



**FortiVoice™ Enterprise and PMS Systems
Interoperability via Control Interface
Technical Note**

December 2017

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December 12, 2017

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Introduction

FortiVoice Enterprise (FVE) natively supports the Mitel PMS protocol. All Property Management Systems (PMS) that support Mitel protocols can work with FVE seamlessly. However, in the hospitality industry, there are many more PMS systems using their own proprietary implementation and do not support the Mitel protocol. This is where Control's Lodging Link protocol comes into play. In essence, it works as a middle-ware that translates the commands between a third-party PMS and guest service systems such as a PBX. It streamlines integration systems for the hospitality industry and enables seamless communications between a hotel's property management system and its guest service systems. FVE supports the Control Lodging Link and therefore can work with some popular PMS systems in the hospitality industry.

Summary of steps for FortiVoice/PMS connection

Step 1

In the FVE GUI, go to Hotel Management > Setting > PMS and configure the following:

- Protocol
- Mode (For Control protocol – Server or Client)
- Server (For Control protocol, FortiVoice in Client mode)
- Port number – this defaults to Port 15374

Step 2

In the FVE GUI, go to Hotel Management > Setting > PMS and configure the following:

- Trusted Host IP address(es) and subnet mask(s) for both FortiVoice and Control protocol.

Step 3

For connection of the RS-232 IPocket adapter to the Enterprise system, configure the following in the IPocket GUI interface:

- Mode (Server or Client)
- IP Address
- Subnet Mask
- Default Gateway
- Local Port number
- Remote IP address
- Remote Port number

Step 4

Connect the Property Management System through either an RS-232 IPocket adapter or via a native connection (No IPocket adapter) to the FortiVoice system.

Supported PMS systems

The supported systems list is subject to change. Refer to the Control website for the latest information:

<http://www.comtrol.com/solutions/hospitality/property-management-systems-partners>

The following vendors and their PMS systems support the Control Lodging Link interface:

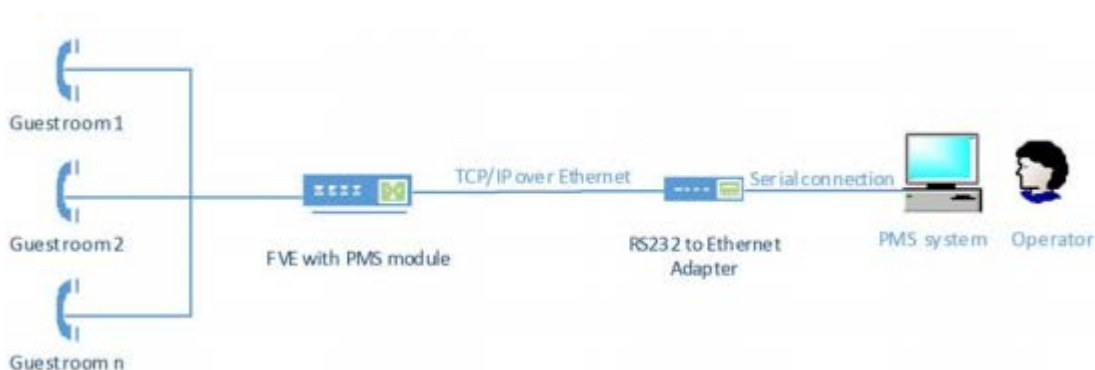
Vendors	PMS Systems	Reference
AgilysysInc	Visual One System & V1Net	http://www.agilysys.com/home
AutoClerk Inc.	AutoClerk, MyHMS	http://www.autoclerk.com/
BookingCenter	MyPMS, BookingCenter PMS version 5.03 and above	http://www.bookingcenter.com/
Cenium A/S	Cenium Hotel/Cenium Property Management (PMS)	http://www.cenium.com/
CIMSO (Pty) Ltd	INNkeeper	http://www.cimso.com/
Club Intrawest	RCC (Resort Computer Corporation)	http://www.clubintrawest.com/
Consolidated Resorts	PMS Cornerstone	http://www.crmlv.com/
Enablez	ResortSuite	http://www.resortsuite.com/
Execu/Tech Systems, Inc.	HOTEL Premium	http://www.execu-tech.com/
Guestline Ltd.	FrontClerk 2000 (HSS-Link 1.2)	http://www.hssltd.com/
Hyatt Vacation Ownership	n/a	http://www.hyattvacationclub.com/
INN-Client Server System (ICSS)	ATRIUM	http://www.atriumpms.com/
iHotelligence	iHotelligence Hotel Management Software	http://www.ihotelligence.com/
INNfinity	INNfinity&INNfinity Lite & V1 & V2	http://www.innfinity.com/
innRoad, Inc	innRoadSoftware-as-a- Service (Saas)	http://www.innroad.com/
IQWARE	IQWARE_PMS	http://www.iqwareinc.com/
LogiSoft Computer Systems	Positive Hotel Management Systems	http://www.logisoft-cy.com/
MAiS Information Systems	Fidelity	http://www.fidelity-mais.com/

