



Work People ICM

Prepaid and Postpaid ICM Switch

development by

MOR /Crossing Net

User : admin

Pass : xxxxx

www.switch.crossingnet.net

User & Configuration Manual V.1.1

■ INSTALLATION

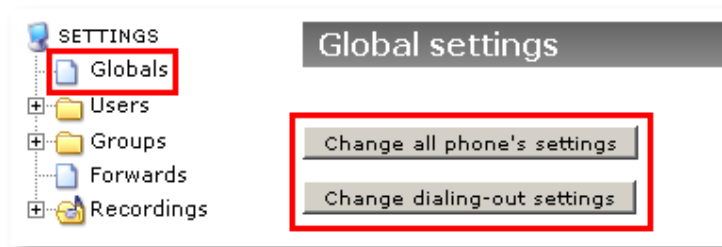
ICM depends on:

- Apache(2) web server
- PHP (4/5)
- MySQL 4/5 (5 if we want to use MySQL Replication)
- Ruby on Rails
- Asterisk
- ImageMagick
- Lame

The detailed installation script is provided for Debian Testing distribution. If you want to install ICM on other distribution - you will have to follow the steps in this script and only adapt it to your distribution, because some steps may vary.

Database initialization

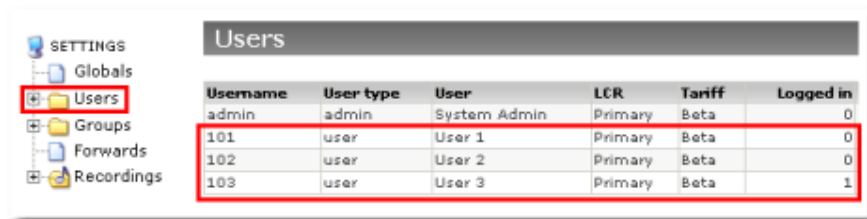
Just after installation it's necessary to fill the database with data. (This will be automated in future versions of ICM). Please press each button once as seen on picture:



Soft-phone Configuration

You can configure simple VoIP hard-phone if you wish.

There are 3 already preconfigured users and each of them have 1 device:



Username	User type	User	LCR	Tariff	Logged in
admin	admin	System Admin	Primary	Beta	0
101	user	User 1	Primary	Beta	0
102	user	User 2	Primary	Beta	0
103	user	User 3	Primary	Beta	1

■ Provider configuration

If we want to dial out outside world, we need to have Provider (Trunk) for it. Here we will show demonstration with IAX2 Provider.

Attention! You will need to be sure your provider is configured properly to accept calls from your server. Here we are owners of demo Provider and in such way it's very easy to debug if something goes wrong.

And we enter Provider's data into ICM:

BILLING

- Providers**
- LCR
- Tariffs
- Directions

Providers

Provider	Technology	Channel	Login	Password	Server IP	Tariff	
Zeta	IAX2		mtest	mtest	213.197.165.79	Alfa	Edit Destroy

[New Provider](#)

Edit Provider: Zeta

Name
Zeta

Technology
IAX2

Channel

Login
mtest

Password

Server IP
Provider's IP

Tariff
Alfa

[Edit](#)

Entering Rates

In order to do that, we need to configure two tariffs for this destination for Provider and for User.

Provider uses Tariff - 'Alfa' and user - 'Beta'. Let's update them to let us dial-out. We will enter Rate for Provider first. Select his Tariff:

BILLING

- Providers
- LCR
- Tariffs**
- Directions

Tariffs

Name	Purpose	Rates
Alfa	provider	0 View
Beta	user	0 View

Press on 'New rate'

Rates for tariff: Alfa

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Direction	Prefix	Subcode
New rate		

Press on letter 'L' (for Lithuania - for example)

Add new rate to tariff: Alfa

A B C D E F G H I J K **L** M N O P Q R S T U V W X Y Z

Direction	Prefix	Subcode	Rate
Lao People's Democratic Republic	011856	LAO	
Latvia	011371	LVA	

Scroll down and find necessary Prefix for Destination. Enter some rate and press button at the top 'Add Rates' to add this rate.

Lithuania	011370681	LTU	
Lithuania	011370685	LTU	1,45
Lithuania	011370689	LTU	

This rate will be selfcost for the call to that Destination from that Provider.

Do the same for user's tariff 'Beta' but with slightly higher value. This will be User's cost to that Destination.


Dialing-out

Now we can try to dial-out through our soft-phone:

If everything is OK, call will reach it's destination.

You should see something like that on Asterisk's CLI if all debug options are enabled:

Now let's go to STATISTICS - Users and select 'Calls' for user 101:



First name	Last name	Username	Calls	Time	Avg. call time	Missed & not processed
System	Admin	admin	0			0 Calls
User	1	101	1	00:00:26	00:00:26	0 Calls
User	2	102	0			0 Calls
User	3	103	0			0 Calls
Total:			1	00:00:26	00:00:26	0

And you should see your call:

Date	Called from	Called to	Duration	Hangup Cause	Price
2006-11-11 22:58:40	"101" <101>	01137068547770	00:00:10	ANSWERED	0.333333
2006-11-11 22:58:05	"101" <101>	01137068547770		NO ANSWER	0.0
2006-11-11 22:57:16	"101" <101>	01137068547770		NO ANSWER	0.0
Total			00:00:10		0.333333

That means billing works correctly.

■ BILLING

For the introduction to the billing process in ICM let's review following items:

- Concepts
- Links - how concepts depend on each other
- Logic - how these concepts work together

Concepts

There are main parts from which billing in ICM consists. The most important are:

- Providers
- LCR
- Directions
- Destinations
- Rates
- Tariffs

Providers - In old PSTN world they are called *Trunks*. These are your routes to outside world (out of your VoIP network). Providers can be several types: Zap, SIP, IAX2, H323. Type determines which technology is used to connect to Provider.

