

VigorAccess IP DSLAM Management

The screenshot displays the management interface for a DrayTek IP DSLAM. The interface includes a status bar at the top with a row of green indicator lights. Below this, there are tabs for 'Status', 'Summary', 'PVC', and 'Throughput'. The main content area is divided into several sections:

- 172.16.2.151**: A section showing a grid of status indicators for various ports (slave1 to slave6).
- 172.16.2.151-Master**: A section with the DrayTek logo and a grid of status indicators.
- Statistics View**: A table showing various performance metrics for 'Up Stream' and 'Down Stream'.
- eth-0 at 172.16.2.151-Slave00**: A throughput graph showing data usage over time, with a peak around 12:00.

Item	Up Stream	Down Stream
1. SNR Margin(dB/10)	95	195
2. Output Power(dBm/0)	120	195
3. Adjustable Bitrate(kbps)	748000	12564000
4. Attenuation(sdb/10)	60	30
5. Interleave Current Rate	672000	8064000
6. Interleave Previous Rate	672000	8064000
7. Interleave Delay	16	16
8. Fast Current Rate	0	0
9. Fast Previous Rate	0	0
10. Current Status	noDefect	noDefect

Additional statistics shown in the interface include:

- Octets: 4.02 kbits/s Maximum output Octets: 6.27 kbits/s
- Octets: 3.99 kbits/s Maximum Input Octets: 6.15 kbits/s

The interface also shows a 'Statistics View' section with a 'Display' button and a 'Port' section with a 'Port 1' dropdown menu.

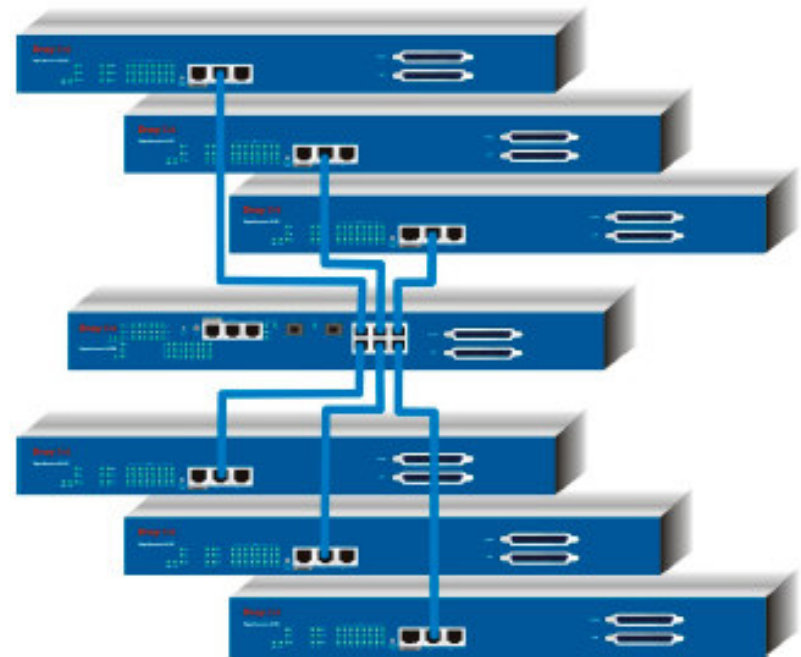
A stack of five blue DrayTek VigorAccess IP DSLAM units is shown in the bottom right corner of the screenshot. Each unit has a front panel with a display screen and several ports.

Introduction

- This presentation is to provide a quick guide to configure the VigorAccess IP DSLAM devices and enable them **manageable**

Architecture

- Two types of Topology
 - Master-Slave
 - Slave-Standalone



Management Channels

- Serial Port
- Telnet
- EMS (SNMP-based)