NorthWind Software Corp.	Maestro PMS	http://www.north88.com/
Multi-Systems, Inc/ REMco Software Inc	MSI CloudPM	http://www.msisolutions.com/
Novexsys, LLC	NOVEXSYS PMS	http://www.novexsys.com/
ONETECH SOLUTION, LLC	ONETECH.PMS	http://www.onetechsolution.com/
PAR Springer-Miller Systems, Inc.	ATRIO	http://www.atrio.com/
RezStream	RezStream Professional	http://www.rezstream.com/
RSI International	RoomKey, RoomKey Express	http://www.welcometorsi.com/
Sabre Hospitality Solutions	SynXis Property Manager	http://www.sabrehospitalitysolutions/
Skyware Systems	Skyware PMX	http://www.skywaresystems.com/
Systems Products International	SPI Win	http://www.spiinc.com/
Wyndham Vacation Ownership	Focus	http://www.wyndhamvo.com/

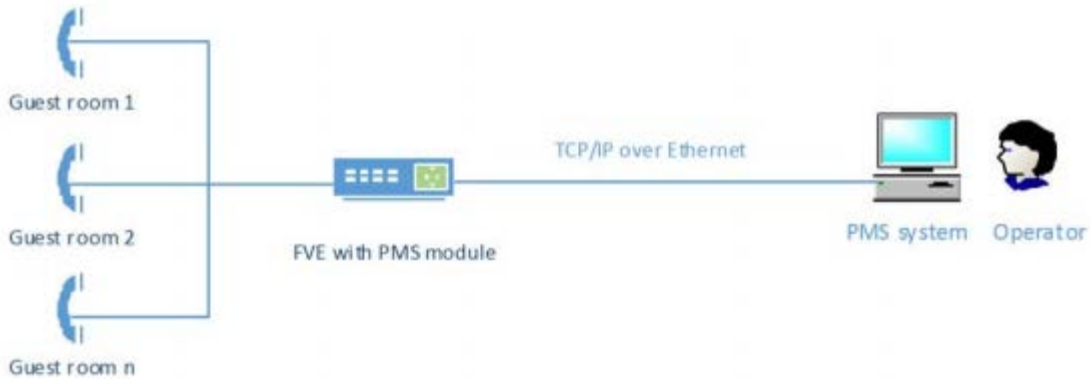
Connecting FVE and the PMS system

Most modern PMS systems natively support TCP/IP protocol and can connect to FVE without an interface through routers and/or switches, as long as TCP/IP connectivity is available. For some legacy PMS systems that only support serial port connection, a serial to TCP/IP adapter is required. The iPocket232 RS232 to Ethernet converter has been tested in the lab and will be used as our example. This converter is available on Amazon (<http://www.amazon.com/iPocket232-RS232-to-Ethernet-Converter/dp/BOOK309TKY>).

Here are the network diagrams of the PMS to FVE connection, with and without a Serial Port adapter:



Connection into the FVE PMS module via an RS232 to Ethernet Serial adaptor.



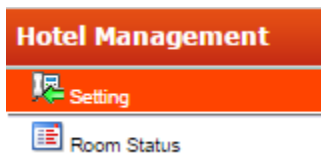
Direct (Native) IP connection from PMS System to FVE PMS module

Items to consider when making a network connection into FVE PMS module

The Control connection method into the Enterprise system has the following Network considerations that must be observed:

- FVE PMS module is configured either as a Server or a Client.
- The IP address of the Server, if the FVE PMS module is configured as a Client.
- The IP Address of the Client is compatible with the subnet of the FVE PMS module, if the FVE module is configured as a Server.
- Port numbers of the Server/Client or Client/Server must match (Default port number is 15374). The Port number can be other than 15374, just as long as both Server and Client ports match and there is no conflict with another port number.
- Trusted Host IP settings.

