



VigorCMS

Element Management System(EMS)

Quick Start Guide

V1.0

1

Software Installation

1.1 Platform for Windows 2000 or XP

EMS Server

1. Install JDK \Software\jdk-1_X_X_XX-windows-i586-p.exe
2. Install MySQL. \Software\mysql-4.0.17-win\Setup.exe. - The default directory of mysql is located at c:\mysql.
*Please make sure the dir length of mysql setup is not over 100 characters, otherwise you may have problems to install mysql.
3. Install EMSServer \EMSServer\setup.exe - When prompt ask you to select database path and JDK path, you must choose the correct directory. You also can choose rebuild or upgrade database.

EMS Client

Install EMSClient \EMSClient\setup.exe.

1.2 Platform for Unix

1.2.1 EMS Server

1. Login Linux or Solaris with root or the root privilege.
2. Decompress the setup packages.
`gzip -cd EMS_Unix_Like_XXXXXX_XXXXX.tar.gz |tar xvf -`
3. Change the permissions mode of install.sh uninstall.sh
`chmod 755 ./install.sh`
`chmod 755 ./uninstall.sh`
4. Execute installation procedure.
`./install.sh`
Please make sure you have `/usr/bin/sh` first. If you don't have `/usr/bin/sh`, please do `ln -s /bin/sh /usr/bin/sh`
5. EMS supports Solaris and Linux OS now. Please select OS version first. The following is an example for Solaris 9 OS.
What is the OS version of about your machine (Linux or Solaris) Solaris
6. Verify the version of Solaris. Please input 8 or 9.
What is the Solaris OS version of about your machine (8 or 9) 9
7. Select the item number which you want to execute.

For Solaris System

1. Install library: libgcc coreutils libiconv ncurses install
(installing mysql need)
2. Install mysql
3. Install java

4. Install EMS Server (It will build one mysql database: snmpdb)
5. Install EMS Client
6. Upgrade EMS Server (It will upgrade snmpdb database)
7. Exit

input select num:

For Linux System

1. Install mysql
2. Install java
3. Install EMS Server (It will build one mysql database: snmpdb)
4. Install EMS Client
5. Upgrade EMS Server (It will upgrade snmpdb database)
6. Exit

input select num :

Because Linux OS has the library that installing mysql need, it will not appear in menu.

- Install library: Install the library that installing mysql need. Only display on Solaris System.
- Install mysql: Install mysql database to save EMS data
- Install java: Install java software to run EMS
- Install EMS Server: Install EMS Server and build snmpdb database that EMS server using.
- Install EMS Client: Not Available
- Upgrade EMS Server: If this is not the first time for installing EMS, please select this item to upgrade EMS Server. This will reserve the EMS data you have built.

If your machine does not install any other package, you need to repeat 1 - 4 step to install EMS Server.

8. Save the license key.

Please edit the file *license.key* in */usr/local/ems/EMSServer/version*.

Paste the license key and save it.

1.2.2 EMS Client

Install EMSClient \EMSClient\setup.exe.

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Start EMS Server

2.1 Overview

The normal procedure of starting up the EMS Server goes follows:

- Start MySQL Database
- Edit EMS Server IP
- Start EMS Server

Different platform has different way of initiation. Please follow the steps for each platform.

2.2 Windows Platform

2.2.1 Start MySQL Database

After installing EMS Server, install program will register MySQL to Windows Service. MySQL will startup automatically after installing EMS Server or rebooting system. Normally, you don't need to worry about this step on Windows. But if you find any problems on EMS Server, you should check mysql first. Please go to Windows Service check the MySQL Service starts or not. And Run the script "*Programs->EMSServer->Test DataBase*" to check if the database is OK or not.

2.2.2 Edit EMS Server IP

When starting the EMS Server at first time on Windows, startup program will ask you input Server IP. Once you input this IP, EMS Server will keep it on bindip.txt. If you want to change it, click *Programs->EMSServer->Edit Bind IP of EMSServer* to open and edit the bindip.txt.

2.2.3 Start EMS Server

Click *Programs->EMSServer->StartEMSServer.bat* to startup EMSServer. If you start it for the first time, you will be asked to input the server bind IP.

2.3 Solaris or Linux Platform

Execute "*/usr/local/ems/EMSServer/bin/ems.sh*" instruction. It will appear the menu as follows.

