



MVTS II

Quick Start Guide

MVTS II

VoIP traffic management system

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1 INTRODUCTION

This document explains how to set up MVTs II for initial use and how to begin using the System. The content of this document presumes that MVTs II has been properly installed and deployed on the user network.

2 ACCESSING TMNGR THROUGH WEB-SERVER

To establish a link with the web server, enter the IP address or DNS name of the web server on the address line of the web browser you are using. For example <https://192.168.1.101>. Note that the working protocol must be HTTPS (Hyper Text Transmission Protocol, Secure.) The system will respond with a logon dialog similar to that shown in the figure below.



Fig. 1 Logon dialog box

Upon first log onto the web-interface use the “admin” login name and password. You will be displayed with the main window of the web-interface.

Note: *It is advisable to change the first-time logon credentials immediately after you have accessed the newly deployed system (Customers/Vendors > Administration > Web authentication). The login and password check in the system is case-sensitive.*

3 WHAT YOU SEE ON THE SCREEN

The left part of the web-interface shows the tree of object categories. The right pane is a working area which displays the information on the currently selected object in tabular representation. The screenshots below (Fig. 2 and Fig. 3) illustrate the web interface elements and the terms used in this manual to refer to the objects that the TMngr software deals with.

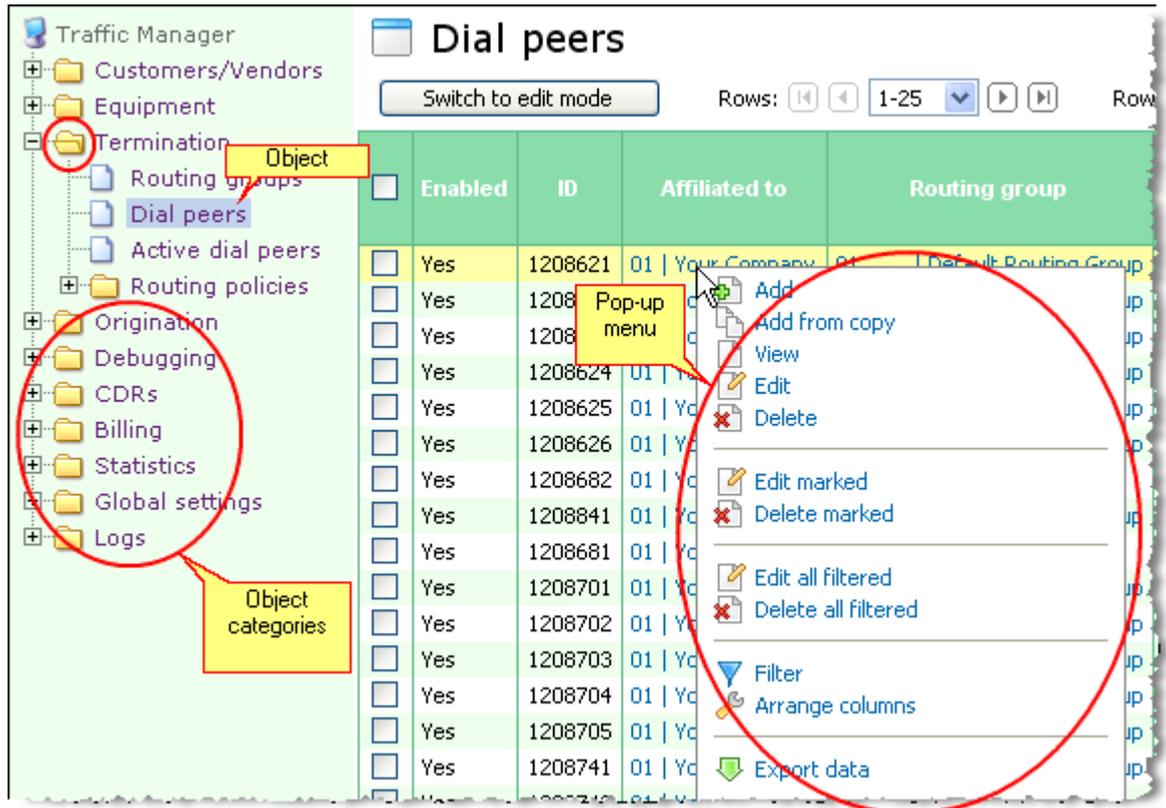


Fig. 2 TMngr objects and GUI elements

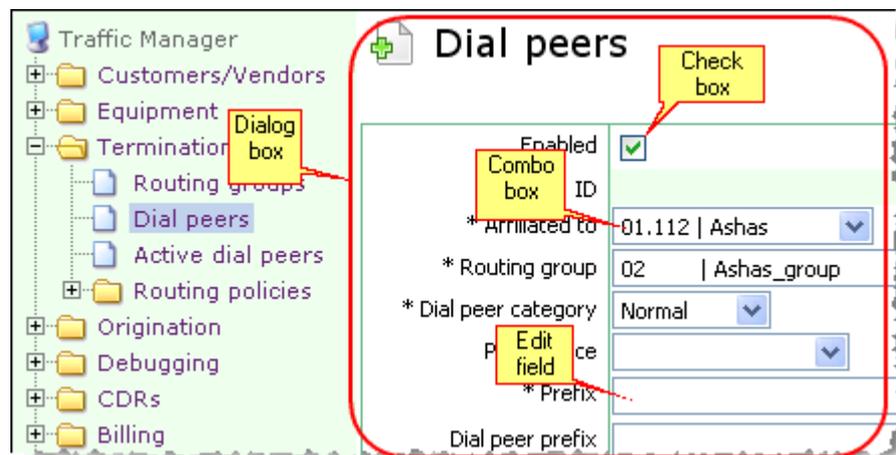


Fig. 3 GUI elements

Use the **Rows on page** combo box located above and below the tables to control the number of rows displayed in them (10, 25, 50 or 100). Use the buttons / to view the next (or previous) portion of data. Use the buttons / to go to the last or first view.

4 POP-UP MENU

Left-click a record of interest in the table you are working with to invoke a pop-up menu that offers record manipulation options. The contents of pop-up menus may differ from table to table and depend on your user permissions. The figure below presents an example of the pop-up menu that you invoke to work with the records of a table.