Server/Client, IP and Port settings in FVE GUI for FVE/Control PMS connection (Examples)



1. In the FVE GUI, this is the place where the PMS Protocol, Server/Client Mode, Server IP Address (Control Protocol/Client Mode) and Port number are set.

The screenshot shows the PMS configuration interface. At the top, there are tabs for 'PMS', 'Option', and 'Mini Bar Code'. The 'PMS Settings' section is expanded, showing:

- Enabled:
- Protocol: Fortivoice (dropdown menu)
- Port: 15374 (text input)

 Below this is the 'Network Settings' section, which includes:

- Trusted hosts: 192.168.1.0 / 24 (with expand/collapse icons)

 At the bottom, there are 'Apply' and 'Cancel' buttons.

2. Example of FVE PMS setting for the **FVE** Protocol. Server/Client Mode and/or Server IP Address are not set in the FVE GUI for the FVE Protocol.
3. For the **FVE PMS protocol** on the FVE system, FVE defaults as the Server.

The screenshot shows the PMS configuration interface for the Control protocol. At the top, there are tabs for 'PMS', 'Option', and 'Mini Bar Code'. The 'PMS Settings' section is expanded, showing:

- Enabled:
- Protocol: Control (dropdown menu)
- Mode: Server Client
- Server: 192.168.1.5 (text input)
- Port: 15374 (text input)
- Call billing:

 Below this is the 'Network Settings' section, which includes:

- Trusted hosts: 192.168.1.0 / 24 (with expand/collapse icons)

 At the bottom, there are 'Apply' and 'Cancel' buttons.

4. Example of the FVE PMS Control configuration as a Client. This is only for the Control Client configuration. The Server IP address of either the RS232 Adapter or the PMS host needs to be specified.

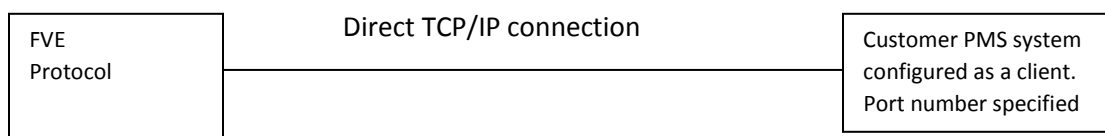
The screenshot shows the configuration interface for the PMS (Property Management System) settings. It is divided into two main sections: 'PMS Settings' and 'Network Settings'. In the 'PMS Settings' section, the 'Enabled' checkbox is checked. The 'Protocol' dropdown menu is set to 'Control'. Under 'Mode', the 'Server' radio button is selected, while the 'Client' radio button is unselected. The 'Port' field contains the value '15374'. The 'Call billing' checkbox is also checked. In the 'Network Settings' section, the 'Trusted hosts' field is configured with the IP address '192.168.1.0' and a subnet mask of '24'. There are plus and minus icons to the right of the trusted hosts field.

5. Example of the FVE PMS Control configuration as a Server. For the Server configuration, the Server IP address is that of the main FVE LAN (commonly 192.168.1.99). The Client IP address of either an RS232 Ethernet adapter or the PMS system connected directly must be compatible with the subnet settings of the FVE PMS server.

Direct (native) connection of PMS into the FVE Hotel Management System

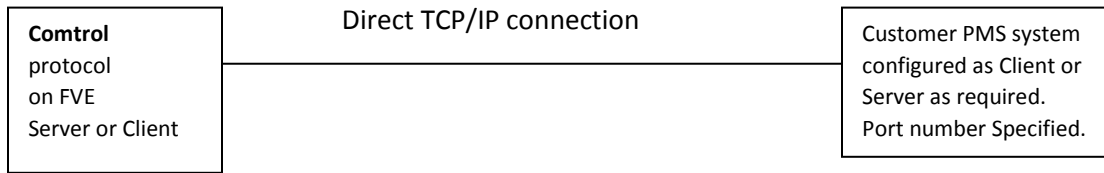
FVE Protocol

1. For the FVE Protocol in the Property Management System (PMS tab), the default setting for the PBX is Server mode. Therefore the hotel management software used to communicate with the FVE PMS must be a Client. The Port number is also set on this client.



Control Protocol

2. For the FVE Control Protocol in the Property Management System (PMS tab), the setting for the PBX can either be Server mode or Client. Therefore the hotel management software used to communicate with the FVE PMS must be configured as the opposite – A Client compatible with a Server, or a Server compatible with a Client. The port number is also set on the customer hotel management Software.