1. start mysql
 2. shutdown mysql
 3. start ems
 4. shutdown ems
 5. edit bind ip of EMS Server(please keyin ip or servername)
 6. set the MAX and MIN memory vaule of running java (It will valid after restarting EMS)
 7. view the MAX and MIN memory vaule of running java
 8. exit
- input select num:

2.3.1 Start/Shutdown MySQL Database

After installing EMS Server, mysql daemon has started. You can see it by using "ps -ef|grep mysql" instruction. You can use the menu item 1, 2 to start/shutdown mysql. Or, execute command of "/etc/init.d/emsmysqld start" which also can start MySQL Database. The command "/etc/init.d/emsmysqld stop" is another way to shutdown MySQL Database.

2.3.2 Edit EMS Server IP

When starting the EMS Server at first time on Solaris or Linux, startup program will ask you input Server IP or input enter key using the IP of hostname. Once you input IP, EMS Server will keep it on startway.txt. If you want to change it, you can select item 5 to edit startway.txt using vi editor.

2.3.3 Start/Shutdown EMS Server

After installing EMS Server, you can select item 3 to start EMS. If you have been reboot machine after installing EMS Server, select item 1 to start mysql first. Then, select item 3 to start EMS. Or, execute command of "/etc/init.d/emsserver start" which also can start EMS Server. If you want to shutdown EMS server, the first way is select item 4, the other way is execute the command "/etc/init.d/emsserver stop".

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EMS Client

3.1 Start EMS Client

Start the EMS client by clicking *Start -> Program -> EMS Client -> Start EMS Client* to start EMS client.

3.2 Connect to EMS Server

After starting EMS Client, EMS Login Dialog will display on your machine. You have to input the server IP which is your EMS Server IP, username, and password. The default username and password is root and admin123.

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Connect to IPDSLAM

The normal procedure for connecting to IPDSLAM goes follows:

- Setting the IPDSLAM Device
- Add the device to EMS

Different IPDSLAM device has different way. Please follow guide of each device.

4.1 Master Device

4.1.1 Setting the IPDSLAM Device

1. Login the master by console.

2. Set the IP address of outband.

```
Admin> network outband <Device IP> <Mask>
```

3. Set trap host

```
Admin> service snmp -a <HostIP>
```

* <HostIP> is EMS Server IP

4. Change community.

```
Admin> service snmp -c <CommRO> <CommRW> <CommTrap>
```

* Default community is public, private and trap for community of read only, read write, and trap.

You can just use default value without the step.

For example:

```
EMS Server IP: 172.16.2.135, Device IP: 172.16.2.151
```

```
Admin> network outband 172.16.2.151 255.255.255.0
```

```
SUCCESS: Command done.
```

```
Admin> service snmp -a 172.16.2.135
```

```
SUCCESS: Command done.
```

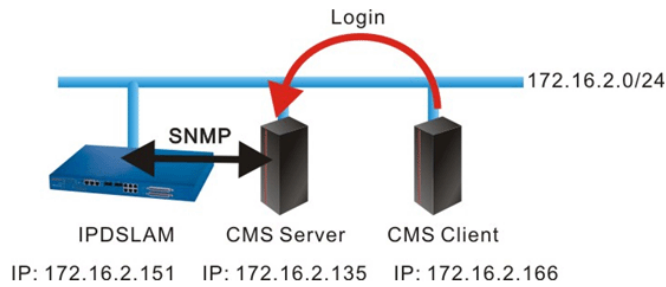
```
Admin> service snmp -c public private trap
```

```
SUCCESS: Command done.
```

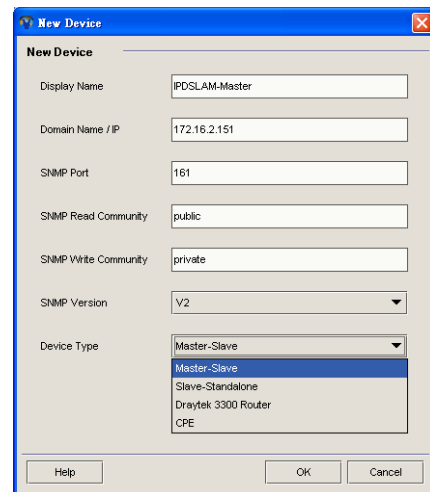
4.1.2 Add the Device to EMS

1. EMS server and IPDSLAM can communicate with each other by SNMP. Besides, EMS client can manage the IPDSLAM via EMS Server easily.