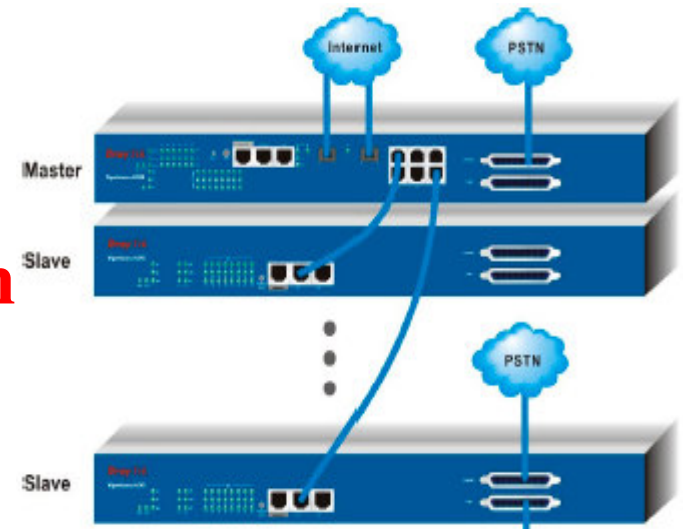
Serial Port Management

- Console Setting
 - **9600/8/N/1**, no flow control
- Master-Slave
 - Connect to [CONSOLE] port
 - username/password: **admin/1234**
- Slave-Standalone
 - Connect to [CONSOLE] port
 - no password required



Master-Slave Connectivity

- By default, ports G1, G2, ..., G6 are disable
 - Turn the interfaces ON
 - Admin>**system link -m g_n on**
(where _n is 0 to 6)
 - Admin>**system link** (check the status)



Master-Slave Connectivity (cont.)

- Check the connectivity between the slave and master
 - Admin>**dsl**

```
-----  
Logic-Name  Slave-IP    Connection-Status  
-----  
dsl-master  10.0.1.2    ON LINE  
dsl-slave-01 10.0.1.18   (NA)  
dsl-slave-02 10.0.1.34   ON LINE  
dsl-slave-03 10.0.1.50   ON LINE  
dsl-slave-04 10.0.1.66   (NA)  
dsl-slave-05 10.0.1.82   (NA)
```

Login to DSL Module

- DSL inside master via serial channel
 - Admin>**dsl -c** (type <Ctrl-Z> to return)
- DSL inside master via ethernet channel
 - Admin>**dsl -m** (type 'exit' to return)
- DSL inside slave via ethernet channel
 - Admin>**dsl -s *n*** (type 'exit' to return), where *n* is 1 to 6

Version Information

- Master Controller
 - Admin>**system basic**

```
-----  
SYSTEM BASIC INFORMATION  
-----
```

```
Machine Model      : IP DSLAM MASTER  
Firmware Version  : V2.1.12  
Hardware Version   : 0.0  
Build Time        : Wed Aug 17 14:44:10 CST 2005  
System Uptime     : 0 days 03h:43m:59s  
System Contact    : admin@urcompany.com  
System Name       : Taiwan001  
System Location   : urlocation  
CPU Usage         : 01%  
Memory Usage      : 49%  
Current Time      : Thu Jan 01 11:43:42 1970
```

Version Information (cont.)

- DSL (inside master or slave)

- **\$get system info**

```
Description      : IP DSLAM
Name              : Taiwan001
Location         :
Contact          :
Vendor           :
LogThreshold     : 0
Object-id        : 1.3.6.1.4.1.7367.2.11.1
Up Time(HH:MM:SS) : 2:40:40
HwVersion        : A-A-24-1GE-1.0
CPSwVersion     : V1.1.1_G_016
DPSwVersion      : DP_B02_08_07_21
System Time      : Thu Jan 01 03:45:33 1970
Time Zone        : GMT
DST              : off
Services         : physical datalink internet end-to-end  applications
```

Save the Configuration

- Master Controller
 - Admin>**commit**
- DSL module (in master or slave)
 - **\$commit**

IP Address Setting

- Mandatory if Telnet or EMS management is required
- Default setting
 - Master
 - Outband (MGM port): **172.16.1.1**/255.255.255.0
 - Inband (Uplink port): 0.0.0.0 (disable)
 - Slave (DSL module)
 - Proprietary DHCP (support only for master-slave architecture)