LCR - Least Cost Route. It's an entity which describes how calls should go through several *Providers* and in which order. Order can be determined by calls route's price, quality or manual priority.

Directions - In other words - Countries. Could also be satellite networks. They just describe direction to which the call is routed.

Destinations - these are ICM concrete concepts of the calls course. Let's say we are dialing number 0037068547771. From this number ICM knows, that *Direction* is Lithuania, but *Destination* is Mobile network Bite. Destinations are determined by **Prefix**. Each destination has unique *Prefix*. The *Prefix* from the example is 00370685.

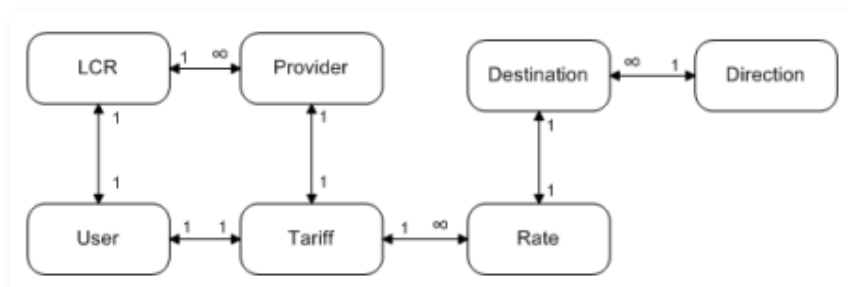
Rates - these are the prices for *Destinations*. They have many properties from which the way they are calculated depends.

Tariffs - they are groups of Rates. Sometimes they are called *Price Lists*.

Links

There are links between main concepts of ICM:

- LCR can have many Providers
- Direction can have many Destinations
- Tariff can have many Rates
- Provider can have 1 Tariff
- User can have 1 Tariff
- User can have 1 LCR
- Destination can have 1 Rate for special Tariff



Logic

In order to successfully use ICM for dialing out and billing some rules must be met. Best way to show this is by example.

- User A dials number trying to reach User B.
- System takes User's A **Tariff** and **LCR**.
- Then takes all **Providers** which belongs to that **LCR**.
- For every **Provider** system takes their **Tariff**.
- From every **Tariff** based on **Prefix - Rate** is taken.
- If **LCR's** type is 'Price' then all **Providers** are sorted that first **Provider** would have lowest **Rate** to that **Destination**.
- Then system tries to dial number using first **Provider**.
- If call successful - system does billing and finishes session.
- If call unsuccessful - system tries to dial next **Provider** in a row.
- It repeats until call is successful or no **Providers** left.

■ PROVIDERS

Here you will find out how to add and configure Providers and LCR.

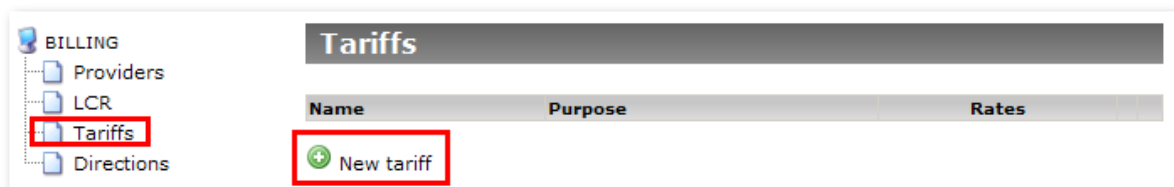
At the very start you have to create Providers (sometimes they are called Trunks) or one Provider through which you will dial out to PSTN or other VoIP networks.

Every Provider will charge you some money for calling through him (rate could be 0 also) to various destinations. And to every destination rate is different. Following this logic we need to have Tariff (or Price List) for Provider. This Tariff will tell our billing what price we pay to some destination if we are using this Provider's services. In other words - that would be our Selfcost.

Creating Tariffs

If we have several Providers (and usually we do) we need to create one Tariff for each Provider.

In this example we will demonstrate setup with 2 Providers. So first we need to create Tariffs for these Providers:



Make sure you have selected *Purpose - Provider* when creating Tariffs for Providers:

After creating first one - ProvTariff1, let's create another one - ProvTariff2:

Tariffs

Tariff was successfully created

Name	Purpose	Rates		
ProvTariff1	provider	0 (View)		

[+ New tariff](#)

Ok, now we have Tariffs for our Providers:

Name	Purpose
ProvTariff1	provider
ProvTariff2	provider

Creating Providers

When we have Tariffs, we need to create Providers which will use these Tariffs. Let's go to BILLING - Providers and press on New Provider:

BILLING

- Providers**
- LCR
- Tariffs
- Directions

Providers

Provider	Technology
+ New Provider	

Then we will create (as an example) first Provider which will use Zap technology. In this case we only need to fill fields Name and Channel. Channel must be the same as configured in Asterisk. This you should do manually in zapata.conf file. Make sure you selected ProvTariff1 as tariff for this Provider:

New Provider

Name:

Technology: Zap SIP IAX2 H323

Channel:

Login:

Password:

Server IP:

Tariff:

Second Provider will use SIP technology. That means we will use SIP channel to connect to remote Trunk or Provider. Make notice of Tariffs we are assigning to these Providers. In this case we do not need to fill field Channel instead we need to fill Login, Password and Server IP (it can be hostname also):

New Provider

Name
Provider2

Technology
 Zap SIP IAX2 H323

Channel

Login
testuser

Password
somepassword

Server IP
203.192.126.124

Tariff
ProvTariff2

Create

Ok, we have our Providers:

Providers

Provider was successfully created.

