field is applicable for 802.11i authentication methods.<br>This field displays the last multicast cipher used for a device with the specified MAC address. |
| LastPMKId | This field is applicable for 802.11i authentication methods.<br>This field displays the last pairwise master key used for a device with the specified MAC address. |

## 17.5.3 Pre-shared Key Setup

Use the **PreSharedKey** screen to configure a pre-shared key. You can also use this screen to configure the passphrase the device uses to generate the pre-shared key and/or WEP keys automatically.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > WLANConfiguration** > **PreSharedKey** and click on an index to display the screen.

**Figure 121** Configuration: LAN Device: WLANConfiguration: PreSharedKey



The following table describes the fields in this screen.

**Table 64** Configuration: LAN Device: WLANConfiguration: PreSharedKey

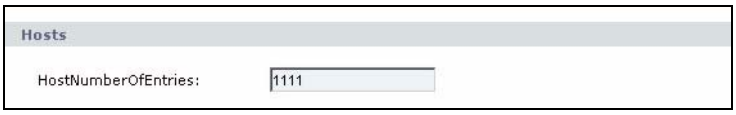
| LABEL | DESCRIPTION |
|---|---|
| PreSharedKey | Enter a pre-shared key (up to 64 characters) for WPA security. |
| KeyPassphrase | To have the device automatically generate a pre-shared key or WEP key based on a key string, enter the passphrase in this field. You can enter up to 63 characters. |
| AssociatedDeviceMACAddress | This field displays the MAC address of a wireless client associated to this key. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

# 17.6 LAN Hosts

In the **Hosts** screen, you can view the number of LAN hosts that are assigned a dynamic or static IP address by the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > Hosts** to display the screen.

**Figure 122** Configuration: LAN Device: Hosts




The following table describes the fields in this screen.

**Table 65** Configuration: LAN Device: Hosts

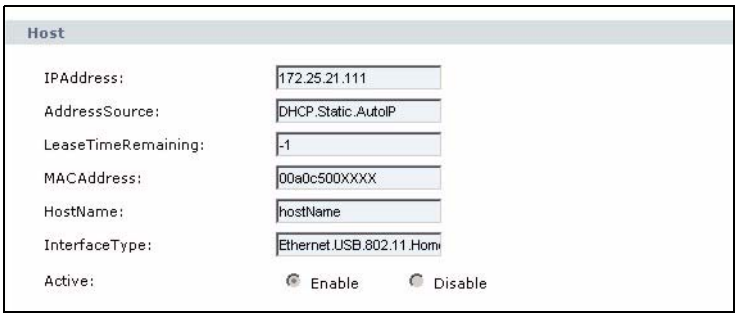
| LABEL | DESCRIPTION |
|---|---|
| HostNumberOfEntries | This field displays the number of entries in the DHCP table. |

## 17.6.1 LAN Host Information

Display the **Host** screen to view detailed information on a LAN host.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > LANDevice > Hosts** > **Host** to display the screen.

**Figure 123** Configuration: LAN Device: Hosts: Host



The following table describes the fields in this screen.

**Table 66** Configuration: LAN Device: Hosts: Host

| LABEL | DESCRIPTION |
|---|---|
| IPAddress | This field displays the IP address assigned to the LAN host. |
| AddressSource | This field indicates whether the LAN host obtains the IP address statically (**Static**), dynamically from the device (**DHCP**) or through automatic assignment (**Auto**). |
| LeaseTimeRemaining | If the host IP address is assigned through DHCP, this field displays the lease time remaining (in seconds). A value of -1 means that the lease never times out.<br>This field displays zero if the IP address assignment is not through DHCP. |
| MACAddress | This field displays the MAC address of the LAN host. |
| HostName | This field displays the name of the LAN host. |
| InterfaceType | This field displays the name of the interface the LAN host uses to connect to the device. |
| Active | This field is **Enabled** to indicate that the LAN host is currently present in the network. Otherwise, this field is **Disable**. |

# 18

# Voice Service

This chapter describes the screens you use to configure and view VoIP settings.

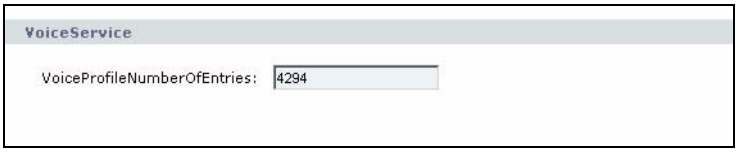
## 18.1 Voice Service Screen

The **VoiceService** screens are applicable for CPE devices that support VoIP features. The number of screens and field labels available vary depending on your device model.

Display the first **VoiceService** screen to view the number of VoIP services available on the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService** to display the screen.

**Figure 124** Configuration: VoiceService




The following table describes the fields in this screen.

**Table 67** Configuration: VoiceService

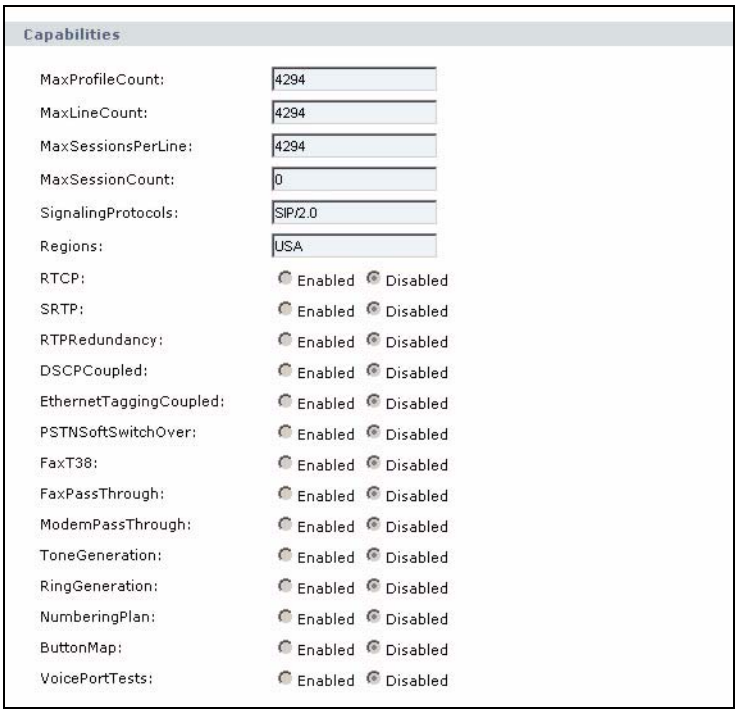
| LABEL | DESCRIPTION |
|---|---|
| VoiceProfileNumberOfEntries | This field displays the number of instances of voice profiles on the device. |

## 18.2 VoIP Capabilities

You can view the VoIP functions available on the device in the **Capabilities** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > Capabilities** to display the screen.