Master IP Setting

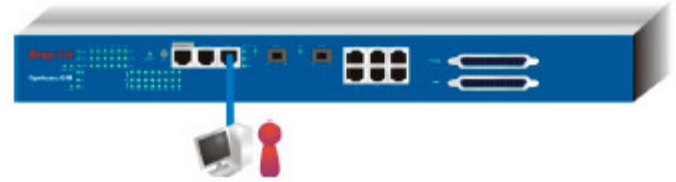
- Outband
 - Admin>network out <new-ip> <mask> [vlanid]
- Inband
 - Admin>network in <new-ip> <mask> [vlanid]
- Status
 - Admin>network out (in)
- outband and inband IP addresses can not belong to the same domain

Slave-Standalone IP Setting

- For 2 fast-ethernet version
 - `$aggr intf ifname aggr-0 ip <new-ip> mask <mask> usedhcp false`
- For 1 giga-ethernet version
 - `$ethernet intf ifname eth-0 ip <new-ip> mask <mask> usedhcp false`
- Change back to master-slave architecture
 - `$aggr (ethernet) intf ifname aggr-0 (eth-0) ip 0.0.0.0 mask 0.0.0.0 usedhcp true`

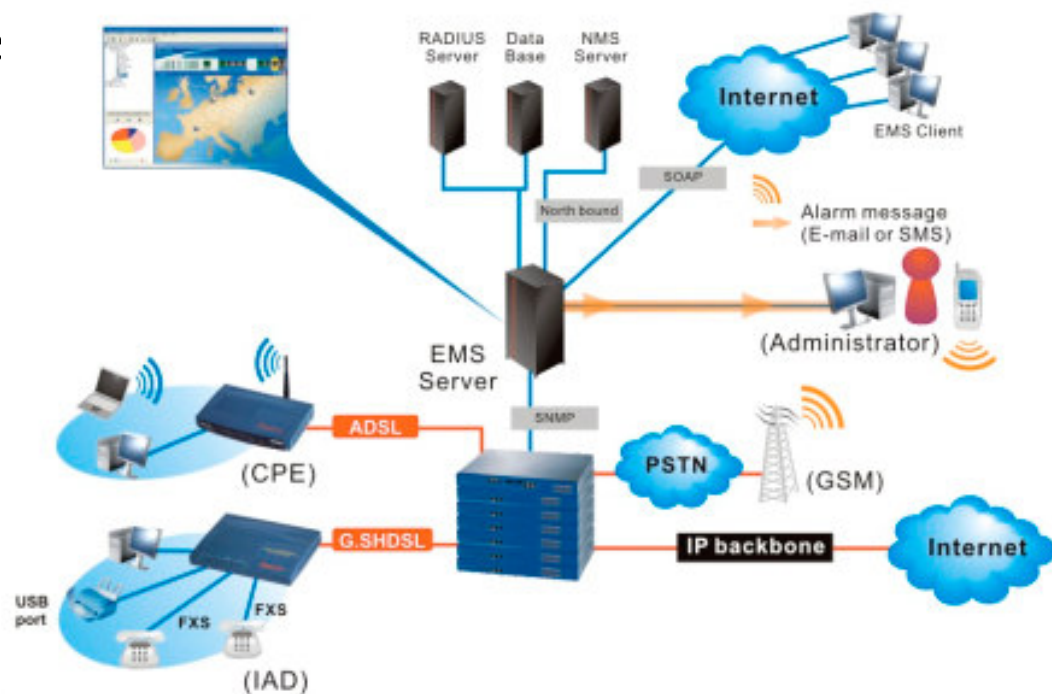
Telnet Management

- Device IP configured well
- Connect to ...
 - Master: MGM port for outband, uplink port for inband
 - Slave: Any uplink port
- Username/Password
 - **admin/1234** (type 'exit' to return)



EMS Management

- Device IP configured well
- SNMP related parameters
 - Community
 - Trap Host



Master SNMP Enabled

- Communities
 - Default: public/private/trap
 - Admin>**service snmp -c <ro> <rw> <trap>**
- Trap destination
 - Admin>**service snmp -a <ems-server-ip>**

Slave-Standalone SNMP Enabled

- CLI commands...

```
$create snmp comm community <ro-comm>
```

```
$create snmp comm community <rw-comm>
```

```
$create snmp host ip <ems-server-ip> community  
  <ro-comm>
```

```
$create snmp host ip <ems-server-ip> community  
  <rw-comm>
```

```
$create snmp traphost ip <ems-server-ip>  
  community <trap-comm>
```