Fig. 4 Pop-up menu

Typically a pop-up menu contains the following commands:

Add – this command enables you to add new records to the table;

View – opens a record viewing window. To return to the tabular view click the **OK** button;

Edit – opens a record editing dialog box. When you are through with editing the record parameters, click **OK** to confirm or **Cancel** to discard the changes;

Delete – use this command to delete the record you selected;

Edit marked – you can use this command to perform group editing of table records. Mark the records of interest and select **Edit marked**. You will be displayed with a dialog box similar to the one displayed by the **Edit** command but with additional check boxes in front each parameter record. Select the appropriate check box, enter the required changes and click **OK**. The changes will be applied to all the marked records.

Delete marked – this command allows you to delete marked records. To mark the records, select the respective check boxes in the leftmost column of the table. To mark all the records in the list simply select the checkbox in the header of the table.

Edit all filtered - you can use this command to edit all the records at a time. In case the table data has been filtered, the changes will be applied only to the records matching the filtering criteria. Invoke the popup menu and select **Edit marked**. You will be displayed with a dialog box similar to the one displayed by the **Edit** command but with additional check boxes next to each parameter record. Select the appropriate check box, enter the required changes and click **OK**. The changes will be applied to all the records in the table or to all filtered records.

Delete all filtered – this command allows you to delete all the records form the table you are working with. In case the table data has been filtered, only the records matching the filtering criteria will be removed.

Filter – invokes a filter dialog box;

Arrange columns – enables you to arrange the table columns according to your preference;