**Figure 125** Configuration: VoiceService: Capabilities




The following table describes the fields in this screen.

**Table 68** Configuration: VoiceService: Capabilities

| LABEL | DESCRIPTION |
|---|---|
| MaxProfileCount | This field displays the maximum number of voice profiles supported on the device. |
| MaxLineCount | This field displays the maximum number of voice connections to a peer VoIP endpoint support on the device. |
| MaxSessionsPerLine | This field displays the maximum number of sessions per connection. |
| MaxSessionCount | This field displays the maximum number of sessions allowed on the device. |
| SignalingProtocols | This field displays the signaling protocol(s) supported on the device. |
| Regions | This field displays the two-character code for the country in which the device is configured to work.<br>If this field is empty, the device is not customized to work in any geographical area. |
| RTCP | This field indicates whether RTCP (Real Time Control Protocol) is activated on the device or not. |
| SRTP | This field indicates whether SRTP (Secure Real Time Control Protocol) is activated on the device or not. |
| RTPRedundancy | This field indicates whether the RTP redundancy is activated on the device or not. |
| DSCPCoupled | This field indicates if the device is to send call control packets with the same DSCP setting as the transmitted RTP packets. |
| EthernetTaggingCoupled | This field indicates if the device is to send call control packets with the same tag as the transmitted RTP packets. |
| PSTNSoftSwitchOver | This field indicates if the device is able to forward calls to PSTN lines in case the VoIP connection is down. |

**Table 68** Configuration: VoiceService: Capabilities (continued)

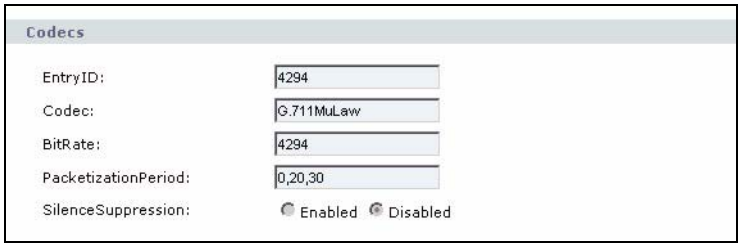
| LABEL | DESCRIPTION |
|---|---|
| FaxT38 | This field indicates whether the T.38 fax feature is supported on the device or not. |
| FaxPassThrough | This field indicates whether the fax passthrough feature is supported on the device or not. |
| ModemPassThrough | This field indicates whether the modem passthrough feature is supported on the device or not. |
| ToneGeneration | This field indicates whether the tone generation feature is supported on the device or not. |
| RingGeneration | This field indicates whether the ring generation feature is supported on the device or not. |
| NumberingPlan | This field indicates whether numbering plan configuration is supported on the device or not. |
| ButtonMap | This field indicates whether button map configuration is supported on the device or not. |
| VoicePortTests | This field indicates whether the voice port testing feature is supported on the device or not. |

## 18.2.1 Codecs Information

You can view the codec information in the **Codecs** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > Capabilities > Codecs** and click on an index number to display the screen.

**Figure 126** Configuration: VoiceService: Capabilities: Codecs




The following table describes the fields in this screen.

**Table 69** Configuration: VoiceService: Capabilities: Codecs

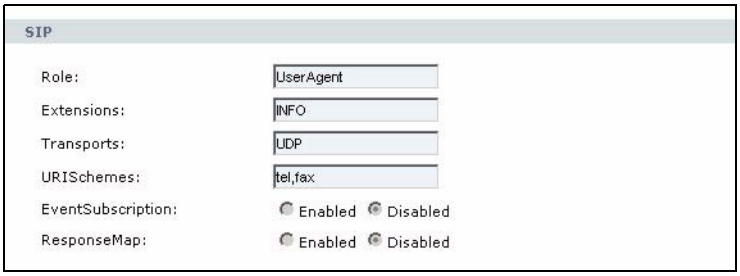
| LABEL | DESCRIPTION |
|---|---|
| EntryID | This field displays the index number of the codec entry. |
| Codec | This field displays the name of the codec. |
| BitRate | This field displays the bit rate in bits per second. |
| PacketizationPeriod | This field displays the list of packetization periods (in milliseconds) supported on the device. |
| SilenceSuppression | This field indicates whether the silence suppression feature is supported by the codec or not. |

### 18.2.2 SIP Setup

You can view the SIP setting information in the **SIP** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > Capabilities > SIP** and click on an index number to display the screen.

**Figure 127** Configuration: VoiceService: Capabilities: SIP




The following table describes the fields in this screen.