VigorAccess EMS

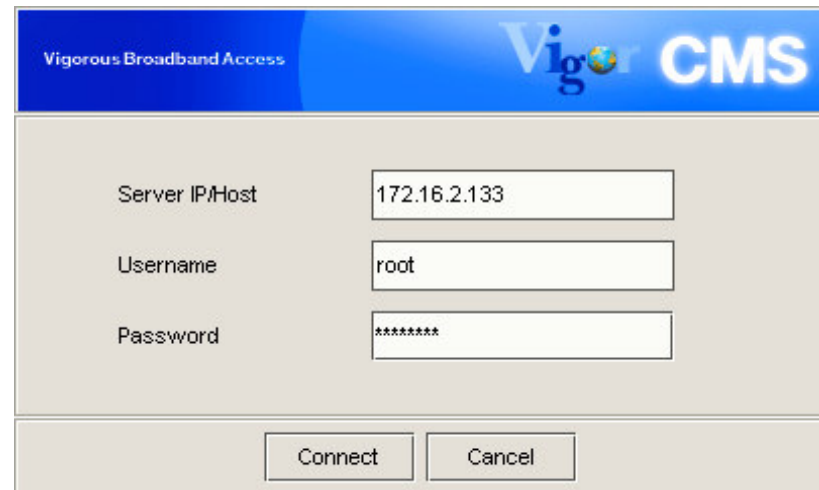
- Element Management System
- Client-Server Model
- Pure Java Cross-Platform Architecture

EMS Installation

- Retrieve the EMS Software
- Following the installation guide...
 - Server
 - Install JDK
 - Install MySQL Database
 - Install EMSServer
 - Client
 - Install EMSClient

EMS Startup

- EMS Server
 - Edit [Bind IP of EMSServer]
 - Start EMSServer (MySQL will be launched automatically)
- EMS Client
 - Start EMSClient
 - Username/Password
 - **root/admin123**



The screenshot shows a login dialog box for Vigor CMS. The title bar is blue and contains the text "Vigorous Broadband Access" on the left and the "Vigor CMS" logo on the right. The main area is light gray and contains three input fields: "Server IP/Host" with the value "172.16.2.133", "Username" with the value "root", and "Password" with the value "*****". At the bottom, there are two buttons: "Connect" and "Cancel".

Add Device into EMS

- Choose [Add a Device]
 - Fill the name of the device
 - Fill the IP address of the device
 - Choose the correct **Type** of the device
 - Master-Slave
 - Slave-Standalone
- Double-Click the device icon for further management

Advanced

- How to set G6 port as uplink
- How to set the default gateway
- How to upgrade firmware via EMS

How to Set G6 Port as Uplink

- For Master Controller
 - Admin>**system G6 up** or Admin>**system uplink G6 up** (the latest version)
 - Admin>**system link -m g6 on**
 - Admin>commit (on demand)

How to Set the Default Gateway

- Master Controller
 - Admin>**network route default <gateway-ip>**
- Standalone-Slave
 - \$**create ip route ip 0.0.0.0 gwyip <gateway-ip> mask 0.0.0.0**

