DrayTek

VigorAccess A48 Series

ADSL2/2+ IP DSLAM

Quick Start Guide

V.1.0

VigorAccess IP DSLAM A48

Quick Start Guide

Version: 1.0

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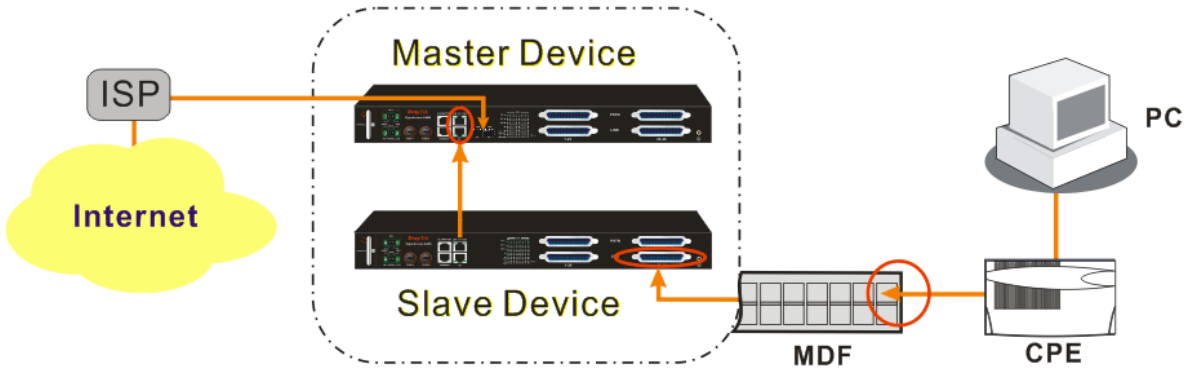
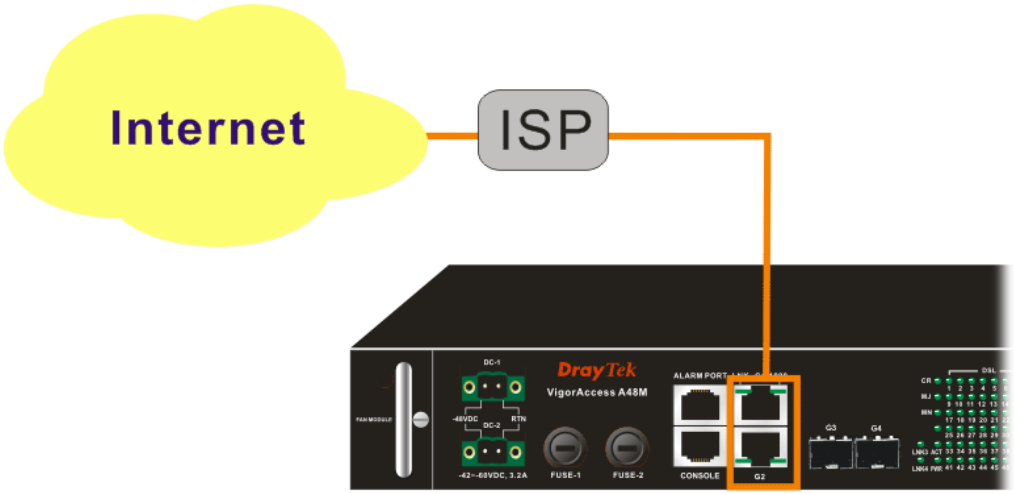
1 Network Topology Overview



Above diagram shows the basic network topology (example) among master device, slave device, MDF, CPE (ATU-R) router and user's computer. One thing is important – always set the VPI/VCI value for the CPE the same as the ones configured in master and slave IP DSLAM. The default setting for VPI/VCI of IP DSLAM is **8/35**. By the way, the values for these devices can be changed (yet must match with CPE) if necessary. Please finish all the connections according to the real situation of the environment for the devices.

> **Note:** For standalone usage, the device can connect to Internet through G1or G2 connector with Ethernet cable directly.