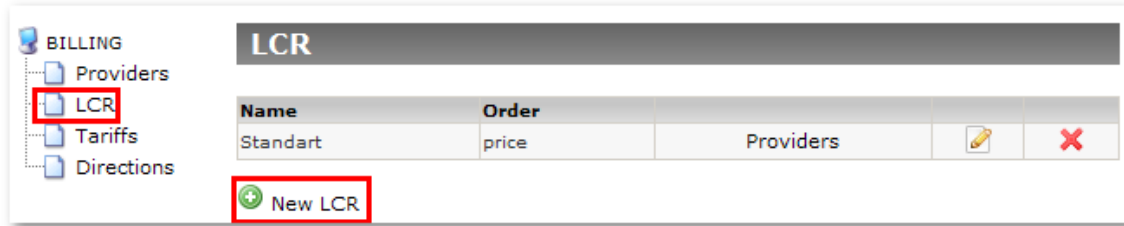
Provider	Technology	Channel	Login	Password	Server IP	Tariff		
Provider1	Zap	g1				ProvTariff1		
Provider2	SIP		testuser	somepassword	203.192.126.124	ProvTariff2		

Creating LCR

Now we need to create a rule how to use these Providers. The rule is called LCR - Least Cost Routing. It's simplified, because under it you can get Least Cost Routing, Best Quality Routing or Manual Routing. Currently only Least Cost Routing is implemented. With all these options you get Failover - if one Provider is not capable of delivering a call - system will try to use remaining Providers.

So let's create simple LCR with these 2 Providers we created earlier.

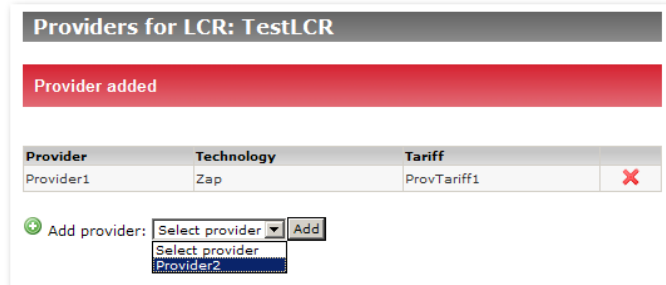
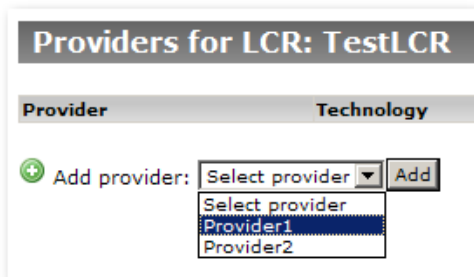
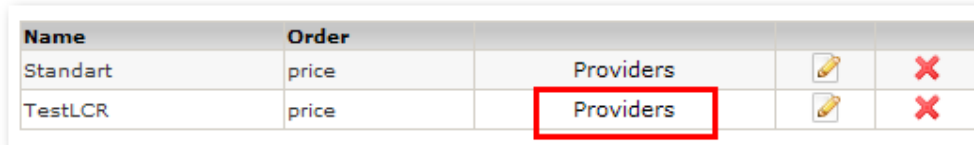
We go to BILLING - LCR and New LCR. Here we also see Standart LCR created by installation script. We can use it but in order to show full process we will create new LCR:



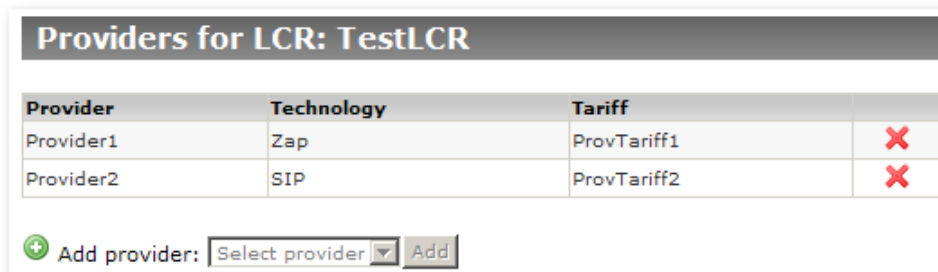
So we put some name for it and as Order we choose Price. That means our Providers will be selected by cheapest price to that destination which we will call. So this is LCR.



Now when we have created our LCR, let's add our Providers to it:



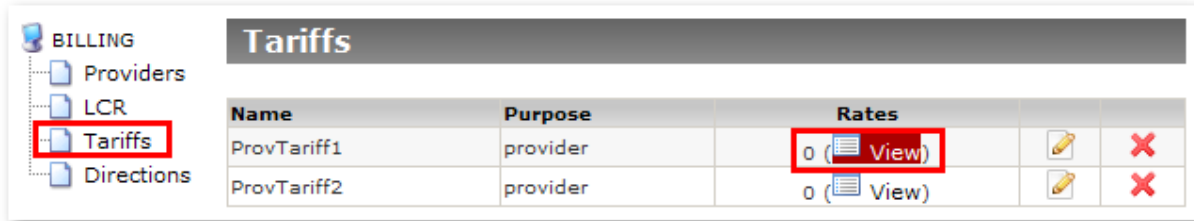
There's no difference in which order we will add Providers to LCR:



Filling Tariffs

Now we need to add Rates to Provider's Tariffs. Rates are necessary to allow us call some destinations. We will add only few rates for demonstration purposes. Let's say we want to call Lithuania proper network. Provider 1 gives us \$0.08 rate per minute and Provider 2 - \$0.078. Lets enter them into ICM:

Select BILLING - Tariffs - View for ProvTariff1:



Name	Purpose	Rates		
ProvTariff1	provider	0 (View)		
ProvTariff2	provider	0 (View)		

Select "L" for Lithuania and New rate:




Direction	Prefix	Subcode
New rate		

Put the rate in appropriate place and press Add rates at the bottom to finalize addition:



Liechtenstein	0042379	LIE	
Lithuania	00370	LTU	0.08
Lithuania	003705	LTU	

Now you should see this one rate added:



Direction	Prefix	Subcode		
Lithuania	00370	FIX	Details	

Do all the same for ProvTariff2.