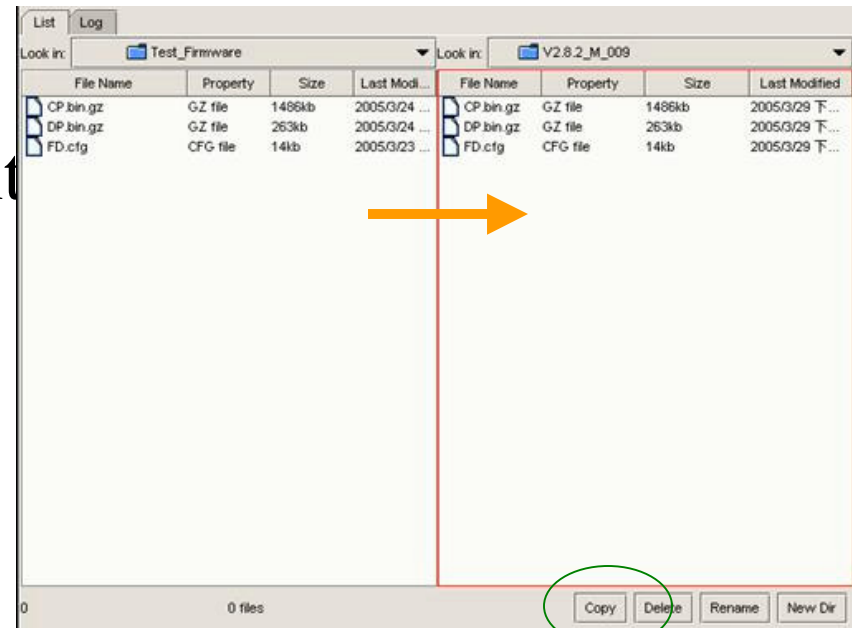
How to Upgrade Firmware via EMS

- Firmware Type
 - Master Controller
 - draytek_V2.1.1.all for example
 - DSL Module
 - 2 fast-ethernet version, ex, V1.1.1_**M**_016 for
 - 1 giga-ethernet version, ex, V1.1.1_**G**_016 -- the one inside master box



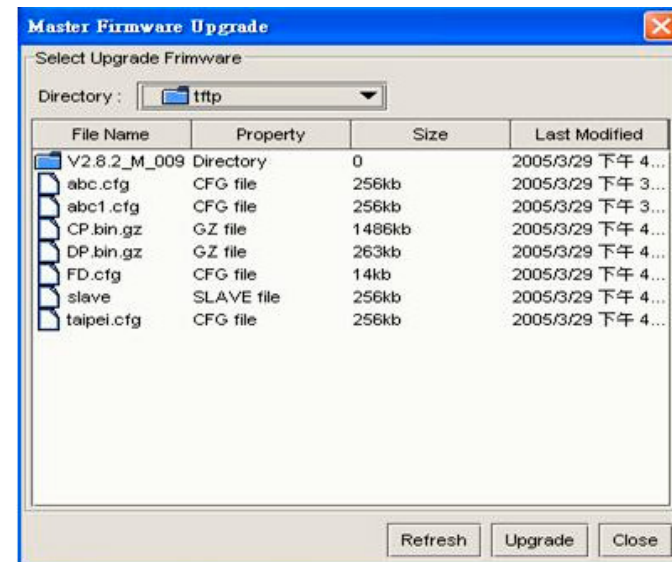
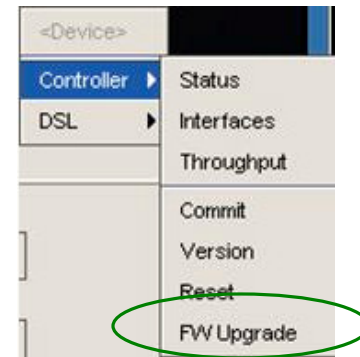
How to Upgrade Firmware via EMS (File Upload)

- Retrieve the latest firmwares
- Using [Advanced]-[File Upload] from EMS client to copy the local files to TFTP server on EMS server
- For DSL module,
 - copy the whole directory is recommended



How to Upgrade Firmware via EMS (FW Upgrade)

- Open the device faceplate from EMS client
- Choose the target unit -- master controller or DSL module in master or slave
- Right-click on the faceplate, choose [FW Upgrade]
 - Master Controller
 - DSL module: choose the type and firmware file



How to Upgrade Firmware via EMS (DSL Component)

- Upgradable DSL Firmware Components
 - CP (Control Plane) CP.bin.gz
 - DP (Data Plane) DP.bin.gz
 - DSL DSP code gsv_dsl_AD_DM_3C00000C.bin.gz
 - Factory Default Setting FD.cfg

File Name	Property	Size	Last Modified
CP.bin.gz	GZ file	2kb	7/12/05 3:10 PM
DP.bin.gz	GZ file	2kb	7/12/05 3:10 PM
FP.cfg	CFG file	2kb	7/12/05 3:11 PM
ipdslam_v1.1.8rc5.all	ALL file	2kb	7/12/05 3:13 PM

Select Type

CP DP FD DSL

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