Configuring an RS232 adapter as a serial port connection into the FVE PMS system (iPocket232 as an example)

The use of the adapter is to convert the RS232 serial protocols to TCP/IP protocol over the Ethernet. By using TCP/IP, the PMS and the FVE PBX are not limited into one physical location. They can even connect through WAN as long as the TCP/IP connectivity is available. In case the server/PC hosting PMS software only has USB, you can use a USB to serial adapter to connect the RS232 to Ethernet adapter.

To set up the adapter

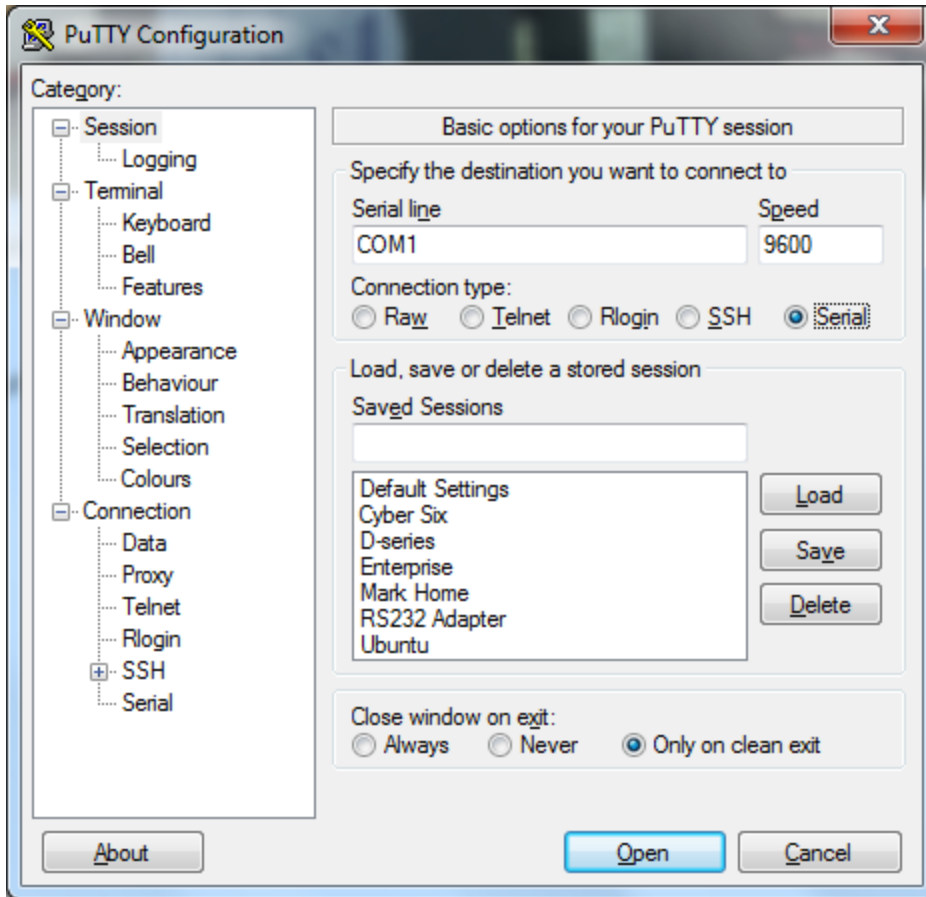
1. Connect the serial port to the COM port of the PC/Server hosting the PMS application. If a USB adapter is used, connect the USB port to the PC/Server instead.
2. Connect an Ethernet cable with RJ45 connector to the Ethernet port of the iPocket adapter.
3. Plug in the power supply of the iPocket RS232 adapter.