❷ Management for VigorAccess

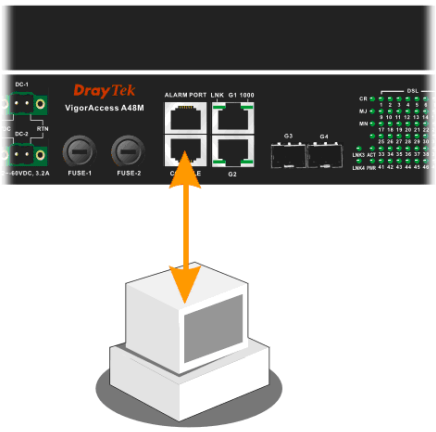
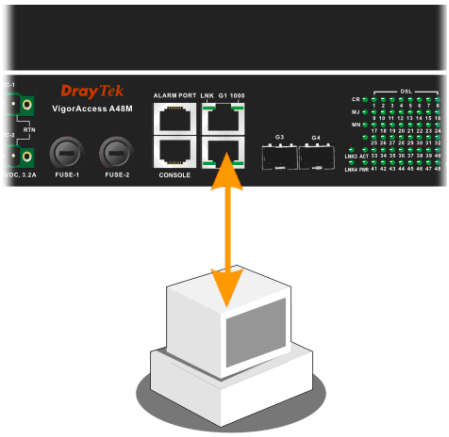
If users want to configure or monitor the devices, there are some methods provided here to utilize. The **G1/G2** port on the IDPSLAM 48 device allows you to make control remotely; yet the **Console** port on the IDPSLAM 48 device only allows you to make control locally.

> **Note:** If you are not used to configure the settings with terminal emulator software or Telnet commands, you can use VigorCMS (SNMP-based) software to manage these devices. For the detailed information, please contact your dealer.

VigorAccess can be managed via **G1/G2**, **Console**, even **Uplink** Ports (G3/G4). It depends on your necessity.

❸ Port Connection for Management

No matter what tool you would like to use for managing IPDSLAM 48, the first thing you have to do is making correct port connection.

Connect to a PC through **CONSOLE** port. It is useful for controlling the device locally.	Connect to a PC through **G1/G2** port. It is useful for controlling the device remotely.
	

❹ Configuration by Using Terminal Emulator Software

▲How to Login with a Terminal Emulator Software

VigorAccess IP DSLAM 48 devices have DSL module installed. The DSL module plays the core role for aggregating all ATM traffic coming from DSL ports to the uplink Ethernet interface, and vice versa. Administrator can login to the DSL module inside for managing DSLAM.

1. The default setting is “baud rate 9600, no parity, and 8 bit with 1 stop bit (N,8,1)”.
2. When the sign “$” appears, it means you can type commands to configure the device.
   login: admin
   password:
   Login Successful
   $

▲How to Check the Version Information

To display the DSL module information	The results
1. Login the specified DSL module. 2. Type the following command to get the DSL module information **- $get system info**	You will get the following results: **$get system info** **Description: IP DSLAM** **Name : IPDSLAM** **Location :** **Contact :** **Vendor :** **LogThreshold: 0** **Object-id : 1.3.6.1.4.1.7367.2.11.1** **Up Time(HH:MM:SS): 1:1:0** **HwVersion : 0.2** **CPSwVersion: W-A48-M-1GE-2.10.2.22.2** **DPSwVersion: DP_B02_10_14_60_ip1000a** **System Time: Thu Jan 01 00:33:23 1970** **Time Zone : GMT** **DST : off** **Services : physical datalink** **internet end-to-end** **applications** **$**

▲How to Save the Configuration

To save the configuration for the DSL module
Type the following command to save the configuration. Next time, the saved configuration will be invoked after powering on the device. **- $commit**

❺ Configuration by Using Telnet

To use Telnet for managing IP DSLAM 48 device, refer to the following sections.

Default IP Settings for Slave Device
Proprietary **DHCP** is configured on UPLINK port in slave device by default. The IP address will be assigned automatically when it connects to the master device.

▲How to Configure IP Address for IP DSLAM 48

For one gigabit-ethernet interface version, please set as the following

- **`$ethernet intf ifname eth-0 ip <new-ip> mask <mask> usedhcp false`**

Change back to master-slave architecture, please set as the following

- **`$ethernet intf ifname eth-0 ip 0.0.0.0 mask 0.0.0.0 usedhcp true`**

▲How to Login with Telnet

1. Make sure the device IP has been configured well.
2. Make sure the connection of UPLINK port is well done.
3. Open Telnet command screen.
4. Username/Password
   - **`admin/1234`** (type '**exit**' to return)

❻ Reference – Common Use Commands for Configuration

Here provides some general and common commands used in IP DSLAM 48 for users to configure the IP DSLAM DSL Module.

Note: Please refer to the Command Line Interface manual for getting more commands that IP DSLAM supports. Contact your dealer for advanced information.

▲How to Monitor DSL Status

Users can use the following command to check the status for specified DSL port. The commands are listed as below.

Command	Description
`$get adsl atuc physical ifname dsl-*`	for downstream (*: 0 ~ 47)
`$get adsl atur physical ifname dsl-*`	for upstream (*: 0 ~ 47)

▲How to Enable/Disable a DSL Port

Users can use the following command to enable or disable DSL port for certain user. The commands are listed as below.