User configuration

Now we have to configure user to allow him to call through our system.

First we need to have Tariff for user with rates for same Destinations as all Providers have. So let's create Tariff for him. Just make sure in Tariffs set Purpose to User:



New Tariff

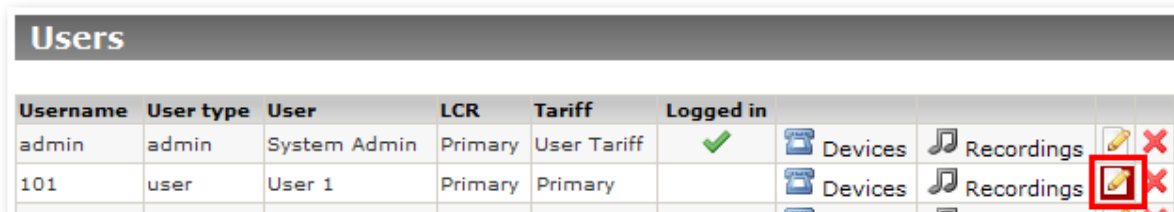
Name
UserTariff

Purpose
User

Create

Now enter rate for same Destination (Lithuania Proper 00370). You already know how to do it from previous examples.

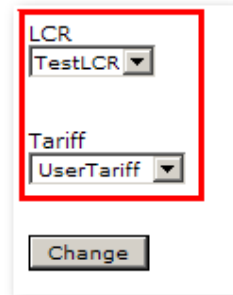
The final step is to assign Tariff and LCR to some User. Go to SETTINGS - Users and press Edit for one user:



Users										
Username	User type	User	LCR	Tariff	Logged in					
admin	admin	System Admin	Primary	User Tariff	✓	Devices	Recordings			
101	user	User 1	Primary	Primary		Devices	Recordings			

Now assign LCR and Tariff for this user:

That's it. If you made everything correct - you can connect your device (assigned to that user) and try to call.



LCR
TestLCR

Tariff
UserTariff

Change

■ DID MANAGEMENT

What is DID?

In short - it's external number from PSTN to make incoming calls to your VoIP network to reach some device. (It's a very simplified explanation which suits our needs right now).

We usually get DIDs from one or another provider. In order to use these DIDs we need to add them into ICM. Let's go to **BILLING - DIDs** and select **New DID** at the bottom at the page:



BILLING

- Providers
- LCR
- Tariffs
- Directions
- DIDs

DIDs

DID	Status
+ New DID	

In a new window you can add one DID or series of DIDs:

+
New DID

Here you can add one DID:

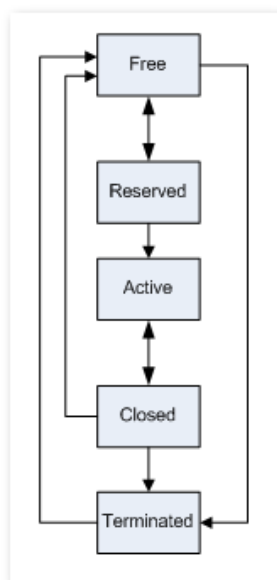
DID

Here you can add DID interval:

DID interval
 -

We will add one DID for demonstration purposes: 9999

Here's our new DID. The **owner** of just created DIDs always is **System Administrator**. You will change this later.



DIDs					
DID was successfully created					
DID	Status	User	Device	Rates	
9999	Free	System Admin		View	

Here you can see that this DID is not assigned to any device. That means if we will try to call this DID - we will get voice prompt (if our channel supports audio through not answered lines) and then Hangup.

Status is very important. For every just created DID status is **Free**. DID can have several **Statuses**:

Free - This status means, that DID is free to be **reserved** for any user/device. You can also **Terminate** it.

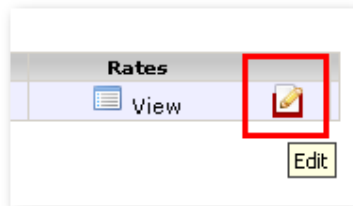
Reserved - DID is reserved but **NOT actually used** for some user. It's useful in negotiation state before signing a contract when user decides to sign up - then we will **Activate** this DID. We can also make this DID **Free**.

Active - DID is assigned to some Device and **it's functional**. We can **Close** it.

Closed - DID is no ICMe functional. E.g. all calls going to this DID will get Hangup. One important feature of this state: when DID is **Closed**, he will be closed for some time (default - 90 days) in case user will change his mind and will decide to use this DID again. (Usefull when user is not paying for services, so we can suspend DID using just Closing it). ICM will make it **Free** after time of Closing will run out. You can manually make it **Free** or **Terminate** this DID.

Terminated - DID is no ICMe used in ICM. It's here just for historical purposes. You can make it **Free** if you want.

You can change DID Status pressing on **Edit** icon near each DID:



Each DID can have it's **Rate**. You can change it pressing on **View** in column Rates near each DID:

DIDs					
DID	Status	User	Device	Rates	
9999	Free	System Admin		View	

You will get following window, where you can change values just pressing on them:

DID rates					
Did: 9999					
Start Time	End Time	Rate	Connection Fee	Increment	Minimal Time
00:00:00	23:59:59	0,0	0,0	1	0

■ RATES IMPORT

It's very tedious work to add several thousands rates by hand so you can import them from CSV file.

There're 7 steps for importing rates from CSV file:

- File upload
- Column assignment
- Column confirmation
- Analysis
- Creating destinations
- Updating rates
- Creating new rates

We will cover each of them one by one.