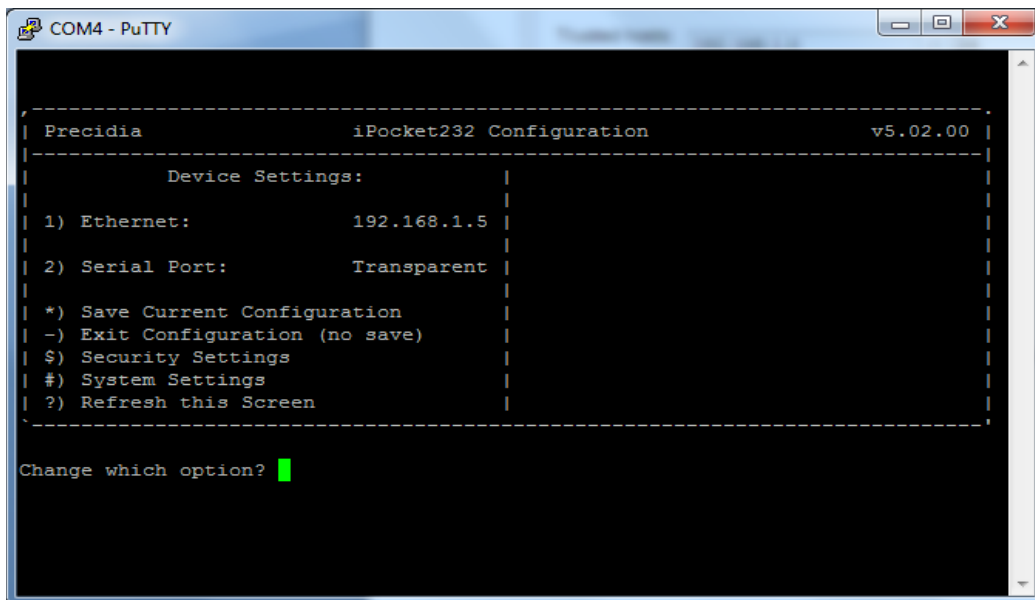
Diagram of iPocket Serial Port/Ethernet adapter

4. Example of the PuTTY serial connection into the RS232 Adapter:

Note the Baud rate: 9600 and the Connection type: Serial

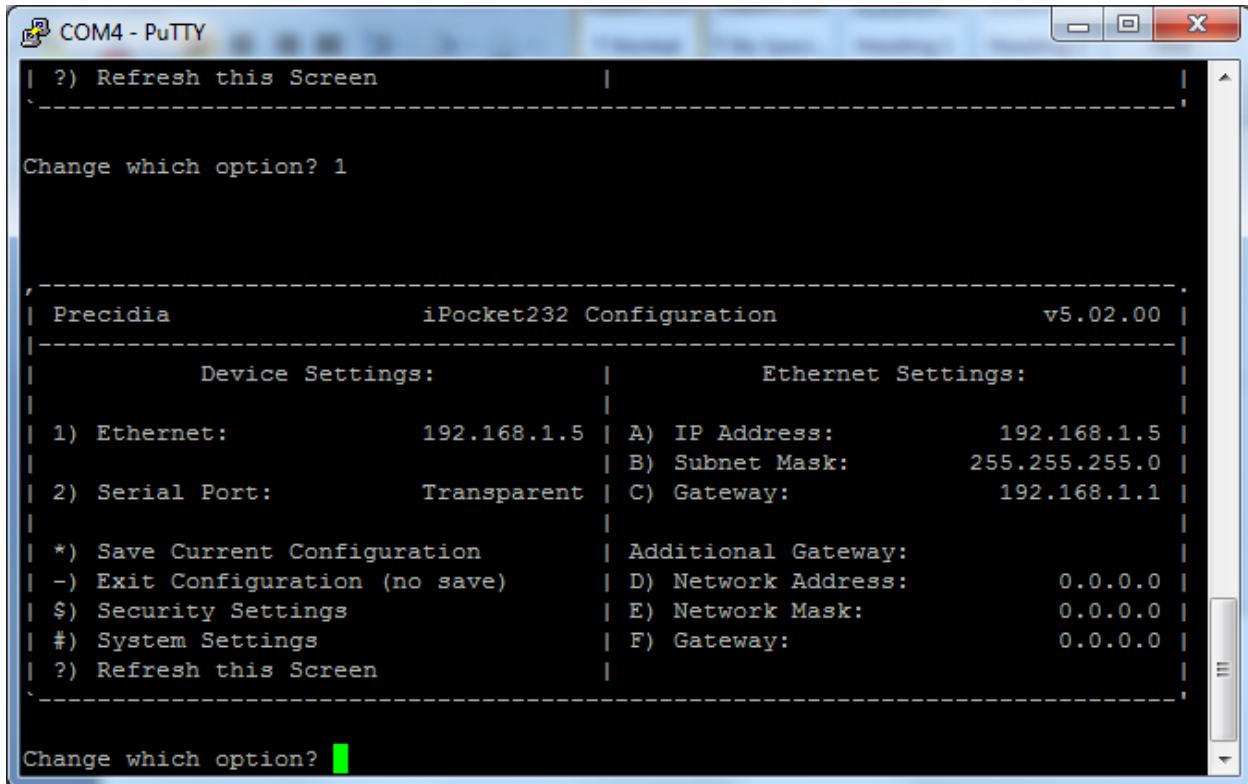


5. With PuTTY running and COM1 connected to the RS232 adapter, on the adapter itself, press and hold the push pin where it is labelled “CONFIG” to obtain the following PuTTY screen:



FVE PMS Protocol settings for RS232 adapter

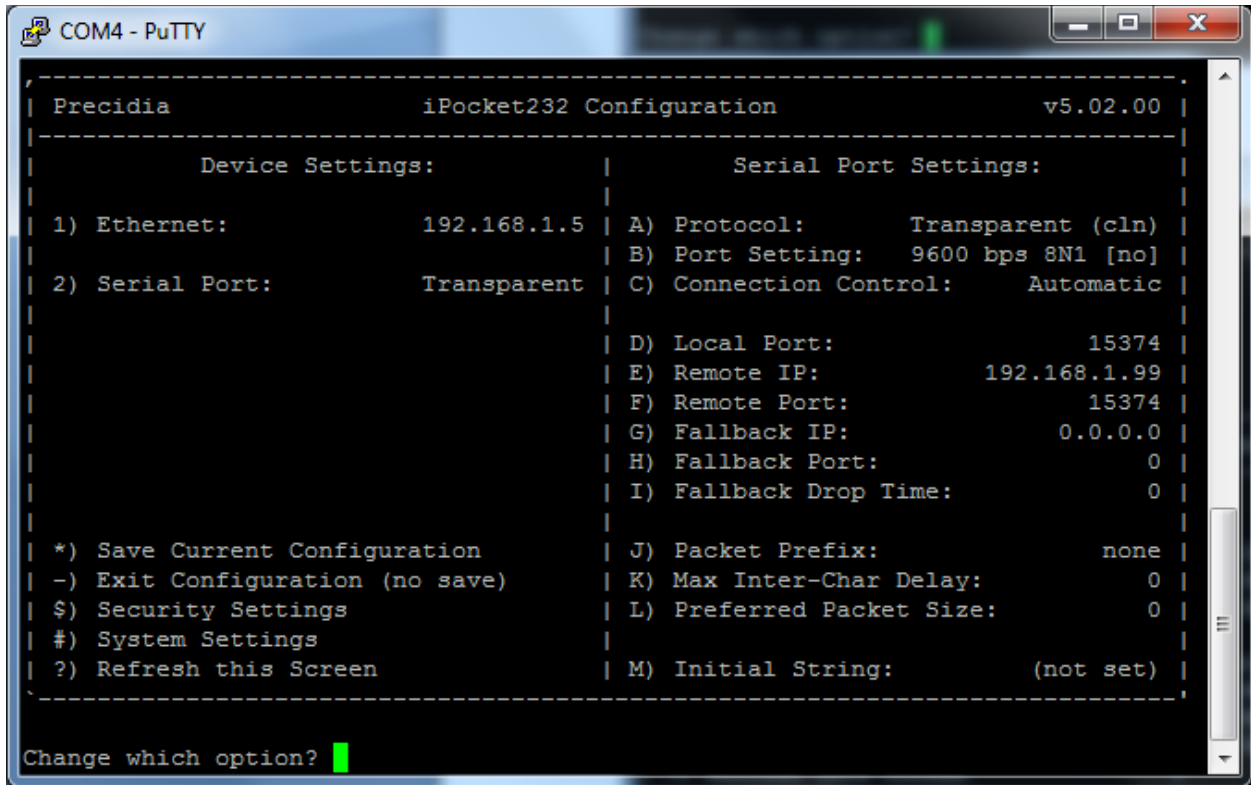
1. With the display of the PuTTY screen, enter 1 on the PuTTY host keyboard to be able to configure IP settings:



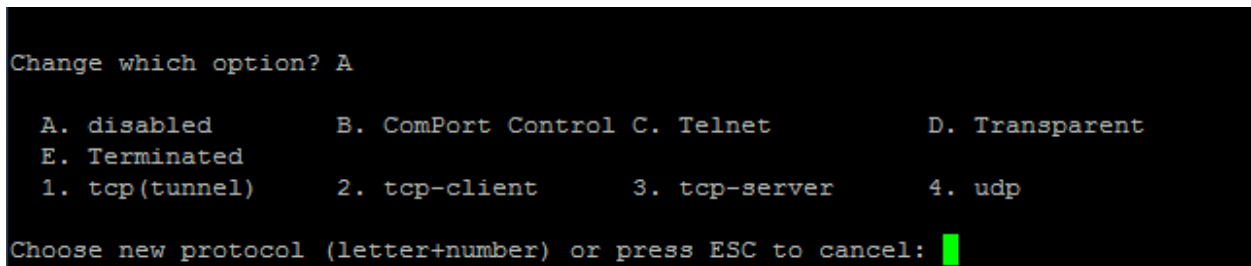
```
COM4 - PuTTY
| ?) Refresh this Screen
|-----|
Change which option? 1

|-----|
| Precidia          iPocket232 Configuration          v5.02.00 |
|-----|
| Device Settings: | Ethernet Settings: |
| 1) Ethernet:     | A) IP Address:     |
|                   |                   | 192.168.1.5 |
|                   | B) Subnet Mask:    | 255.255.255.0 |
| 2) Serial Port:  | C) Gateway:        | 192.168.1.1 |
|                   |                   |
| *) Save Current Configuration | Additional Gateway: |
| -) Exit Configuration (no save) | D) Network Address: | 0.0.0.0 |
| $) Security Settings | E) Network Mask:   | 0.0.0.0 |
| #) System Settings | F) Gateway:        | 0.0.0.0 |
| ?) Refresh this Screen |                   |
|-----|
Change which option? █
```

2. For the example above,
 - o specify the IP address of the RS232 adapter Ethernet connection.
 - o specify the Subnet Mask of the RS232 adapter Ethernet connection.
 - o specify the default gateway of the RS232 adapter Ethernet connection.
3. Enter 2 to display the screen below:



4. Enter A to set the RS232 adapter protocol (Client or Server/Transparent)

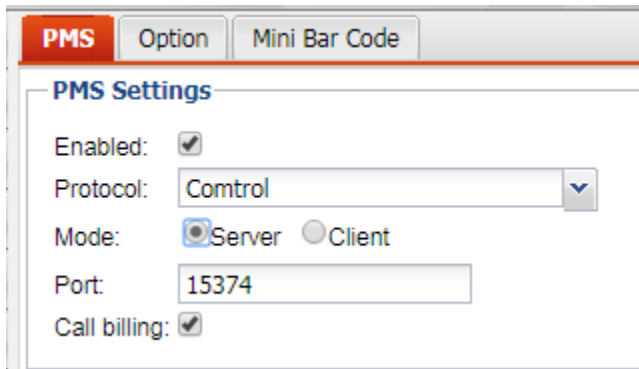


5. At this point, enter D2 to make the unit transparent and a TCP client.
6. Press * to save changes.
7. Press - to discard changes.

Control PMS Protocol settings for RS232 adapter

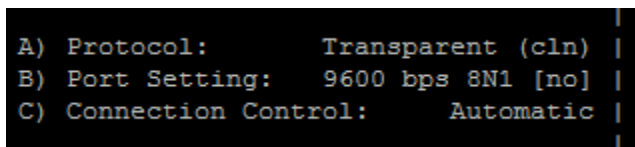
1. The IP address, Subnet Mask and Default Gateway of the RS232 adapter Ethernet section is set as shown previously under the heading: FVE Protocol settings for RS232 adapter.

FVE is Server, RS232 adapter is Client

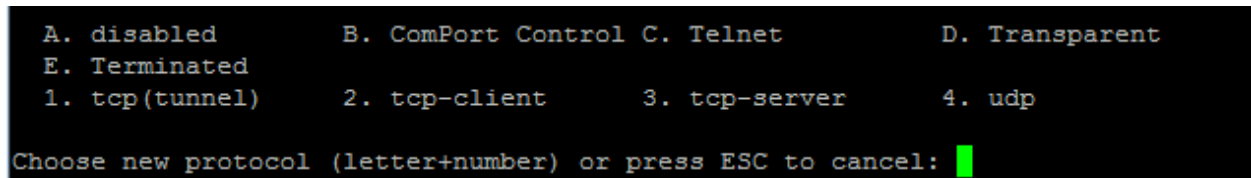


FVE PMS settings for Control Server

- In the RS232 adapter PuTTY settings, enter 2, then A.



- Enter D2 and press Enter to make the RS232 adapter transparent and a Client.