For example, EMS S Server IP is 172.16.2.135, device IP (for IPDSLAM) is 172.16.2.151 and EMS Client IP is 172.16.3.166, the connecting diagram can be shown as the following:



2. Please start EMS Client and connect to EMS Server first. *Choose Network -> New Device* on Main Menu to add the device to EMS Server for management. Please type device IP, **Read community** and **Write community** as you set on the device. Finally, set the **Device Type** to Master-Slave.



4.2 Slave Device

4.2.1 Setting the IPDSLAM Device.

1. Login the slave by console.
2. Configuration the management IP address for uplink port.
`$aggr intf ifname aggr-0 ip <ip> mask <mask> usedhcp false`
3. Create the SNMP related parameters.
`$create snmp comm community public ro`
`$create snmp comm community private rw`
`$create snmp host ip <server ip> community public`
`$create snmp host ip <server ip> community private`
`$create snmp trap host ip <server ip> community trap`

4. Save the configuration

`$commit`

For example:

EMS Server IP: 172.16.2.135, Device IP: 172.16.2.151

`$aggr intf ifname aggr-0 ip 172.16.2.151 mask 255.255.255.0 usedhcp false`

`$create snmp comm community public ro`

`$create snmp comm community private rw`

`$create snmp host ip 172.16.2.151 community public`

`$create snmp host ip 172.16.2.151 community private`

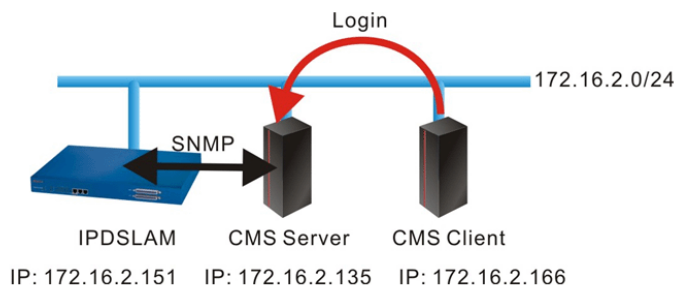
`$create snmp trap host ip 172.16.2.151 community trap`

`$commit`

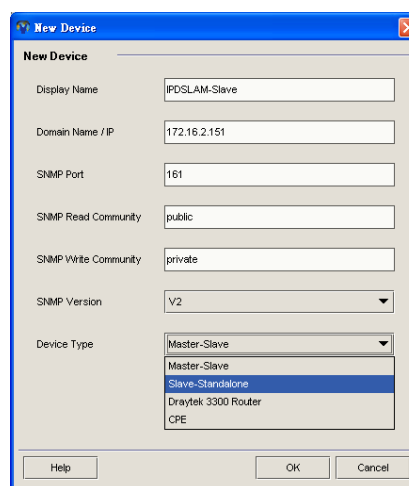
4.2.2 Add the Device to EMS

1. EMS server and IPDSLAM can communicate with each other by SNMP. Besides, EMS client can manage the IPDSLAM via EMS Server easily.

For example, EMS S Server IP is 172.16.2.135, device IP (for IPDSLAM) is 172.16.2.151 and EMS Client IP is 172.16.3.166, the connecting diagram can be shown as the following:



2. Please start EMS Client and connect to EMS Server first. *Choose Network -> New Device* on Main Menu to add the device to EMS Server for management. Please type device IP, **Read community** and **Write community** as you set on the device. Finally, set the **Device Type** to Slave - Standalone.



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Connect to Vigor3300 Router

The normal procedure for connecting to Vigor 3300 Router goes follows:

- Setting the Vigor3300 Router
- Add the device to EMS

5.1. Setting the Vigor 3300 Router

1. Suppose the LAN IP or WAN IP of Vigor3300 has been setup successfully.
2. Login the device by console.
3. Set community for Vigor3300.

```
DrayTek> advance snmp community -e <Index> <Community> <Host/mask> <MAX  
Access>
```

Example:

EMS Server IP: 172.16.2.135,

Device IP: 172.16.2.153,

Client IP: 172.16.2.166

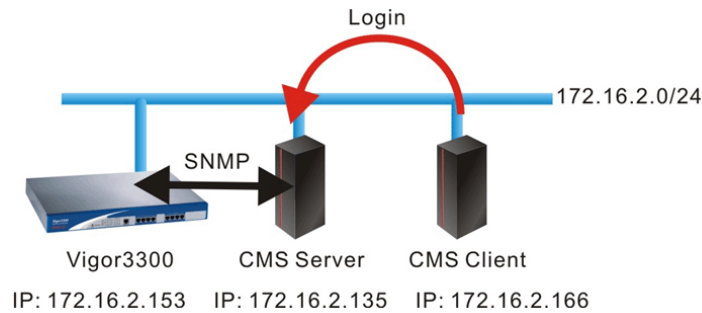
```
DrayTek> advance snmp community -e 1 public 172.16.2.135/32 0
```


DrayTek> advance snmp community -e 2 private 172.16.2.135/32 1

Note: The community can be set by web in *Advanced->SNMP->SNMP Community* also.