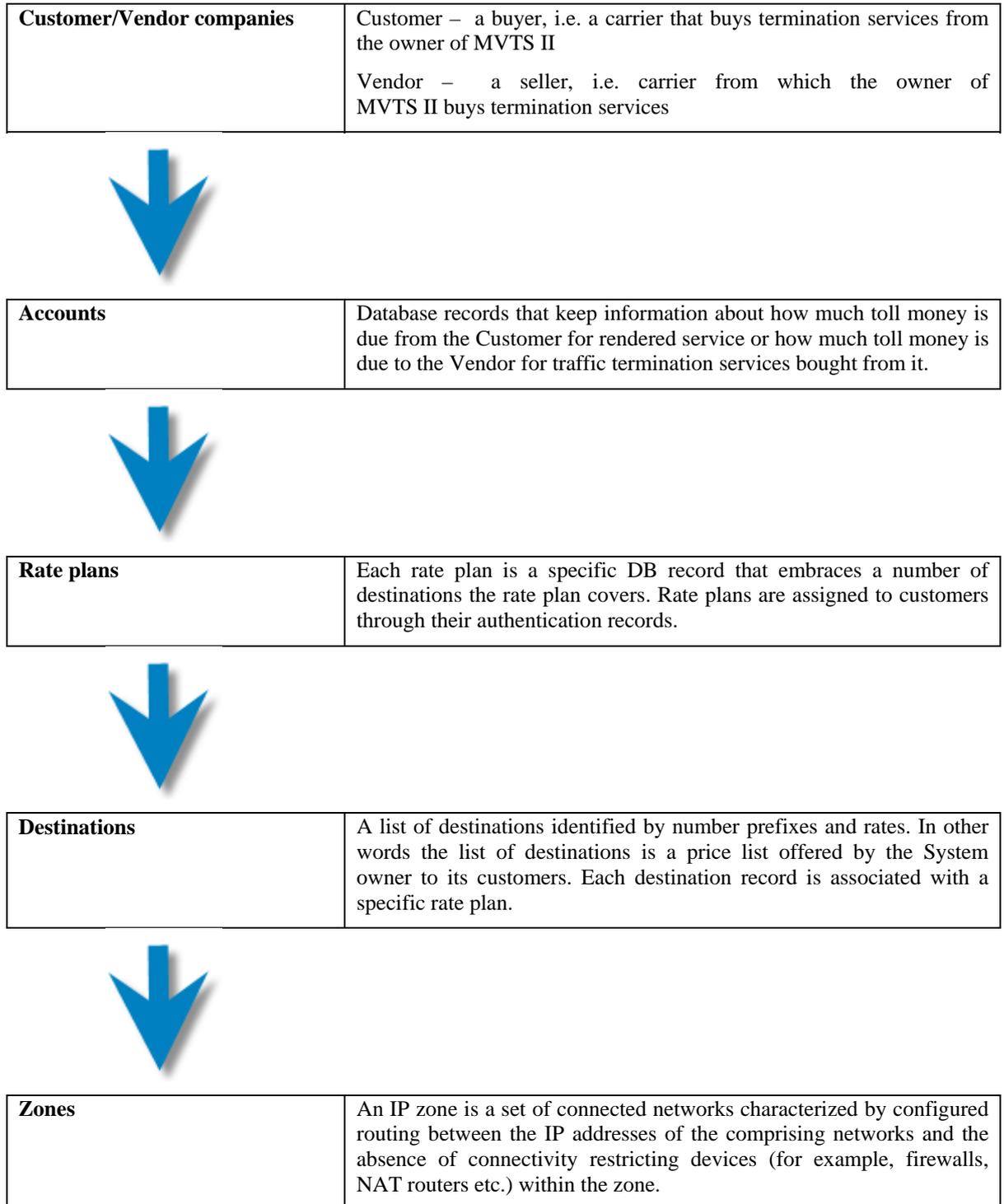
Export data – use this command to unload data from the tables into CSV-files.

Related tables – a list of tables associated with the table you are working with. The table opened by this command contains information related only to the item selected in the source table. For example, left-click a

record of interest in the table **System users** and select **Role assignments** on the pop-up menu. The system will display the table **Role assignments** with information about the roles assigned to the selected user only.

5 BASIC TERMS AND CONFIGURATION SEQUENCE

This section discusses the basic terms required to understand the operating principle of MVTS II and leads you through the main configuration steps that will allow you to start making calls through the System.





Codec groups	Groups of codecs supported by origination and termination equipment.
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Equipment	Collective name for network devices (VoIP gateways, softswitches, session border controllers or user endpoints) that can originate and/or terminate VoIP traffic
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Routing groups	<p>A routing group is a collection of dial peers (see below) grouped by some criterion, for example, high QoS or ASR values.</p> <p>In our configuration example we will skip this step and use the “Default routing group” already configured in the DB.</p>
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Dial peers	In terms of MVTS II a dial peer is a complex notion denoting a termination option characterized by destination prefixes and per minute rates. In other words the list of dial peers is a price list offered to the System owner by its termination partners, i.e. vendors.
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Customers' authentication data	<p>DB records that contain data by which the System identifies Customers that originate calls. A customer record also provide information about:</p> <ul style="list-style-type: none">▪ rate plan assigned to the customers, i.e. about the prices they will be charged▪ routing groups, i.e. about dial peer groups that will be used for termination of calls arriving from the customer.
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The figure below shows interrelations of the terms described above.