File upload

Go to **BILLING - Tariffs** and select **Import from CSV** for the Tariff you want to import rates:

Tariffs						
Name	Purpose		Rates			
Standart	user	View (1863)	Import from CSV	Delete all rates		
mitul	provider	View (1863)	Import from CSV	Delete all rates		
ProvTariff1	provider	View (0)	Import from CSV	Delete all rates		
ProvTariff2	provider	View (127930)	Import from CSV	Delete all rates		

Import from CSV - Step: 1 - File upload

Tariff: ProvTariff1

Please select CSV file with rates to import:

Upload:

Next step: Column assignment

Column assignment

File is uploaded and 5 first line of this file is available to check:

```
File size: 48861 bytes
First file lines:
Prefix,Country,EUR,,Full Prefix,LTL
93,Afghanistan,0.3792,,0093,1.30930176
355,Albania,0.1981,,00355,0.68399968
213,Algeria,0.2464,,00213,0.85076992
684,American Samoa,0.2464,,00684,0.85076992
....
Total file lines: 937
```

This helps us in next step, to assign CSV file's columns to ICM's variables. We have following window:

Value	Select from CSV file	Enter manually	Default
Prefix/NPANXX	<input type="text"/>		
Rate	<input type="text"/>		
Connection Fee	<input type="text"/>	<input type="text"/>	0
Increment	<input type="text"/>	<input type="text"/>	1
Min. time	<input type="text"/>	<input type="text"/>	0
Destination/OCN name	<input type="text"/>		
City	<input type="text"/>		
Country/Direction	<input type="text"/>		
Country code	<input type="text"/>		
USA specifics			
State	<input type="text"/>		
LATA	<input type="text"/>		
Class/Tier	<input type="text"/>		
OCN	<input type="text"/>		

Here we must to assign columns from CSV file. **Prefix** and **Rate** are mandatory fields. All other fields can be empty.

Connection Fee, **Increment** and **Min. Time** have their defaults, if you want, you can enter manually values for them. Manually entered values have highest priority. If you omit them, then ICM insert values from CSV file, if there're no assigned column for these fields, then default values will be added to database (DB).

There're group of values under name **USA specifics**. These are only for USA/Canada?. Users from these countries need to use these fields with their CSV files.

In the following example we selected fields which match our CSV file. Also entered some manual values for **Increment** and **Min.Time**. We will count time by 30s increments and minimum time for the call will be 60s with these settings:

Value	Select from CSV file	Enter manually	Default
Prefix/NPANXX	<input type="text" value="Full Prefix"/>		
Rate	<input type="text" value="EUR"/>		
Connection Fee	<input type="text"/>	<input type="text"/>	0
Increment	<input type="text"/>	<input type="text" value="30"/>	1
Min. time	<input type="text"/>	<input type="text" value="60"/>	0
Destination/OCN name	<input type="text"/>		
City	<input type="text"/>		
Country/Direction	<input type="text" value="Country"/>		
Country code	<input type="text"/>		
USA specifics			
State	<input type="text"/>		
LATA	<input type="text"/>		
Class/Tier	<input type="text"/>		
OCN	<input type="text"/>		

Such way of selecting CSV rows and assigning them to ICM values lets us import various CSV file formats.

Column confirmation

Next step is to review our selection and confirm if everything is correct. We can go Back or forward to the next step:

Prefix/NPANXX	Rate	Connection Fee	Increment	Min. time	Destination/OCN name	City	Country/Direction	Country code
0093	0.3792						Afghanistan	
00355	0.1981						Albania	
00213	0.2464						Algeria	
00684	0.2464						American Samoa	
00376	0.2343						Andora	
00244	0.2102						Angola	
001264	0.2706						Anguila	
001268	0.209						Antigua and Barbuda	
0054	0.1498						Argentina	
00374	0.177						Armenia	
003749	0.177						Armenia	
0037472	0.177						Armenia	
0037473	0.177						Armenia	
0037479	0.177						Armenia	
00297	0.2026						Aruba	
00247	0.5604						Ascension	
0061	0.039						Australia	
0061071	0.183						Australia	
00611	0.183						Australia	

Total file lines: 937

Back Confirm columns

Analysis

It will take some time to accomplish this step. Now ICM is checking a lot of things from DB and CSV files. Comparing rates, searching for duplicates, fixing small errors and so on. We get something like this after analysis is completed:

Analysis completed		
Tariff: ProvTariff1		
DB analysis		
Directions in DB	254	
Destinations in DB	131940	
Tariff rates	0	
CSV file analysis		
File size	48861	bytes
Total file lines	937	
Destinations in CSV file	937	
Existing destinations in CSV file	782	
New destinations in CSV file	155	3 bad destination(s) List
To do		
Destinations to create	152	Step 5
Rates to update	0	Step 6
New rates to create	934	Step 7

The most interesting line is **3 bad destination(s)**. We press on the **List** to check them. In the new window we can see which destinatinos are bad and we can decide what to do with them. Possible that there are no directions for them, ICM can't know to which

country to assign this destination or maybe these destinations have duplicates in CSV file? You have to fix this if you want to import whole file. Here you can stop and fix your CSV file or you can ignore these errors and continue.

We will continue due to demo purposes pressing on **Proceed**.

Following steps are separated to divide big processing power if rate file is huge. It allows browser not to crash and successfully import 60.000+ destinations from one CSV file. (Tested).

Creating destinations

ICM creates new destinations here. These destinations are necessary for the rates which will be added in step 7. This window is just informative, no decisions here:

Result	
Created destinations	152

Proceed

Updating rates

Here ICM updates rates with the values from CSV files. These rates already exist in DB. Just press Proceed:

Result	
Created destinations	152
Rates updated	0

Proceed

Creating new rates

Finally ICM creates all rates and we are all done!