**Table 70** Configuration: VoiceService: Capabilities: SIP

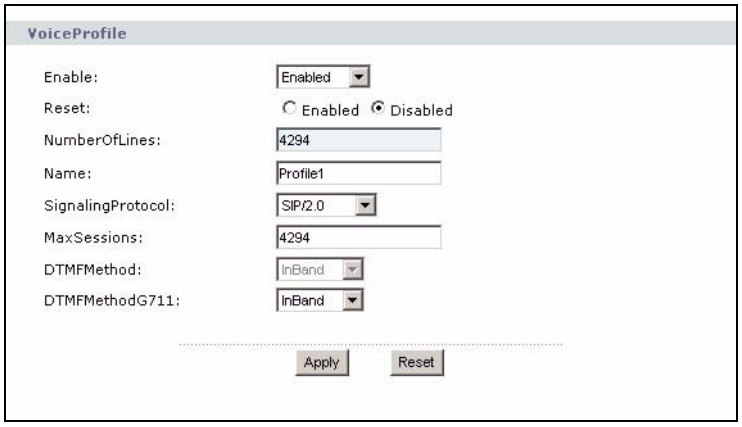
| LABEL | DESCRIPTION |
|---|---|
| Role | This field displays the operation mode of the device in the network. |
| Extensions | This field displays the SIP extension methods supported on the device. |
| Transports | This field displays the list of SIP transport protocols supported on the device. |
| URISchemes | This field displays additional URI (Uniform Resource Identifier) schemes supported on the device. |
| EventSubscription | This field indicates whether SIP event subscription is activated on the device. |
| ResponseMap | This field indicates whether SIP response map is activated on the device. |

## 18.3 Voice Profile Setup

Use the **VoiceProfile** to configure common profile settings for the voice connection(s) on the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > VoiceProfile** and click on an index number to display the configuration screen.

**Figure 128** Configuration: VoiceService: VoiceProfile




The following table describes the fields in this screen.

**Table 71** Configuration: VoiceService: VoiceProfile

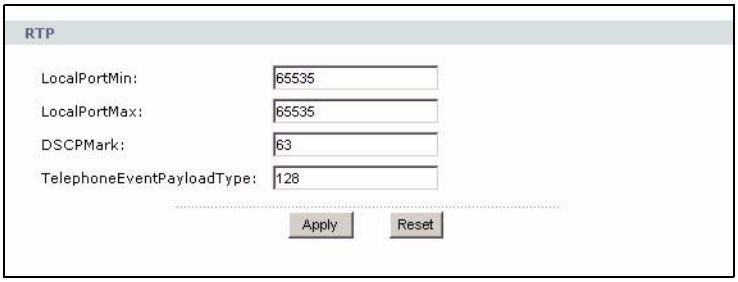
| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the line(s) on which the profile is applied.<br>Select **Disable** to deactivate the line(s) on which the profile is applied.<br>Select **Quiescent** to prevent new session generation on the active line(s). |
| Reset | Select **Enable** to reset the line(s) on which the profile is applied.<br>Select **Disable** to deactivate the line reset. |
| NumberOfLines | This field displays the number of lines associated with the voice profile. |
| Name | Enter a descriptive name (up to 64 characters) to identify the profile. |
| SignalingProtocol | Select the signaling protocol the profile is to use. |
| MaxSessions | Specify the maximum number of simultaneous sessions allowed on the line(s) on which the profile is applied. Enter a number between 1 and 4294967295. |
| DTMFMethod | Select the DTMF method the profile is to pass. |
| DTMFMethodG711 | Select the DTMF method the profile is to pass if the current codec is G.711. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 18.3.1 Voice Profile RTP Setup

Use the **RTP** screen to configure RTP (Real Time Protocol) settings for sending voice traffic on the device.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > VoiceProfile**, click on an index number and **RTP** to display the configuration screen.

**Figure 129** Configuration: VoiceService: VoiceProfile: RTP




The following table describes the fields in this screen.

**Table 72** Configuration: VoiceService: VoiceProfile: RTP

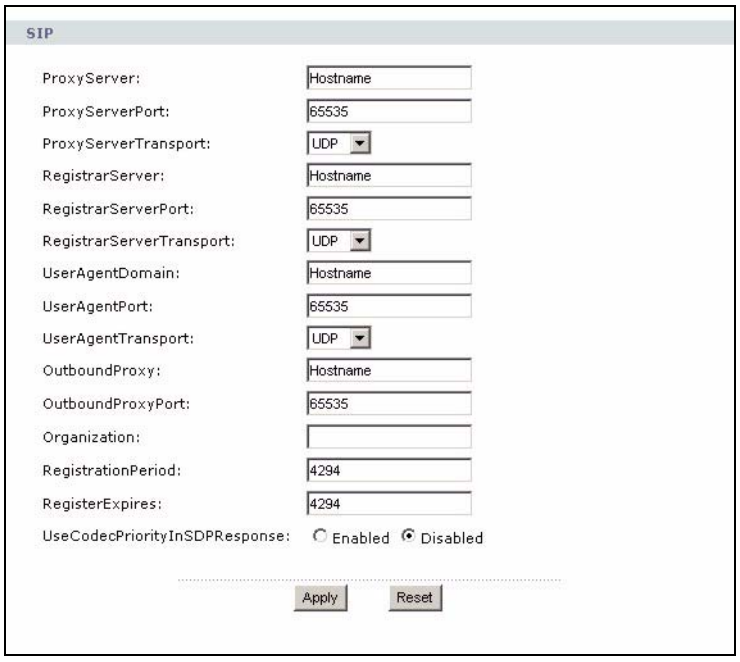
| LABEL | DESCRIPTION |
|---|---|
| LocalPortMin | Specify the start of the local port range for incoming voice traffic. Enter a number between 0 and 65535. |
| LocalPortMax | Specify the end of the local port range for incoming voice traffic. Enter a number between 0 and 65535. |
| DSCPMark | Specify a DSCP number for the outgoing voice traffic. Enter a number between 0 and 63. |
| TelephoneEventPayloadType | Specify the traffic type for the RTF telephone event. Enter a number between 0 and 128. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 18.3.2 Voice Profile SIP Setup

Use the **SIP** screen to configure SIP settings for a voice profile.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > VoiceProfile**, click on an index number and **SIP** to display the configuration screen.

**Figure 130** Configuration: VoiceService: VoiceProfile: SIP




The following table describes the fields in this screen.