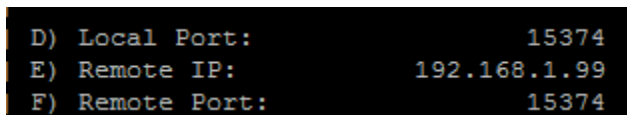


- To set Port numbers and Remote IP addresses, enter

D to set Local Port to 15374.

E to set Remote IP Address to the IP address of the FVE system (FVE defaults to 192.168.1.99).

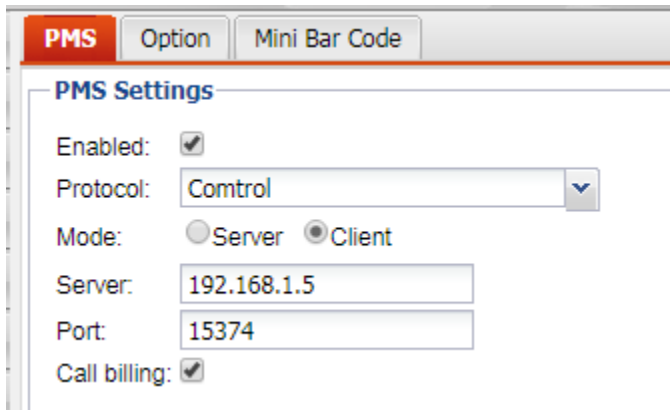
F to set Remote Port to 15374.



- Press * to save changes.

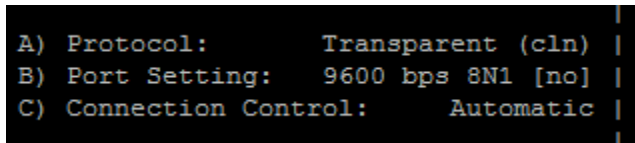
6. Press - to discard changes.

FVE is Client, RS232 adapter is Server

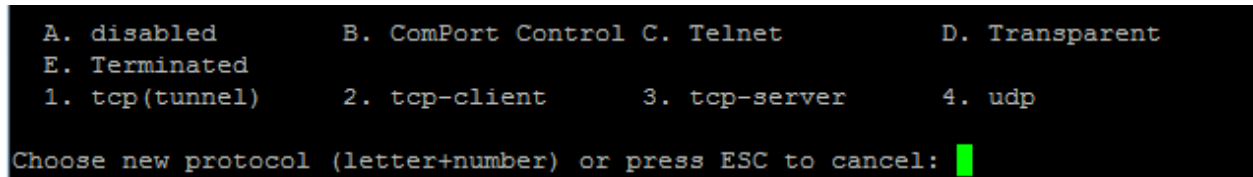


FVE PMS settings for Control Client

1. In the RS232 adapter PuTTY settings, enter 2, then A.



2. Enter D3 and press Enter to make the RS232 adapter transparent and a Server.



3. To set Port numbers and Remote IP addresses, enter

D to set Local Port to 15374.

E to set Remote IP Address to the IP address of the FVE system (FVE defaults to 192.168.1.99).

F to set Remote Port to 15374.

```
D) Local Port:          15374
E) Remote IP:          192.168.1.99
F) Remote Port:        15374
```

4. Press * to save changes.
5. Press - to discard changes.

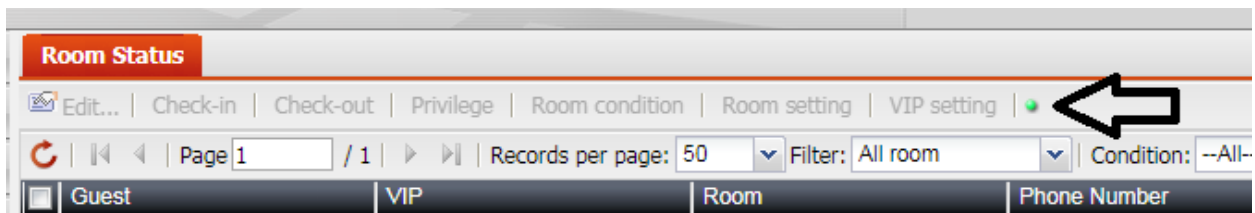
Confirming RS232 adapter connection into FVE PMS

1. On the RS232 adapter, the Status indicator is solidly lit and not flashing.



Status Indicator Solid

2. On the FVE GUI, go to Hotel Management > Room Status, the connection indicator (beside VIP setting) is solid Green.



Note: Connection of the RS232 adapter Ethernet into the FVE PMS is not instantaneous. Allow a few minutes for a complete connection.