Command	Description
`$modify adsl line intf ifname dsl-* enable`	Enable (*: 0 ~ 47)
`$modify adsl line intf ifname dsl-* disable`	Disable (*: 0 ~ 47)

▲How to Read DSL Training Rate

Users can use the following command to read DSL Training Rate for specified DSL port. The commands are listed as below.

Command	Description
$get adsl atuc channel ifname dsli-*	for downstream/interleave channel (*: 0 ~ 47)
$get adsl atur channel ifname dslf-*	for upstream/fast channel (*: 0 ~ 47)
$get adsl atuc channel ifname dsli-*	for downstream/interleave channel (*: 0 ~ 47)
$get adsl atur channel ifname dslf-*	for upstream/fast channel (*: 0 ~ 47)

▲How to Change ADSL Line Profile

Users can use the following command to change the ADSL Line Profile for specified DSL port. The commands are listed as below.

Command	Description
$modify adsl line intf ifname dsl-* disable	Disable (*: 0 ~ 47)
$modify adsl line profile ifname dsl-* ?	(*: 0 ~ 47, ?: means to get more information)
$modify adsl line intf ifname dsl-* enable	Enable (*: 0 ~ 47)

▲How to Change ADSL Line Rate

Users can use the following command to change the ADSL Line Rate for specified DSL port. The commands are listed as below.

Command	Description
$modify adsl line intf ifname dsl-* disable	Disable (*: 0 ~ 47)
$modify adsl line profile ifname dsl-* atucintlmaxtxrate 0x7e0000	Necessary variables (*: 0 ~ 47)
$modify adsl line intf ifname dsl-* enable	Enable (*: 0 ~ 47)

▲How to Change ADSL to Fast Channel/Rate

Users can use the following command to change the ADSL to fast channel/rate for specified DSL port. The commands are listed as below.

Command	Description
$modify adsl line intf ifname dsl-* disable	Disable (*: 0 ~ 47)
$modify adsl line profile ifname dsl-* type fastOnly atucfastmaxtxrate 0x7e0000	Necessary variables (*: 0 ~ 47)
$modify adsl line intf ifname dsl-*	Enable (*: 0 ~ 47)

enable	

▲How to Set ADSL Alarm Profile

Users can use the following command to change the ADSL Alarm profile for specified DSL port. The commands are listed as below.

Command	Description
$modify adsl line intf ifname dsl-* disable	Disable (*: 0 ~ 47)
$modify adsl alarm profile ifname dsl-* ?	(*: 0 ~ 47, ?: means to get more information)
$modify adsl line intf ifname dsl-* enable	Enable (*: 0 ~ 47)

▲How to Change VPI/VCI for Existing VCC

Users can use the following command to change VPI/VCI for existing VCC. The commands are listed as below.

Command	Description
$modify atm vc intf ifname aal5-* disable	Disable (*: Existing aal5 interface)
$modify atm vc intf ifname aal5-* vpi <new-vpi> vci <new-vci>	(*: Existing aal5 interface)
$modify atm vc intf ifname aal5-* enable	Enable (*: Existing aal5 interface)

▲How to Change Management IP Address for Existing Ethernet Port

Users can use the following command to change management IP address for existing Ethernet port. The commands are listed as below.

Command	Description
$modify ethernet intf ifname eth-* ip <new-ip> mask <new-mask>	Create Ethernet (*: 0 or 1)

▲How to Create more VC/EOA/Bridge

Users can use the following command to create more VC/EOA/Bridge. The commands are listed as below.

Command	Description
$create atm vc intf ifname aal5-* vpi <vpi> vci <vci> lowif atm-* [vcmux/llcmux] [fast/interleaved]	(*:0 ~ 47 is used for atm; 0~383 is used for aal5)
$create eoa intf ifname eoa-* lowif aal5-*	(*:0~383 is used for aal5 and eoa)
$create bridge port intf portid <bridge-port-id> ifname eoa-*	(*:0~383 is used for eoa,; 1~384 is used for <bridge-port-id>)

▲How to Setup SNMP Community/Host/Trap

Users can use the following command to setup SNMP community/host/trap. The commands are listed as below.

Command	Description
$create snmp comm community <community> <RW|RO>	Create SNMP community
$create snmp host ip <host-ip> community <community>	Create a host to manage the device through SNMP
$create snmp traphost ip <host-ip> community <community>	Create a host to capture the traps.

▲How to Create VLAN

Users can use the following command to create VLAN. The commands are listed as below.