5.2 Add the Device to EMS

- EMS server and Vigor3300 can communicate with each other by SNMP. Besides, EMS client can manage the Vigor3300 via EMS Server easily.
For example, EMS S Server IP is 172.16.2.135, device IP (for Vigor3300) is 172.16.2.153 and EMS Client IP is 172.16.3.166, the connecting diagram can be shown as the following:



- Please start EMS Client and connect to EMS Server first. *Choose Network -> New Device* on Main Menu to add the device to EMS Server for management. Please type device IP, **Read community** and **Write community** as you set on the device. Finally, set the **Device Type** to Vigor 3300 Router. Finally, set Login User and Login Password.



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Connect to CPE Device

The normal procedure for connecting to CPE Device is listed as below:

- Set the CPE Device
- Add the Device to EMS

6.1 Set the CPE Device

- Suppose LAN IP or WAN IP of CPE device has been setup successfully.
- Login the device by web.
- Set community for the CPE device.

In *System Management->Management Setup*, select *Allow management from the Internet* and filled the *Get Community* for read and *Set Community* for write.

- Set Management Access Control.

In *System Management->Management Setup->Management Access Control*, select *Enable*

remote firmware upgrade (FTP).

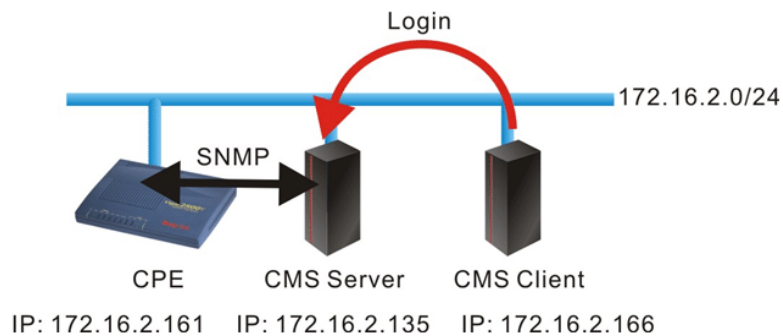
Management Setup

Management Access Control <input checked="" type="checkbox"/> Enable remote firmware upgrade(FTP) <input checked="" type="checkbox"/> Allow management from the Internet <input checked="" type="checkbox"/> Disable PING from the Internet		Management Port Setup <input type="radio"/> Default Ports (Telnet: 23, HTTP: 80, HTTPS: 443, FTP: 21) <input checked="" type="radio"/> User Define Ports Telnet Port: <input type="text" value="23"/> HTTP Port: <input type="text" value="80"/> HTTPS Port: <input type="text" value="443"/> FTP Port: <input type="text" value="21"/>													
Access List <table border="1"> <thead> <tr> <th>List</th> <th>IP</th> <th>Subnet Mask</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>2</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> <tr> <td>3</td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>		List	IP	Subnet Mask	1	<input type="text"/>	<input type="text"/>	2	<input type="text"/>	<input type="text"/>	3	<input type="text"/>	<input type="text"/>	SNMP Setup <input checked="" type="checkbox"/> Enable SNMP Agent Get Community: <input type="text" value="public"/> Set Community: <input type="text" value="private"/> Manager Host IP: <input type="text"/>	
List	IP	Subnet Mask													
1	<input type="text"/>	<input type="text"/>													
2	<input type="text"/>	<input type="text"/>													
3	<input type="text"/>	<input type="text"/>													

6.2 Add the Device to EMS

- EMS server and CPE device can communicate with each other by SNMP. Besides, EMS client can manage the CPE device via EMS Server easily.

For example, EMS S Server IP is 172.16.2.135, device IP (for CPE device) is 172.16.2.161 and EMS Client IP is 172.16.3.166, the connecting diagram can be shown as the following:



- Please start EMS Client and connect to EMS Server first. *Choose Network -> New Device* on Main Menu to add the device to EMS Server for management. Please type device IP, **Read community** and **Write community** as you set on the device. Finally, set the **Device Type** to CPE. Finally, set Login Password.