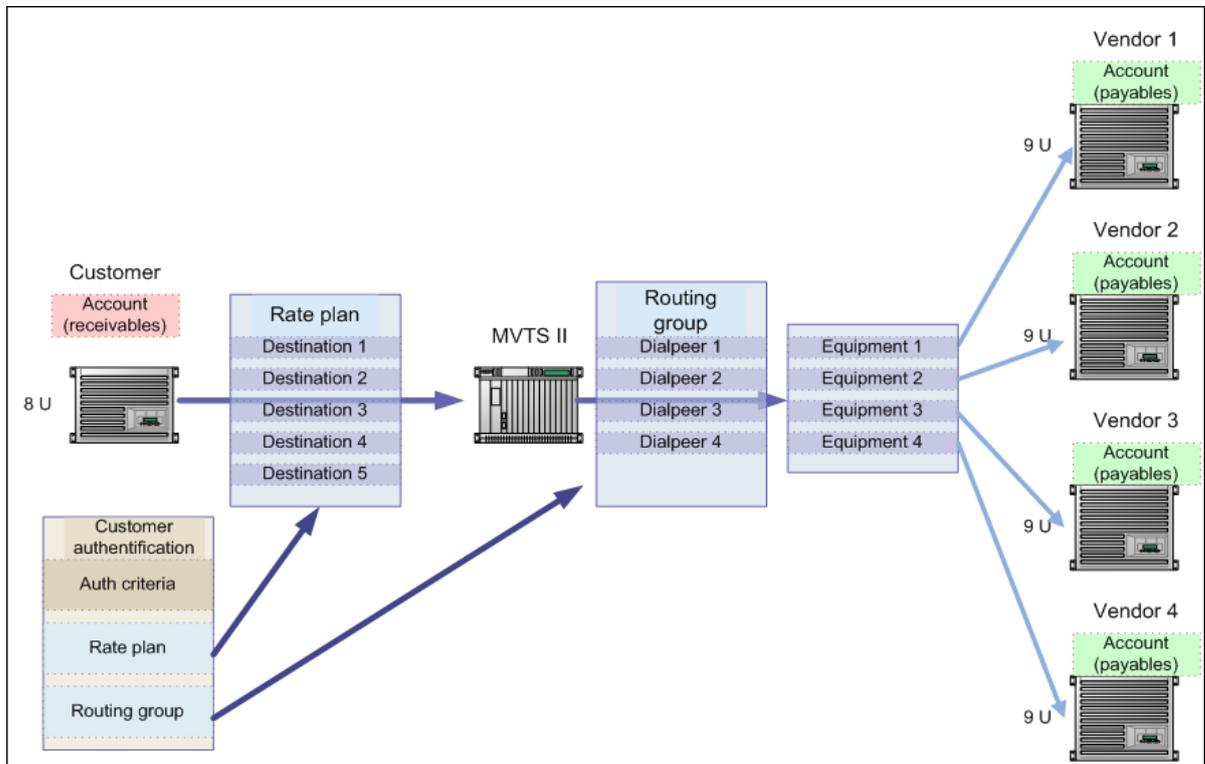


Fig. 5 Basic interconnection diagram

6 CASE STUDY

To start configuring the System, consider the following example that will be used throughout the manual.

Suppose that you have 6 partner carriers. Let us call them:

- UsTel (USA Telecom)
- RuTel (Russia Telecom)
- ItaTel (Italia Telecom)
- InTel (India Telecom)
- BraTel (Brazil Telecom)
- ChiTel (China Telecom)

Each of these companies offer you termination services to their native countries, i.e. act as *Vendors*. And you, in your turn, as a reseller offer them termination services to the rest of the countries. For example, the US provider will be able to place calls to Russia, Italy, India, Brazil and China; the Russian provider will call to the USA, Italy, India, Brazil and China and so on. In this case they will act as *Customers*, each of them having its own rate plan.

Now let us analyze what we have:

- six vendors offering termination services to six countries, i.e. six* dial peers
- six customers and six rate plans each of them covering 5 destinations (see the figure below).

Note: To simplify our example we will consider that the vendors offer one and the same rate for the whole country without any differentiation between different country areas and cities