Command	Description
$create vlan static vlanname <vlan-name> valnid <vlan-id> [egressports <bridge ports>]	Create VLAN

▲How to Setup Port VLAN ID (PVID)

Users can use the following command to setup port VLAN ID. The commands are listed as below.

Command	Description
$modify gvrp port info portid <bridge-port-id> portvalnid <default-pvid>	Setup port VLAN ID

▲How to Filter MAC Address by Port

Users can use the following command to filter MAC address by port. The commands are listed as below.

Command	Description
$create acl port macentry portId <bridge-port-id> macaddr 00:00:00:01:02:03	Allow source address 00:00:00:01:02:03 access from bridge port; bridge-port-id means other source addresses from bridge port <bridge-port-id> are denied
$create acl port macentry portId <bridge-port-id> macaddr 00:00:00:01:02:04	Allow source address 00:00:00:01:02:04 access from bridge port; bridge-port-id means other source addresses from bridge port <bridge-port-id> are denied

▲How to Deny MAC Address Globally

Users can use the following commands to deny MAC Address globally. The commands are listed as below.

Command	Description

$create acl global macentry macaddr 00:00:00:01:02:03 deny enable	Mac source address 00:00:00:01:02:03,04 access from any bridge ports is denied

▲How to Filter Net BIOS

Users can use the following commands to filter Net BIOS. The commands are listed as below.

Command	Description
$create filter rule entry ruleid <id> action drop description NETBIOS-TCP **$create filter subrule tcp ruleid <id> subruleid 1 srcportfrom 137 srcportto 139 srcportcmp inrange** **$modify filter rule entry ruleid <id> status enable** **$create filter rule map ifname all ruleid <id> stageid 1** **$create filter rule entry ruleid <id2> action drop description NETBIOS-UDP** **$create filter subrule udp ruleid <id2> subruleid 1 srcportfrom 137 srcportto 139 srcportcmp inrange** **$modify filter rule entry ruleid <id2> status enable** **$create filter rule map ifname all ruleid <id2> stageid 1**	NETBIOS-NS: Name Service137 TCP/UDP NETBIOS-DGM: Datagram Service 138 TCP/UDP NETBIOS-SSN: Session Service 139 TCP/UDP

▲How to Enable Spanning Tree Protocol

Users can use the following commands to enable spanning tree protocol. The commands are listed as below.

Command	Description
$modify myswitch port info portid <g1|g2|g3|g4> mac <macaddr>	Configrated the mac address of connecting DSLAM
$modify myrstp cfg info status <disable|enable>	Enable or disable the RSTP status

▲How to Enable IGMP Snooping

Users can use the following commands to enable IGMP snooping. The commands are listed as below. Be aware that IGMP Snooping is the Factory Default Setting.

Command	Description
$modify igmpsnoop port info portid <bridge-port-id> status enable leavemode fastNormal **or** **$modify igmpsnoop port info portid <bridge-port-id> status enable leavemode Fast**	The feature is enabled in default.

▲How to Upgrade Control Plane Code Remotely

Users can use the following command to remotely upgrade control plane code. Make sure you have prepared TFTP server, vendor supplied CP.bin.gz , and put CP.bin.gz into root directory of TFTP server. The commands are listed as below.

Command	Description
$firmware upgrade CP.bin.gz CP <tftp-server-ip>	Upgrade the control plane code

▲How to Upgrade Full Image Remotely

Users can use the following commands to remotely upgrade full image. Make sure you have prepared TFTP server, vendor supplied TEImage.bin.gz, and put TEImage.bin.gz into root directory of TFTP server. The commands are listed as below.

Command	Description
$reboot config safe	Reboot from Safe mode

```
$modify ethernet intf ifname eth-0 ip <ip_address> mask <mask> usedhcp false
$download src TEImage.bin.gz dest /nvram/image/ ip <server_ip>
Downloading the File.
.............................................................
Download file size is 1991180
Check if TEImage.bin shall uncompress
Uncompressing "TEImage.bin.gz" (11990111->4194304)......
TEImage.bin.gz is in proper format

Unlocking Flash........
Unlock successful
Erasing Flash ....................................
Erasing successful
Starting to Uncompress TEImage.bin.gz and Burn Flash
Uncompressing "TEImage.bin.gz" (1990111->4194304)......
#########################
Flash Programmed successfully
Done.
Download session Completed, Bytes received 1991180...
$
```

After finish download and upgrade it will reboot automatically

▲Wizard Commands

In addition to the primitive commands described as above. Several wizard commands are provided which is used easily. Type ***wizard*** to see the command syntax.