**Table 73** Configuration: VoiceService: VoiceProfile: SIP

| LABEL | DESCRIPTION |
|---|---|
| ProxyServer | Enter the IP address or the host name of the SIP proxy server. All SIP signalling traffic is sent to this proxy server. |
| ProxyServerPort | Specify the SIP server port number to which the device is to connect. Enter a number between 0 and 65535. |
| ProxyServerTransport | Select the transport protocol the device is to use to connect to the SIP server. |
| RegistrarServer | Enter the IP address or the host name of the SIP registrar server. |
| RegistrarServerPort | Specify the SIP registrar server port number to which the device is to connect. Enter a number between 0 and 65535. |
| RegistrarServerTransport | Select the transport protocol the device is to use to connect to the SIP registrar server. |
| UserAgentDomain | Specify the domain name of the device. You can enter up to 256 characters. |
| UserAgentPort | Specify the port number used for incoming call control signaling. Enter a number between 0 and 65535. |
| UserAgentTransport | Select the transport protocol used for incoming call control signaling. |
| OutboundProxy | Enter the IP address or the host name of the outbound proxy server. |
| OutboundProxyPort | Specify the port number on the outbound proxy server to which the device is to connect. Enter a number between 0 and 65535. |
| Organization | Enter the name of the organization (up to 256 characters) to include in the packets. |
| RegistrationPeriod | Specify the time (between 1 and 4294967295 seconds) the device waits before re-registering to the SIP server. |
| RegisterExpires | Specify the time (between 1 and 4294967295 seconds) the SIP registration expires. |

**Table 73** Configuration: VoiceService: VoiceProfile: SIP (continued)

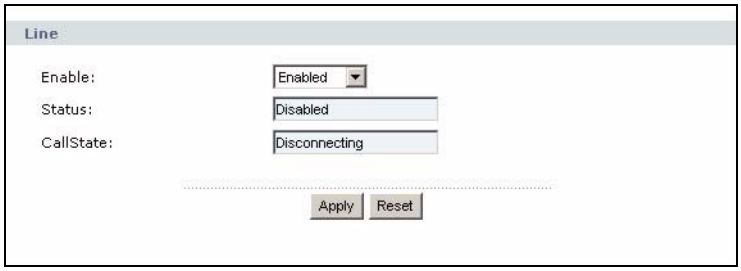
| LABEL | DESCRIPTION |
|---|---|
| UseCodecPriorityInSDPResponse | Select Enable to use the highest-priority codec offered to respond to an invite packet.<br>Select Disable to use any codec in the list to respond to an invite packet. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 18.3.3 Voice Profile Line Setup

Use the **Line** screen to configure the individual line associated to a voice profile.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > VoiceProfile** > **Line** and click on an index number to display the screen.

**Figure 131** Configuration: VoiceService: VoiceProfile: Line




The following table describes the fields in this screen.

**Table 74** Configuration: VoiceService: VoiceProfile: Line

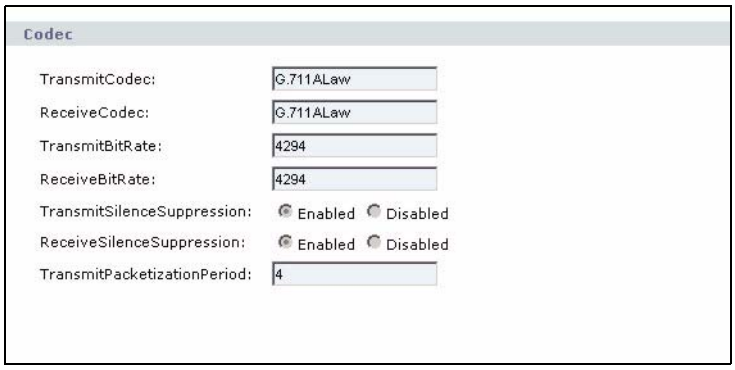
| LABEL | DESCRIPTION |
|---|---|
| Enable | Select **Enable** to activate the line.<br>Select **Disable** to deactivate the line.<br>Select **Quiescent** to prevent new session generation on the line. |
| Status | This field displays the status of the line. |
| CallState | This field displays the call status of the line. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

### 18.3.3.1 Line Codec Information

You can view the codec settings of a line in the **Codec** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > VoiceProfile** > **Line** and click on an index number and **Codec** to display the screen.

**Figure 132** Configuration: VoiceService: VoiceProfile: Line: Codec




The following table describes the fields in this screen.

**Table 75** Configuration: VoiceService: VoiceProfile: Line: Codec

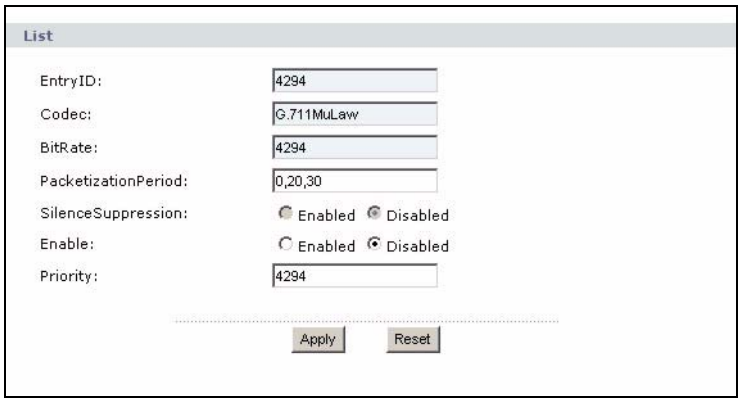
| LABEL | DESCRIPTION |
|---|---|
| TransmitCodec | This field displays the codec the device uses to send voice traffic. |
| ReceiveCodec | This field displays the codec the device uses to receive voice traffic. |
| TransmitBitRate | This field displays the transmission rate (in bits per second). |
| ReceiveBitRate | This field displays the receiving rate (in bits per second). |
| TransmitSilenceSuppression | This field indicates whether silence suppression is enabled for outgoing voice traffic. |
| ReceiveSilenceSuppression | This field indicates whether silence suppression is enabled for incoming voice traffic. |
| TransmitPacketizationPeriod | This field displays the packetization in milliseconds for outgoing voice traffic. |

### 18.3.3.2 Codec List Information

Use the **List** screen to view and change an entry in the codec list.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > VoiceProfile** > **Line** > **Codec > List** and click on an index number to display the screen.