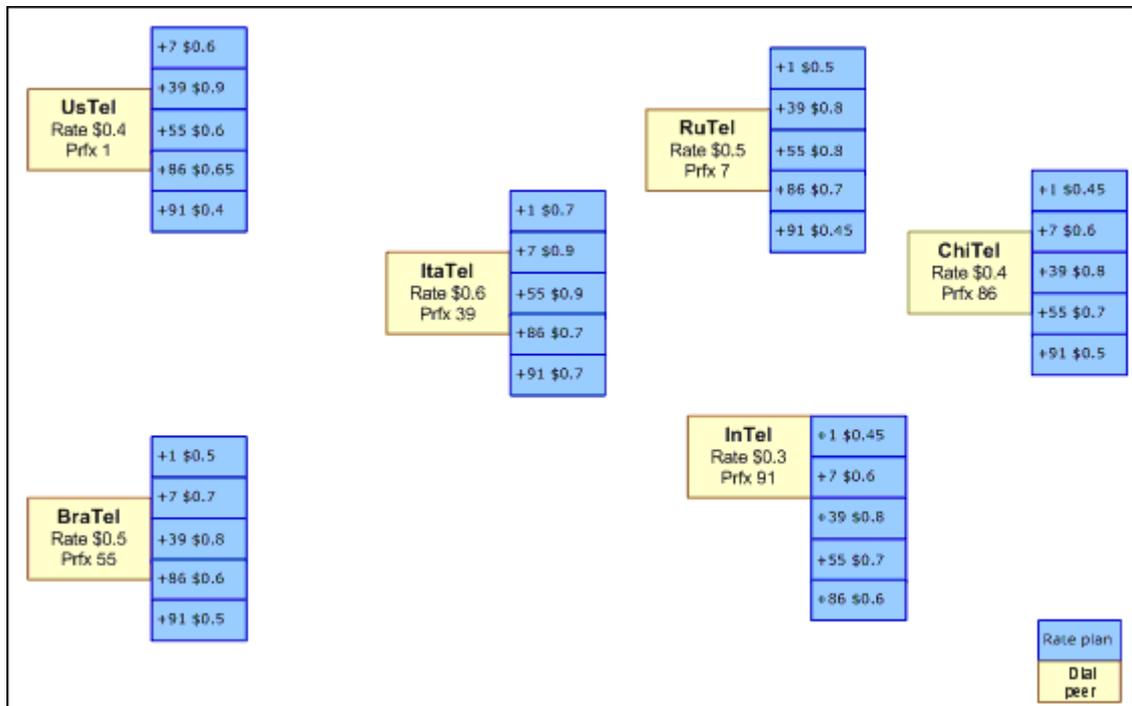


Fig. 6 Case study

But prior to configuring the dial peers and rate plans we will have to add some other essential data to the DB in the order described in section 5.

7 CONFIGURING CUSTOMER/VENDOR RECORDS

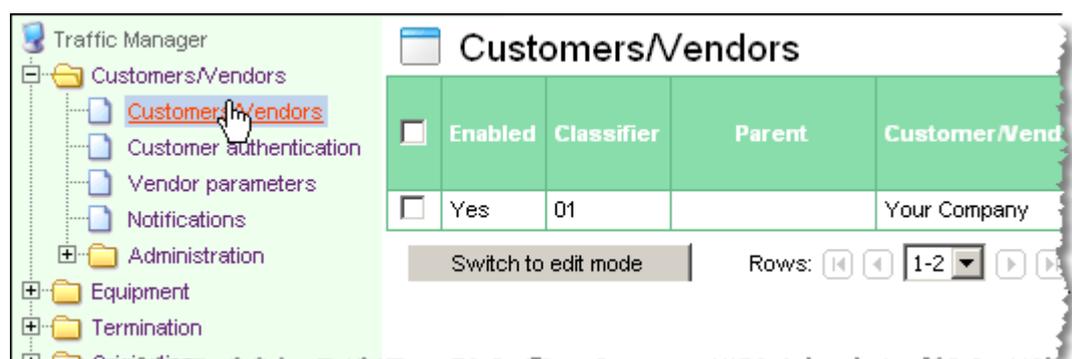


Fig. 7 Table of Customers/Vendors

Open the table **Customer/Vendors** by clicking the required item in the same- name object category.

Add a record for UsTel. For this, left-click the mouse over the table to invoke the pop-up menu and select **Add**.

Fig. 8 Adding a new customer/vendor record

In the displayed dialog box define the following parameters:

Enabled – select the checkbox to make the record active;

***Customer/Vendor** – enter the name of the origination/termination partner (the “*” next to the field name means that the field is mandatory);

Description – in this field you can enter any descriptive information about the record you are adding, however it is not necessary;

Vendor/Customer – select these check boxes to indicate that the carrier acts both as *Vendor* and *Customer*.

Allow proxy for originated calls – this check box is selected by default. It enables the media-proxy function for calls originated by this carrier. Leave the check box selected or uncheck it to disable the media-proxy function.

Click **OK** to add the record to the table.

Repeat the above steps and add five more records for the rest of the carriers.

Note: *The configuration examples given in this manual provide information only about the most essential parameters. For information about the intent of the rest of parameters refer to MVTs II Operator’s Manual.*

8 CONFIGURING CUSTOMER/VENDOR SETTLEMENT ACCOUNTS

Open the object category **Billing** and click **Accounts**. This table serves to keep an account of the amounts in payables and receivables, i.e. Vendor and Customer accounts. According to our case all the carriers act both as customers and vendors. For this reason, we should create two accounts for each vendor, a vendor account and a customer account.