Command	Description

```
$ wizard
<List of Wizard Commands>
-------------------------------------------------------------
 dsl show [fast]
 pvc show
 pvc create <start dsl: 1~48>-<end dsl: 1~48> <vc: 1~8> <vpi> <vci> [<llcmux|vcmux>]
 [<interleaved|fast>] [bridge|pppoa|autosense|ipoa] [MacProfileID]
 pvc delete <start dsl: 1~48>-<end dsl: 1~48> <vc: 1~8>
 pvc modify <start dsl: 1~48>-<end dsl: 1~48> <vc: 1~8> <vpi> <vci>
 bridge delete <bridge id: 1~385>
 firmware upgrade [-]<source file> <CP|DP|FD|DSL|ALL> <server ip>
 fd show
 port <disable|enable|restart> <start dsl: 1~48>-<end dsl: 1~48>
 config backup <filename> <server ip>
 config restore <filename> <server ip>
 ipconfig <ip> <mask>
 snmpconfig <ro community> <rw community> <trap community> <host ip>
 <option:flush>
 snmpflush
 qos show <qos-0 ~ qos-47>
 qos set <qos-0 ~ qos-47> <CBR|rt-VBR|nrt-VBR|UBR> <PCR|SCR|MBS> <value>
 qos port set <Bridge port: 1~384> <CBR|rt-VBR|nrt-VBR|UBR|default>
 qos create <qos-0 ~ qos-47>
 qos delete <qos-0 ~ qos-47>
 trfclass port set <Bridge port: 1~384> <highest|high|medium|low|default>
 cmdlog show
 packetfilter <register|unregister> <PIA|DHCP|ARP>
 vlanlog show
 vlan member <VID> <1:tagged | 2:untagged> <start port> <end port>
 vlan nomember <VID> <1:tagged | 2:untagged> <start port> <end port>
 assign profile <start dsl: 1~48> <end dsl: 1~48> <profile name>
 pktpolicy <delete | create> <bridge id: 1~385> <Start IP address> <End IP address>
-------------------------------------------------------------
```

Dsl show [fast]	Show 48 port current DSL status.
Pvc show	Show current PVC configuration.
pvc create <start dsl: 1~48>-<end dsl: 1~48> <vc: 1~8> <vpi> <vci> [<llcmux|vcmux>] [<interleaved|fast>] [bridge|pppoa|autosense|ipoa] [MacProfileID]	Create a new PVC.
pvc delete <start dsl: 1~48>-<end dsl: 1~48> <vc: 1~8>	Delete un-necessary PVC configuration.
pvc modify <start dsl: 1~48>-<end dsl: 1~48> <vc: 1~8> <vpi> <vci>	Modify PVC ‘s VPI and VCI configuration.
bridge delete <bridge id: 1~385>	Delete un-necessary bridge port.
firmware upgrade [-]<source file> <CP|DP|FD|DSL|ALL> <server ip>	Firmware upgrade.
fd show	Show current factory default configuration.
port <disable|enable|restart> <start dsl: 1~48>-<end dsl: 1~48>	Disable or enable or restart (disable and then enable) DSL port.
config backup <filename> <server ip>	Backup current configuration.
config restore <filename> <server ip>	Restore configuration.
ipconfig <ip> <mask>	IP configuration.
snmpconfig <ro community> <rw community> <trap community> <host ip> <option:flush>	SNMP configuration.
Snmpflush	Clear all SNMP configuration.

qos show <qos-0 ~ qos-47>	Show current QoS configuration.
qos set <qos-0 ~ qos-47> <CBR|rt-VBR|nrt-VBR|UBR> <PCR|SCR|MBS> <value>	Set QoS.
qos port set <Bridge port: 1~384> <CBR|rt-VBR|nrt-VBR|UBR|default>	Set port QoS.
qos create <qos-0 ~ qos-47>	Create a new QoS configuration.
qos delete <qos-0 ~ qos-47>	Delete QoS configuration.
trfclass port set <Bridge port: 1~384> <highest|high|medium|low|default>	Traffic class configuration.
cmdlog show	Show command history.
packetfilter <register|unregister> <PIA|DHCP|ARP>	Register or unregister filter rule.
vlanlog show	Show VLAN configuration history.
vlan member <VID> <1:tagged | 2:untagged> <start port> <end port>	Add port to egressport or untagged port in the vlan.
vlan nomember <VID> <1:tagged | 2:untagged> <start port> <end port>	Remove port from egressport or untagged port in the VLAN.
assign profile <start dsl: 1~48> <end dsl: 1~48> <profile name>	Assigned created predefined profile to DSL port.