**Figure 133** Configuration: VoiceService: VoiceProfile: Line: Codec: List



The following table describes the fields in this screen.

**Table 76** Configuration: VoiceService: VoiceProfile: Line: Codec: List

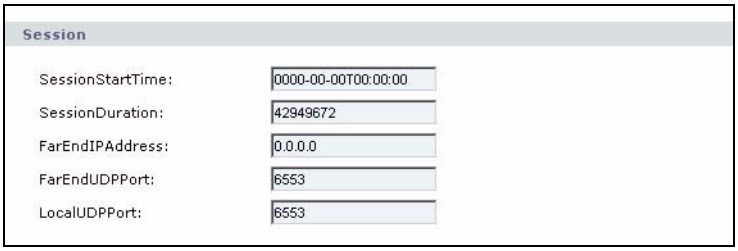
| LABEL | DESCRIPTION |
|---|---|
| EntryID | This field displays the index number of the entry. |
| Codec | This field displays the name of the codec for this entry. |
| BitRate | This field displays the data rate in bits per second. |
| PacketizationPeriod | Enter the packetization period(s) (in milliseconds). You can enter more than one number separated by a comma (,). |
| SilenceSuppression | This field indicates whether silence suppression is enabled. |
| Enable | Select Enable to activate this codec entry.<br>Select Disable to deactivate this codec entry. |
| Priority | Specify the priority of the codec entry. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

### 18.3.3.3 Line Session Information

You can view the session information of a line in the **Session** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > VoiceProfile** > **Line** > **Session** and click on an index number to display the screen.

**Figure 134** Configuration: VoiceService: VoiceProfile: Line: Session




The following table describes the fields in this screen.

**Table 77** Configuration: VoiceService: VoiceProfile: Line: Session

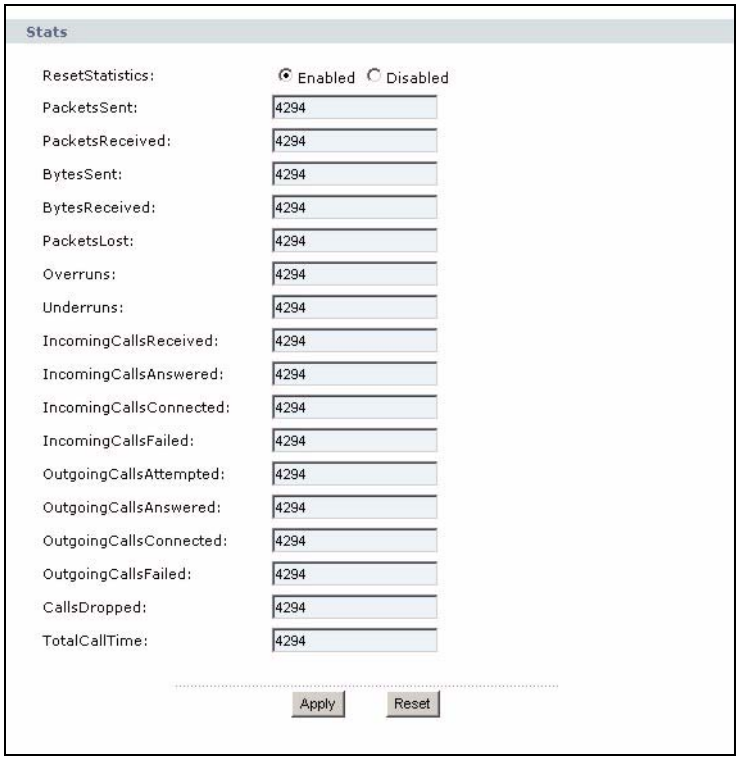
| LABEL | DESCRIPTION |
|---|---|
| SessionStartTime | This field displays the time the session first started. |
| SessionDuration | This field displays the time (in seconds) the current session has been up. |
| FarEndIPAddress | This field displays the IP address of the peer VoIP device. |
| FarEndUDPPort | This field displays the UDP port number of the peer VoIP device. |
| LocalUDPPort | This field displays the UDP port number on the device. |

### 18.3.3.4 Line Statistics

You can view the codec line statistics in the **Stats** screen.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > VoiceProfile** > **Line**, click on an index number and **Stats** to display the screen.

**Figure 135** Configuration: VoiceService: VoiceProfile: Line: Stats




The following table describes the fields in this screen.

**Table 78** Configuration: VoiceService: VoiceProfile: Line: Stats

| LABEL | DESCRIPTION |
|---|---|
| ResetStatistics | Select **Enable** and click **Apply** to reset the counters.<br>Select **Disable** to keep the counters. |
| PacketsSent | This field displays the number of packets sent for this line. |
| PacketsReceived | This field displays the number of packets received for this line. |
| BytesSent | This field displays the number of bytes sent for this line. |
| BytesReceived | This field displays the number of bytes received for this line. |
| PacketsLost | This field displays the number packets lost through transmission. |
| Overruns | This field displays the number of times the received jitter buffer has overrun for this line. |
| Underruns | This field displays the number of times the received jitter buffer has underrun for this line. |
| IncomingCallsReceived | This field displays the number of incoming calls received. |
| IncomingCallsAnswered | This field displays the number of incoming calls answered. |
| IncomingCallsConnected | This field displays the number of incoming calls that have completed the signaling setup process. |
| IncomingCallsFailed | This field displays the number of incoming calls failed to complete the signaling setup process. |
| OutgoingCallsAttempted | This field displays the number of outgoing calls tried. |