Result	
Created destinations	152
Rates updated	0
New rates created	934

Congratulations successfully importing CSV file!

← Back to Tariffs

Notes

If there're a lot of rates please be patient and let ICM finish it's job. Sometimes it gets some time to count everything and come back to life. At the moments it could seem that browser is not responding - that's not true - it just works very hard importing your very own rates from CSV file.

■ USERS

Users can be **Postpaid** and **Prepaid**.

Postpaid users do not pay in advance to use services. They can have a **credit** which allows them to use services unless **credit** is reached. The **credit** could be 'unlimited'.

That means these users can use services as much as they like. The **balance** shows how much user is in dept to you. When his **balance** reaches **credit** (if **credit** is not 'unlimited') this user will be unable to dial out.

Prepaid users should pay in advance to use services. Their **credit** is ALWAYS 0. When their **balance** reaches 0 (zero), they are unable to call.

GROUPS

Groups in ICM are groups of users which have one or ICMe supervisors or managers over group. Managers possess administrative powers over users – like mark users as logged or logged off (thus allowing or preventing calls by the user).

Group Creation

Only admins can create Groups. It's done under SETTINGS ▫ Groups ▫ Add new. Just enter Group's name to create Group. You can select **type** for group from 'simple' or 'callshop'. It describes how you will manage group later.



Groups details

There are some options you can modify with Groups:

- Rename a Group
- Delete a Grup
- Modify Group Members

Groups					
Name	Member count	Logged members			
Group 1	4	2	Members	Edit	Destroy
Group 2	2	1	Members	Edit	Destroy
New group					

Adding Users to Group

Only admins can add Users to Groups. Press on Members for a certain group and you will get following window:

Groups 'Group 1' members					
Username	User	User type			
Total members : 4					
admin	Sistemas Administratorius	manager	Change type	Remove	
107	Giedrė Kiaulevičienė	user	Change type	Remove	
101	... ..	user	Change type	Remove	
104	Ija Šliomina	user	Change type	Remove	
Add new member:					
110 - MK MK			Add member		

From drop-down list at the bottom select desired user and press 'Add member' button. User will be added to the group.

Managers and users

Each Group can (and must) have one or ICMe manager. The manager is the account that can control users. Like login a user or logoff a user (allow or disallow users' calls).

You can change the user type pressing on 'Change type' button for a user.

Manager's actions

If a user is manager of some group, they will see following section in their interface:

Under groups is a list of all the groups that manager can manage, or administrate.



Group's details for managers

By selecting a group, the user will then be presented with details about the group:

Groups			
Name	Member count	Logged members	
Group 1	4	2	Members
Group 2	2	1	Members

For managers, changing user login states

Pressing on 'Members' button near some group manager will get list of users:

Groups 'Group 1' members							
Total members : 4							
Username	User	User type	Login	Duration			
admin	Sistemos Administratorius	manager	2006-08-22 00:42:48	07:34:19	Logout	Logins	
107	Giedrė Kiaulevičienė	user	2006-08-21 12:32:29	19:44:38	Logout	Logins	
101	...	user			Login	Logins	
104	Ija Šliomina	user			Login	Logins	

Pressing 'Login' or 'Logout' buttons manager will change login state of user accordingly. This change will be put into database for further statistic and reference.

Login stats checking

Login statistics can be viewed by the manager under STATISTICS ▫ Users ▫ Logins (for each user). Or by pressing 'Logins' button in previous picture.



PHONE BOOK

PhoneBook is for information purposes only. It searches for the name in database based on incoming number (Caller's number/A number/Source).

The PhoneBook structure in ICM is as following:

- There're two PhoneBooks: **Global** and **Simple**
- There's only 1 Global PhoneBook
- Each user has his own Simple PhoneBook
- User's Simple PhoneBook has higher priority than global PhoneBook - e.g. if record is found in Global and in Simple PhoneBook - the record from the Simple PhoneBook will be used

Global PhoneBook

Only System Administrator can edit Global PhoneBook. It can be found under **SETTINGS - PhoneBook**:



In PhoneBook management window you will see all necessary info to operate it. **Number**, **Name** and **Added** fields are self explanatory.

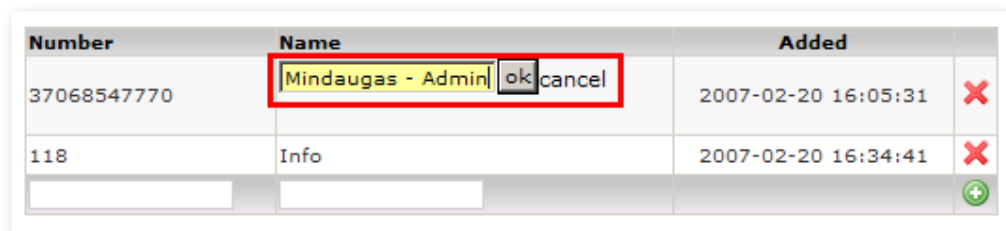
By pressing (3) you can delete appropriate field.

If you want to enter new record fill field (1) and (2) and press (4).

If you want to edit existing records, move mouse over the field you want to edit and press left mouse button once on it when it changes color to yellow:



And you will be able to edit this field. Press **OK** to accept changes or **cancel** to discard them:



That's it for Global PhoneBook.

Simple PhoneBook

Each user has it's own Simple PhoneBook which has higher priority than Global PhoneBook.

It could be found under **PERSONAL MENU - PhoneBook**:

Number	Name	Added	
37068547770	Mindaugas - Admin	2007-02-20 16:05:31	Global
118	Info	2007-02-20 16:34:41	Global
37068547770	Mano MOB	2007-02-20 17:43:35	X

Here you see almost same as in Global PhoneBook except there're records from GlobalPhone book. They do not have delete option instead they are marked as 'Global'. All other functionality is the same. Same rules to add/edit/delete records.