Add a vendor account for UsTel. For this, invoke the pop-up menu and select **Add**. The appearing add-account dialog will look similar to the one shown in the figure below.

Fig. 9 Adding a settlement account record

In the displayed dialog box define the following parameters:

- ***Account type** – enter the name of the account
- ***Customer/Vendor** – select UsTel from the drop-down list of this combo box
- ***Account type** – select the ‘vendor account’ option
- ***Currency** – let us make US dollars a common currency for all the carriers
- ***Active till** – the account expiration date will be automatically set to January 1, 2099. If necessary, you can change this date.
- Min. balance** – the default value of this parameter is “0”. It means that once the customer balance reaches “0”, the account will be blocked. If necessary, you can change this value.

Click **OK** to add the record to the table.

Repeat the procedure and create a record for the UsTel customer account.

Then create account records for the rest of the carriers. As a result we should have 6 vendor and 6 customer accounts.

8.1 DEPOSITING FUNDS TO THE ACCOUNTS

Our next step is to deposit funds to the accounts we created. For this, switch to the table **Payments**.

Let us add \$1000 to each customer account. To add a payment entry, invoke the pop-up menu and select **Add**.

In the invoked dialog box:

- select the payer’s name from the drop-down list of the combo box ***Customer**
- select the Customer’s account name in the combo box ***Account**
- enter the payment amount in the edit field ***Amount**
- use the drop-down list of currency codes to select the payment currency in the combo box ***Currency**.
- set the payment date using the suite of combo boxes titled ***Payment date**
- type the name and number of the payment document in the edit field ***Document**

When the form filling is completed, click  to add the record to the table.

Fig. 10 Adding a payment entry

Repeat these steps to deposit funds to the rest of the 6 customer accounts.

9 CONFIGURING CUSTOMER RATE PLANS

Open the object category **Origination** and click **Rate plans**.

Add a rate plan for UsTel. For this, invoke the pop-up menu and select **Add**. The appearing add-account dialog will look similar to the one shown in the figure below.

Fig. 11 Adding a rate plan

In the invoked dialog define the following parameters:

***Affiliated to** – select the option “Your company”

***Rate plan** – enter the name of the new rate plan

***Status** – select the “In effect option” from the drop-down list of this combo box

***Currency** - select “USD”.

When done, click the OK button to add the record to the table.

Add five more rate plans for the rest of the customers.

10 CONFIGURING DESTINATIONS

Your next step is to configure the destination each of the 6 rate plans cover. In our case it is 5 destinations per rate plan. So in total you are to create 30 destination records.

Switch to the table of destinations found in the category of objects **Origination**.

Configure a record for the destination “China” for the UsTel rate plan. For this invoke the pop-up menu and select **Add**

Enabled	<input checked="" type="checkbox"/>
ID	
* Rate plan	111 UsTel Rate Plan
* Prefix	86
Destination prefix description	China
Reject calls to this destination	<input type="checkbox"/>
Customer's currency	
Rate	0.3
Rate markups	
Billing scheme	
Retain billing scheme	<input type="checkbox"/>
Capacity	

Fig. 12 Adding a destination record

In the invoked dialog define the Rate plan, the destination prefix (for China it is “86”) and the per minute rate. When done, click **OK**.

Repeat these steps to configure the rest of the destination records.

11 CONFIGURING IP ZONES

At this step we will create an IP zone record. This is required to be able to assign IP zones when configuring equipment records.

Switch to the table **Zones** found in the category of objects **Equipment** and invoke the add-record dialog.

Fig. 13 Adding an IP zone record

Type in the name of the IP zone from the configuration of Traffic Switch and click **OK** to submit the records. For more detailed information about IP zones refer to *MVTS II Operator's Manual*.

12 CONFIGURING CODEC GROUPS

Codec groups are the lists of codecs supported by origination and termination devices. The aim of codec groups is to facilitate the routing process and minimize unnecessary codec conversion.

For simplicity, let us consider that equipment of all your partners support the same codecs, say G.723, G.729 and G.729. Open the table of codec groups and create a new codec group record. Let us call it "Test group".