**Table 78** Configuration: VoiceService: VoiceProfile: Line: Stats (continued)

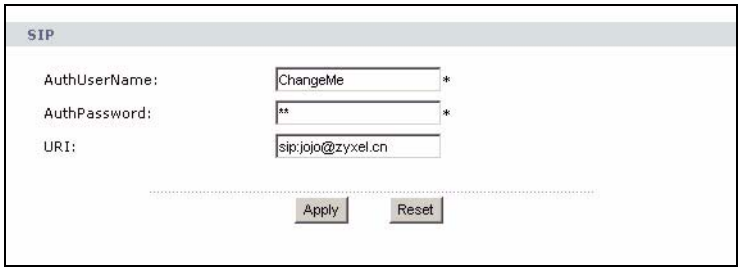
| LABEL | DESCRIPTION |
|---|---|
| OutgoingCallsAnswered | This field displays the number of outgoing calls answered. |
| OutgoingCallsConnected | This field displays the number of outgoing calls that have completed the signaling setup process. |
| OutgoingCallsFailed | This field displays the number of outgoing calls failed to complete the signaling setup process. |
| CallsDropped | This field displays the number of calls dropped. |
| TotalCallTime | This field displays the call duration (in seconds). |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

### 18.3.3.5 Line SIP Setup

You set SIP account information of a line in the **SIP** screen. You should have already given the SIP account information by your VoIP service provider.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > VoiceService > VoiceProfile** > **Line** > **SIP** to display the screen.

**Figure 136** Configuration: VoiceService: VoiceProfile: Line: SIP




The following table describes the fields in this screen.

**Table 79** Configuration: VoiceService: VoiceProfile: Line: SIP

| LABEL | DESCRIPTION |
|---|---|
| AuthUserName | Enter the account user name to connect to the SIP server. |
| AuthPassword | Enter the password associated with the user name above for authentication. |
| URI | Enter the URI (Uniform Resource Identifier) to identify this SIP connection. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

# 19 Syslog

This chapter shows you how to enable and set syslog (system logging) on a device.

## 19.1 X_001349_Syslog Overview

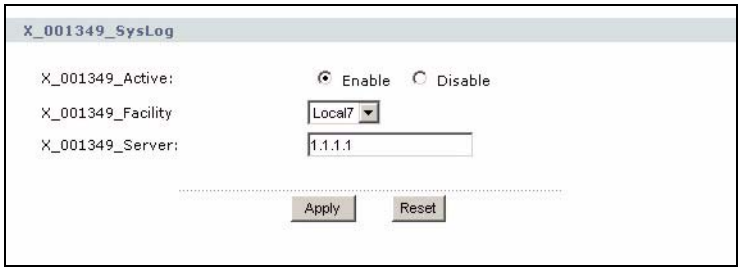
The syslog feature allows devices to send event notification messages across an IP network to syslog servers that collect the event messages. A syslog-enabled device can generate a syslog message and send it to a syslog server.

## 19.2 X_001349_Syslog Setup

Use the main syslog screen to enable system logging and specify the syslog server IP address and log facility.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > X_001349_Syslog** to display the screen.

**Figure 137** Configuration: X_001349_Syslog




The following table describes the fields in this screen.

**Table 80** Configuration: X_001349_Syslog

| LABEL | DESCRIPTION |
|---|---|
| Active | Select **Enable** to turn on syslog and then configure the syslog setting.<br>Select **Disable** to turn off the syslog feature. |
| Facility | The log facility allows you to send logs to different files in the syslog server. Refer to the documentation of your syslog program for more details. |
| Server | Specify the IP address or domain name of the syslog server. |
| Apply | Click **Apply** to save the settings |
| Reset | Click **Reset** to start configuring this screen again. |

## 19.2.1 X_001349_Log Category

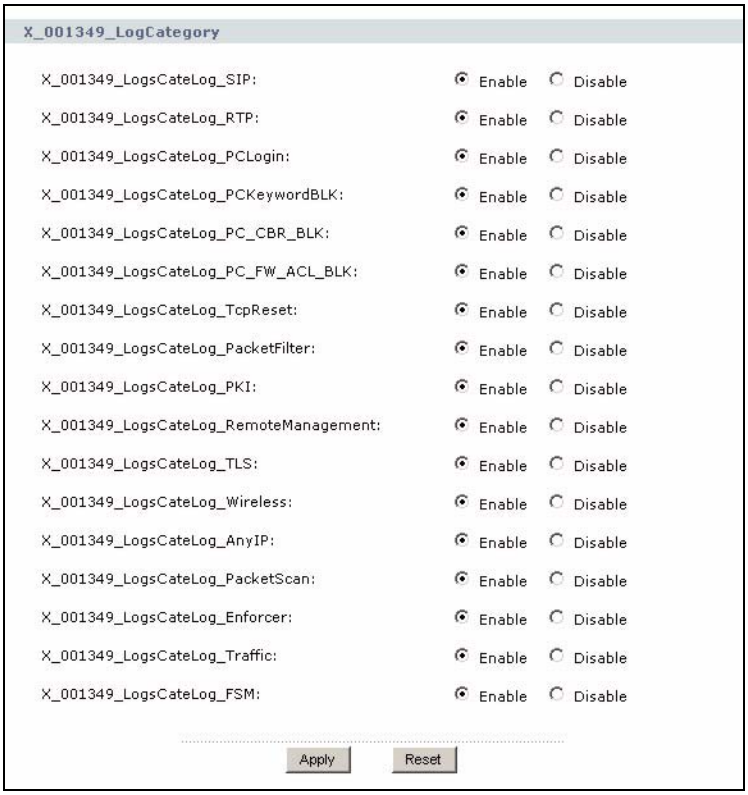
Use the **X_001349_Log Category** screen to select which logs the device is to generate.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > X_001349_Syslog > X_001349_LogCategory** to display the configuration screen.

Select **Enable** to set the device to generate logs for the corresponding category. Select **Disable** to deactivate this feature.

After you have finished configuring this screen, click **Apply** to save the settings or click **Reset** to start configuring this screen again.