RECORDINGS

It's possible to record selected user's calls for monitoring purposes.

In order to use Recording you have to setup which user's calls you want to record. Go to **SETTINGS - Users - Recordings** and you will see such window:

Extension	First name	Last name	Record?	Show
101	<input type="checkbox"/>	Show
102	Julija	Tinterytė	<input type="checkbox"/>	Show
103	Janina	Mačulytė	<input type="checkbox"/>	Show
104	<input type="checkbox"/>	Show
105	Diana	Djačenkienė	<input checked="" type="checkbox"/>	Show
106	Regina	Maskalėnaitė	<input type="checkbox"/>	Show
107	Giedrė	Kiaulevičienė	<input type="checkbox"/>	Show

The recorded calls are stored in mp3 format to save space on hard disk.

You can view/listen/download these recorded calls by selecting **Show** in the Recordings window. You will see something like this:

Date	Source	Destination	Duration	
2007-02-19 10:24:05	68588705	68164381	00:09:14	
2007-02-19 10:23:28	68588705	65098645	00:00:12	
2007-02-19 10:19:17	68588705	37065091414	00:00:49	
2007-02-19 10:09:51	68588705	37065098645	00:01:03	
2007-02-19 10:07:40	68588705	69979559	00:01:54	

Here you can select period/user and view/listen/download his recordings.

FORWARDING

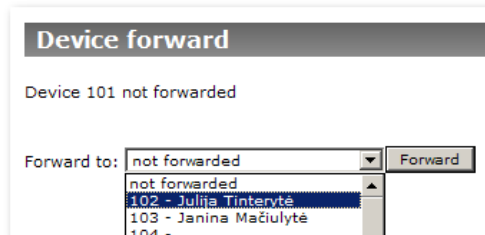
You can forward calls from one device to another. This is unconditional forward. That means all call are forwarded no matter of the state of the primary device.

Go to **SETTINGS - Users - Forwards** and press on the **Change** for desired device:

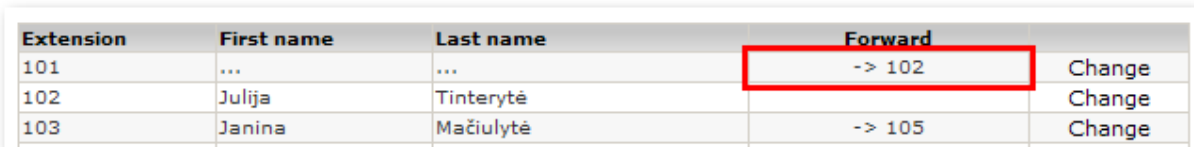


Extension	First name	Last name	Forward	Change
101	...	...		Change
102	Julija	Tinterytė		Change
103	Janina	Mačiulytė	-> 105	Change
104	...	...	-> 105	Change
105	Diana	Djačenkienė		Change

Select from drop-down list the device to which you want to forward calls:



Voila! All calls are forwarded to this device:



Extension	First name	Last name	Forward	Change
101	...	...	-> 102	Change
102	Julija	Tinterytė		Change
103	Janina	Mačiulytė	-> 105	Change

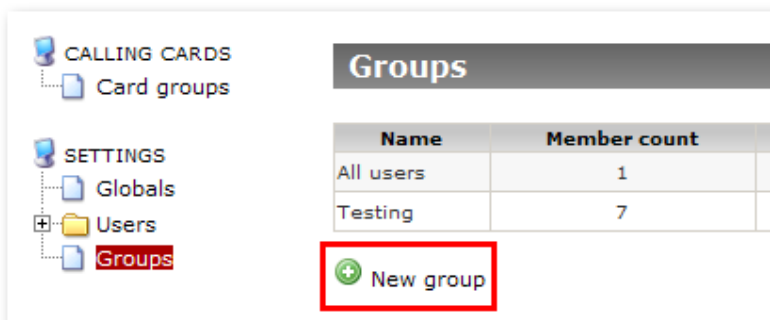
CALL SHOP

This chapter describes how to use ICM in Call Shop environment. The main idea is to have several Phone Booths (we will call them 'Users') which are allowed to dial out. After that they get billed for the calls they made.

Setup

First of all we need to create new **Group** for Call Shop.

Select **SETTINGS - Groups - New group**



Name	Member count
All users	1
Testing	7

Enter name for Call Shop (“CallShop” in example) and select **Type** as “callshop”. Press **Create**.

+ New group

Name
CallShop

Type
callshop

Create

Now we have group which will be use for Call Shop. We need to add some members to this group. Member is User in ICM terms. Let’s add them.

Press on **Members** for the **CallShop** group:

Name	Member count	Logged members	Type	
All users	1	1	simple	Members
Testing	7	1	simple	Members
CallShop	0	0	callshop	Members

Each group can have different types of members. Member can be “Manager” and “User”. Manager will manage the group. Group can have several managers.

Let’s add manager for our Call Shop. Usually that will be “System Admin”.

Make sure in selection list **Add new member** “admin - System Admin” is selected and press **Add member**

Total members : 0

Username	User	User type
----------	------	-----------

+ Add new member: admin - System Admin Add member

When new member is added, it’s type is ‘user’, let’s change it to ‘manager’

Press on **Change type** for our only user:

Member was successfully added

Total members : 1

Username	User	User type	
admin	System Admin	user	Change type

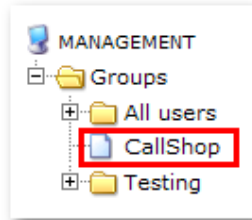
Now we have manager for our group:

Members type was successfully changed

Total members : 1

Username	User	User type
admin	System Admin	manager

Also instantly we have new controls for the 'CallShop' group under MANAGEMENT, because we are logged in as 'System Admin'



Now we need some users for full Call Shop functionality. These users will do actual calling.