Fig. 14 Adding a codec group

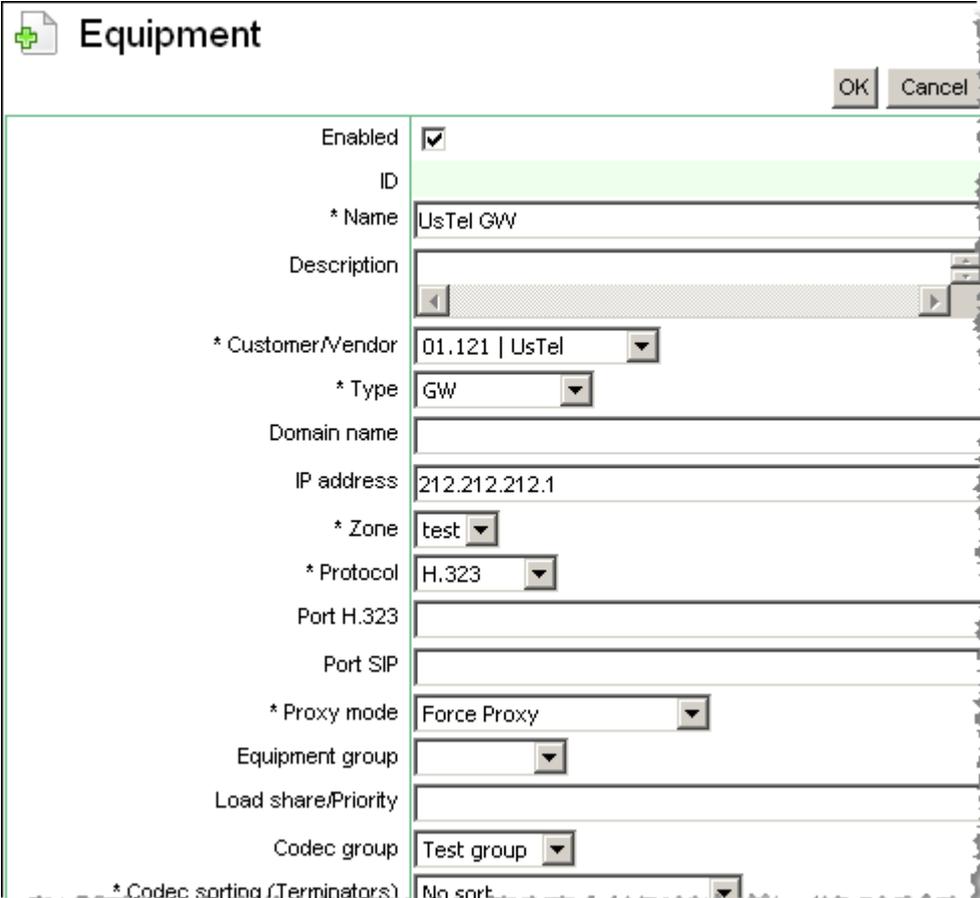
Your next step is to define codecs that make up the group. Switch to the object **Codec group setup** found in the same object category. Invoke the add-record dialog box and configure the G.723 codec (see the figure below).

Fig. 15 Configuring codecs

When done, click **OK** to submit the record. Repeat the procedure for the rest of the codecs.

13 CONFIGURING EQUIPMENT

At this step we will configure equipment records. According to our example we have six gateways that act both as originators and terminators. Switch to the object **Equipment** found in the same-name object category and invoke the add-record dialog box.



The screenshot shows a dialog box titled "Equipment" with a green plus icon on the left and "OK" and "Cancel" buttons on the right. The dialog contains the following fields:

Enabled	<input checked="" type="checkbox"/>
ID	
* Name	UsTel GW
Description	
* Customer/Vendor	01.121 UsTel
* Type	GW
Domain name	
IP address	212.212.212.1
* Zone	test
* Protocol	H.323
Port H.323	
Port SIP	
* Proxy mode	Force Proxy
Equipment group	
Load share/Priority	
Codec group	Test group
* Codec sorting (Terminators)	No sort

Fig. 16 Adding a gateway record

In the displayed dialog box define the following essential parameters for the UsTel gateway:

Enabled – select this check box to make the record active

Name – enter the name of the device

Customer/Vendor - define the device owner

IP address – define the IP address the device

Zone – select the name of the IP zone that we have already configured

Protocol - select the protocol supported by the device

Media proxy mode - select the “Force proxy” option

Codec group - select the “Test group” option

Click **OK** to add the record to the table. Repeat the procedure and configure the remaining five gateways.

14 CONFIGURING DIAL PEERS

Now it is time to configure the dial peers, which as we said altogether make up the list of termination services offered by your partners.

Switch to the object **Dial peers** found in the category of objects **Termination** and invoke the add-record dialog box.