**Figure 138** Configuration: Syslog: X_001349_LogCategory




## 19.2.2 X_001349_Alert Category

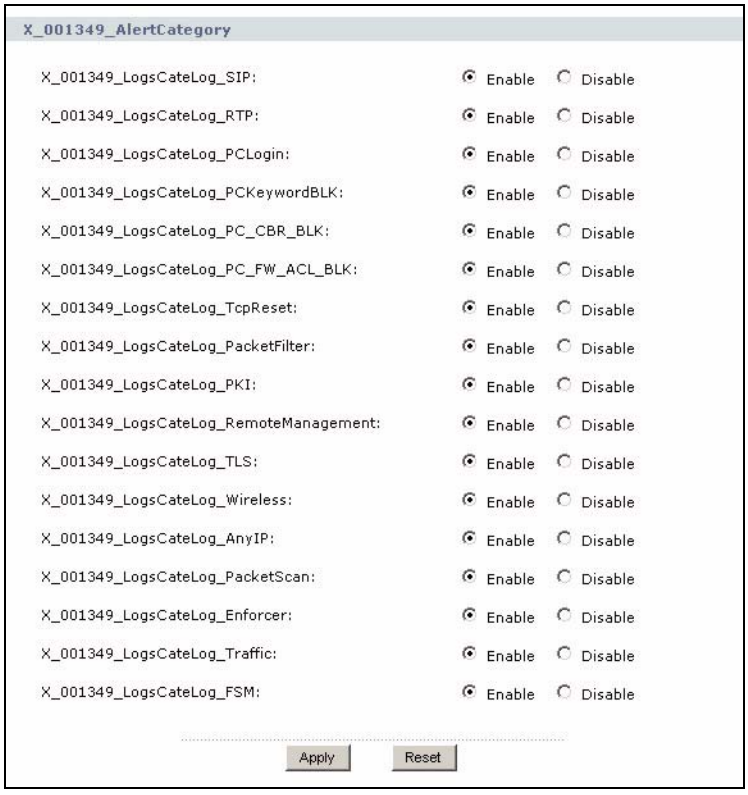
Use the **X_001349_Alert Category** screen to select which alerts the device is to send. Alerts are sent immediately to the administrator email address when there is a newly created log belonging to the corresponding alert category.

Select a registered device in the Device List window and click **Configuration > InternetGatewayDevice > X_001349_Syslog > X_001349_AlertCategory** to display the configuration screen.

Select **Enable** to set the device to send alerts for the corresponding category. Select **Disable** to deactivate this feature.

After you have finished configuring this screen, click **Apply** to save the settings or click **Reset** to start configuring this screen again.

**Figure 139** Configuration: Syslog: AlertCategory



# PART IV
# Troubleshooting

This part contains the following chapters.

# 20

# Troubleshooting

This chapter offers some suggestions to solve problems you might encounter. The potential problems are divided into the following categories.

## 20.1 Vantage Access Startup and Login

### I cannot start Vantage Access.

1. You must reboot your computer after installing Vantage Access.
2. Make sure Vantage Access DB has started.
3. If the "`Error: Remote DB is not alive!`" message displays, this means that you have specified the wrong Vantage Access DB server IP address. Uninstall and install Vantage Access BED with the correct IP address.
4. Make sure you can connect to Vantage Access DB.
5. You may have specified the wrong Vantage Access DB server IP address during the Vantage Access BED installation. In this case, uninstall and install Vantage Access BED and enter the correct IP address during the installation process.

### I cannot display the Vantage Access login screen.

1. This may happen if you have installed the Apache server with your Linux distribution. You must uninstall the existing Apache HTTP server from your Linux computer.
2. If you installed Vantage Access BED and Vantage Access HTTPD on the same computer, uninstall and install Vantage Access HTTPD is using a different port number other than 80.

### I cannot log into Vantage Access.

1. Make sure the Vantage Access server is turned on.
2. Make sure you have started Vantage Access on the server.

3 Make sure you enter the correct IP address of the Vantage Access server.
4 The default user name is “root” and the default password is “root”. They are case-sensitive.
5 If you enter the wrong password three times for a user name, you have to wait for 10 minutes before Vantage Access allows you to log in again with the same user name.

## 20.2 Web Configurator Display

**My web browser does not display the screen properly.**

1 Display the screens using only the supported web browser (Internet Explorer version 6.0). Refer to Section 3.1 on page 45.
2 Make sure you have Macromedia Flash plug-in installed properly.
3 It is recommended you use a monitor with a screen resolution set to 1024 by 768 pixels.

## 20.3 Device Registration

**I cannot see my ZyXEL device in Vantage Access.**

1 Make sure you have first imported an XML file containing basic device information to Vantage Access. See Section 4.2 on page 64.
2 Make sure you have properly set and activated TR-069 management on the ZyXEL device. See Section 4.2.2 on page 65.
3 The initial device discovery process may take up to three minutes depending on your network condition.

# PART V
# Appendices and Index

This part contains the following chapters.


- Product Specifications (187)
- Legal Information (187)
- Index (219)

# A

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"+" is the (prefix) number you dial to make an international telephone call.

# Index

## Symbols

29

## A

access the web configurator 45
accociate a device 56
account management 69
  change account information 73
  create an account 71
  delete an account 71
ACS log, See logs 75
add a device to a group 55
administration 24
administrator account 69
alert category 178
applications 23

## B

back up batch device configuration 111
back up device configuration 109
back up system configuration 91
backup log file 87
backup logs 75
basic device configuration 115
batch device configuration backup 111
batch device configuration restore 113

## C

certifications 187
change account information 73
configuration
  device configuration 117
  device information 115
  internet gateway device 115
  IP ping diagnostics 124
LAN configuration security 124
LAN device 151
LAN Ethernet interface configuration 154
LAN Ethernet interface statistics 155
LAN host configuration management 151
LAN host information 163
LAN hosts 163
LAN IP interface 153
LAN USB interface configuration 155
LAN USB interface statistics 156
layer3 forwarding 122
layer3 forwarding setup 123
management server 118
time 119
user interface 120
vendor configuration file 117
voice capabilities 165
voice codec information 167
voice profile 168
voice profile codec list information 173
voice profile line codec information 172
voice profile line session information 174
voice profile line setup 172
voice profile line SIP setup 176
voice profile line statistics 174
voice profile RTP setup 169
voice profile SIP setup 170
voice service 165
voice SIP setup 168
WAN ATM F5 loopback diagnostics 138
WAN common interface 127
WAN connection 128
WAN connection device 136
WAN device 127
WAN DSL connection management 134
WAN DSL connection service info 134
WAN DSL diagnostics 135
WAN DSL interface configuration 129
WAN DSL line statistics 131
WAN DSL link configuration 137
WAN Ethernet interface configuration 133
WAN Ethernet link configuration 139
WAN Ethernet statistics 133
WAN IP connection 141
WAN IP connection statistics 145
WAN port IP mapping table 143
WAN POTS link configuration 140
WAN PPP connection 145
WAN PPP connection statistics 149
WAN PPP port mapping table 148
WLAN associated device 161
WLAN configuration 157

WLAN pre-shared key setup 162
WLAN WEP key setup 161
configuration change status 78
configuration file management 87
configuration menu 58
configuration status 78
configure an HTTP server 63
configure syslog 177
contact information 215
copyright 187
CPE log, See logs 77
CPE status 79
create a group folder 50
create a login account 71
create a new batch 111
customer support 215


## D


data maintenance 24
default login accounts 45, 69
delete a device firmware file 100
delete a device group 50
delete a file on Vantage Access 88
delete a login account 71
device configuration 107
batch backup 111
batch restore 113
create new batch 111
device group 108
single backup 109
single device 107
single restore 110
update 108
device configuration backup 109
device configuration maintenance 109
device configuration restore 110
device firmware management 99
add a firmware 101
delete firmware 100
device firmware upgrade 24
device firmware upgrade, See firmware upgrade 103
device firmware version 80
device group configuration 108
device list 48, 54
device logs 77
device monitor 24
device registration 64
import an XML file 64, 83
ZyXEL device setting 65, 84
device registration status 50, 55
device search 53
device setup 115
device status 79
device window 47, 48
add a device to a group 55
associate a device 56
device list 54
right-click menu 57
search 53
topology 49
unassociate a device 57
disclaimer 187
download a file from Vantage Access 88


## E


Easy Login 70
enable TR-0xx protocol on a device 65, 84


## F


features 23
file management 24, 87
delete files 88
download files 88
firmware upgrade 103
manual 103
manual upgrade list 105
request 104
scheduled 104
scheduled upgrade list 105
function window 47, 58
configuration menu 58
group configuration menu 58
menu summary 59
right-click menu 61


## G


general device setup 115
group configuration menu 58
guest account 69

## H

help icon 48
HTTP serve port number 63
HTTP server 63, 93
HTTPD 37
HTTPD port number 30, 40

## I

idle timeout 48
import an XML file 64, 83
Installation
  preparation 26
installation 25
  command line 31
  methods 25
  overview 25
  software components 25
  Vantage Access BED 27, 34
  Vantage Access DB 26, 31
  Vantage Access HTTPD 29, 37
  wizard 26
installation method
  command line 25
  wizard 25

## L

launch Vantage Access 41
log category 178
log setting 96
login 46
login account type 45
login account types 69
  administrator 69
  guest 69
  root 69
Login screen 46
logout icon 48
logs 75
  automatic backup 75
  device logs 75
  purge 75
  reserve days 96
  setting 96
  system logs 75

## M

main screen 47
manage device firmware files 99
manual firmware upgrade 103
manual upgrade list 105
menu summary 59
message window 61
monitor 75

## N

Network example 23
notification 78

## O

overview 23

## P

password
  default value 46
product registration 188
purge logs 75, 76, 77

## Q

Quick Start Guide 23

## R

register a device, See device registration 64
registration
  product 188
related documentation 3
remote device management 24
remove a group folder 51
rename a group folder 52
report window 47

reports 24
restore batch device configuration 113
restore device configuration 110
restore system configuration 90
right-click menu
  device window 57
  function window 61
root account 69

## S

scheduled firmware upgrade 104
scheduled upgrade list 105
search a device 53
security timeout 48
start Vantage Access 41
statistics 24
status
  device registration 50, 55
status center 47
status centers 61
stop Vantage Access 42
syntax conventions 4
syslog 177
  alert category 178
  log category 178
  setup 177
system configuration changes 89
system log 24
system logs 75
system maintenance 89
  backup 91
  restore 90
system requirements 25
  Vantage Access client 25
  Vantage Access server 25

## T

title bar 47, 48
topology 49
  create a group folder 50
  delete a groupl 50
  remove a group folder 51
  rename a group folder 52
  unassociate a device group 52
trademarks 187
troubleshooting 183
  cannot display login screen 183
  cannot display screens properly 184
  cannot log in 183
  cannot see my ZyXEL device in device window 184
  cannot start Vantage Access 183

## U

unassociate a device 57
unassociate a device group 52
upgrade device firmware, See firmware upgrade 103
upload a device firmware 101
user name
  default value 46

## V

Vantage Access
  about 61
  start 41
  stop 42
  version 61
Vantage Access BED
  installation 27, 34
Vantage Access DB
  installation 26, 31
Vantage Access HTTPD
  installation 29, 37
Vantage Access server 23
version 61
view device logs 77
view system logs 75

## W

warranty 187
  note 188
web configurator 45
  about 61
  access 45
  default password 46
  default user name 46
  device list 48
  device window 48
  function window 58
  icons 48
  idle timeout 47
  in typical application 23

lock-out 46
loginl 46
main screen 47
message window 61
minimum requirements 45
starting 45
timeout 48
title bar 48
URL 46

## X

XML file 64, 83

## Z

ZyXEL device setting 65, 84