Enabled	<input checked="" type="checkbox"/>
ID	
* Affiliated to	01.121 UsTel
* Routing group	01 Default Routing Group
* Dial peer category	Normal
Precedence	
* Prefix	1
Dial peer prefix description	USA
Vendor's currency	
* Rate (vendor's currency)	0.4
Rate (domestic currency)	
Billing scheme	
Retain billing scheme	<input type="checkbox"/>
Equipment	UsTel GW (01.121 UsTel)
Equipment group	
* Payables account	UsTel vendor account

Payables account is blocked

Fig. 17 Adding a gateway record

In the displayed dialog box define the following essential parameters for the UsTel dial peer:

Enabled – select this check box to make the record active

Affiliated to – select “UsTel” from the drop-down list of this combo box

Routing group – select “Default Routing Group”

Prefix – enter the US country code

***Rate (vendor’s currency)** - enter the per minute rate

Equipment – select “UsTel GW” from the drop-down list of this combo box

***Payables account** – select “UsTel vendor account”

When done, click **OK** to submit the record.

Repeat the procedure to add the rest 5 dial peer records.

15 CONFIGURING CUSTOMER AUTHENTICATION DATA

Finally we have come to the last step where we will configure customer authentication parameters. Switch to the object **Customer authentication** (the category of objects **Customers/Vendors**). Invoke the add-record dialog box and create an authentication record for the UsTel gateway.

The System can authenticate Customers by:

- login
- password
- IP address and network mask
- technical prefix
- source or destination numbers
- or any combination of the above criteria.

Assume that the gateway will be authenticated by the IP address and network mask. We will also need to define the following parameters:

Enabled – select this check box to make the record active

Affiliated to – select “UsTel” from the drop-down list of this combo box

Equipment – select the equipment record that we have configure for the UsTel gateway

Rate plan – select the rate plan configured for UsTel

Chargeable account - select the “UsTel” customer account

When done, click **OK** to submit the record.

Congratulations! The System is ready to start handling traffic, but before it we will make a couple of tests to make sure that the System is properly configured.

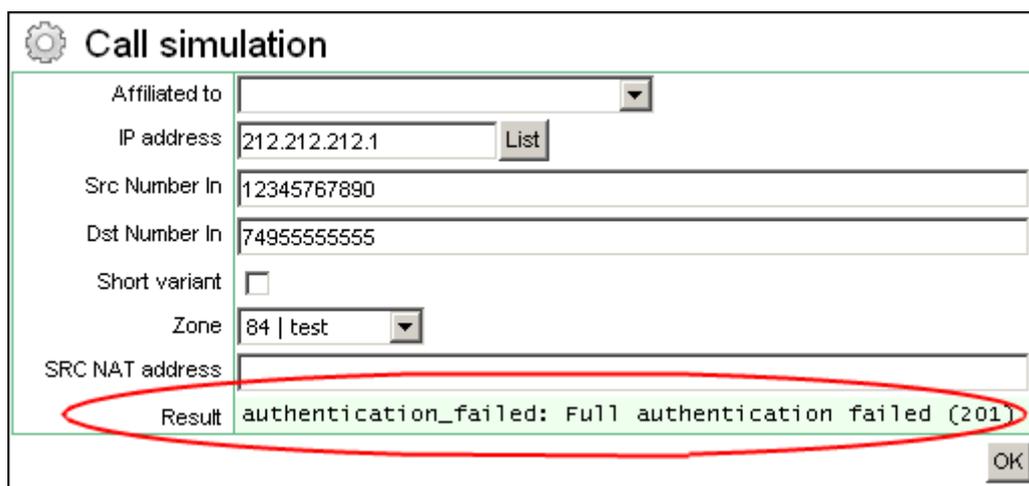
16 CALL SIMULATION

Switch over to the object **Call simulation** found in the category of objects **Debugging**. This object allows the operator to make test calls and check the System for correctness of configuration.

In the displayed dialog box define:

- the IP address of the origination device;
- source and destination phone numbers;
- the IP zone.

When done, click **OK** to initiate call simulation.



The screenshot shows a dialog box titled "Call simulation" with a gear icon. It contains several input fields and a "List" button. The fields are: "Affiliated to" (dropdown), "IP address" (text box with "212.212.212.1" and a "List" button), "Src Number In" (text box with "12345767890"), "Dst Number In" (text box with "74955555555"), "Short variant" (checkbox), "Zone" (dropdown with "84 | test"), and "SRC NAT address" (text box). At the bottom, there is a "Result" field containing the text "authentication_failed: Full authentication failed (201)", which is circled in red. An "OK" button is located at the bottom right.

Fig. 18 Call simulation results

You will be displayed with the results of the simulation procedure in the lower part of the dialog box. In case of errors found (see the figure above), check the respective configuration settings. Repeat the procedure for the rest of the gateways.