We add them same way as our manager but we leave their type as 'user':

+ Add new member: test1 - Testinis 1 Add member

And second:

Total members : 2

Username	User	User type
admin	System Admin	manager
test1	Testinis 1	user

+ Add new member: test2 - Testinis 2 Add member

Now we have 3 members: 1 manager and 2 users:

Total members : 3

Username	User	User type
admin	System Admin	manager
test1	Testinis 1	user
test2	Testinis 2	user

The setup is complete. If users have correct setup (devices, tariffs, LCRs, etc) and they can dialout, then we can start using our Call Shop.

Operation

Now we go to **MANAGEMENT - Groups - CallShop** and we see our main Call Shop management window:

Username	User	Calls	Duration	Login	Login duration	Logout	Calls in Period	Logins
test1	Testinis 1	1	00:00:19	2007-02-18 20:15:50	00:02:42	Logout		
test2	Testinis 2	0	00:00:00			Login		

1. Here you can select the period you want to check. It's saved in your browser's memory and if you go to other pages, you will have this period selected automatically.
2. Calls/Duration are for the selected period.
3. Login shows last login time of the user. If it's empty - that means user is not logged in and he can't call. If you press on login time, you will get detailed list for that login time till current moment.
4. Login duration - how long user is logged in.
5. Here're controls which let's you to login/logout user, at the same time to allow him to call or disallow him to call.
6. By pressing on this link you will get detailed list of calls in selected period.
7. Here you will get list of logins in selected period grouped by days.

The main procedure is as following:

1. New person comes to your callshop and wants to call.
2. You select free user in Call Shop management window and press on button "Login" (5) allowing calls from this Call Booth.
3. Person goes to this Call Booth which represents some user on management interface and starts calling.
4. When he finishes he comes back to you (manager).
5. You press on Login time (3) for this user and you get a list with all user's calls.
6. You can get PDF report for user's calls, print it and give it to user.
7. User pays for the calls.
8. You press "Logout" (5) for his Phone Booth ending this session.

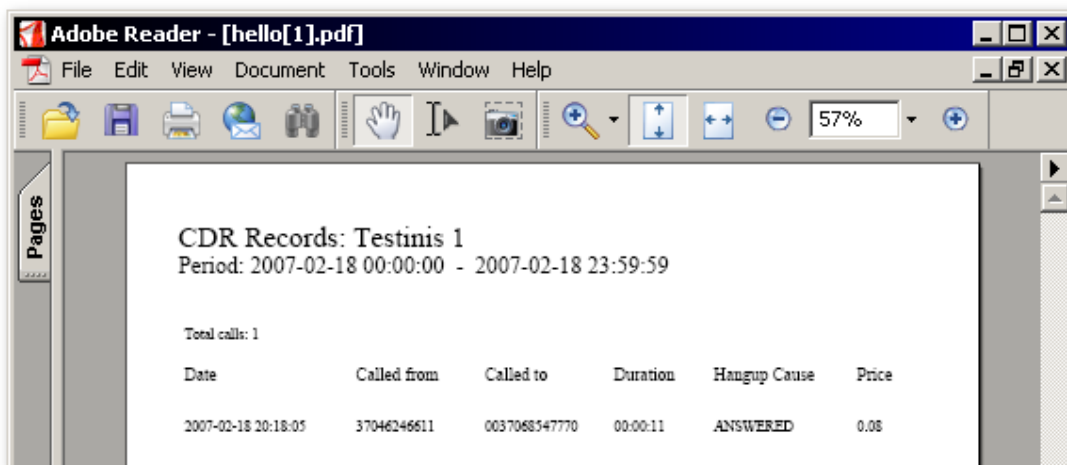
When you press on Login time (3)

Login	Login duration	Buttons
2007-02-18 20:15:50	00:02:42	Log
		Calls from this time till now

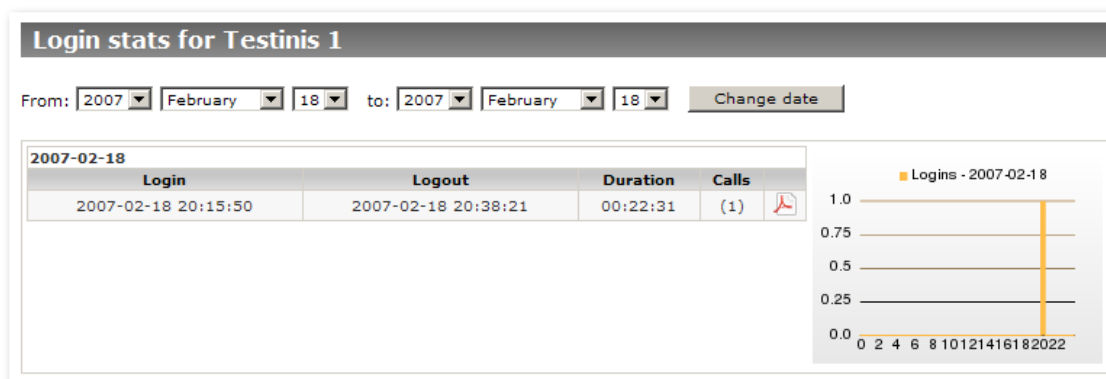
you will get call list from this login time till current moment:

Date	Called from	Called to	Duration	Hangup Cause	Price
2007-02-18 20:18:05	"846246611" <37046246611>	0037068547770	00:00:11	ANSWERED	0.08
Total:			00:00:11		0.075167

Here you can press on **Export to PDF** to get same result in PDF format:



When you press on “Logins” (7) you will get Logins window:



Here you will find graphical representation and all logins - sessions with ability to get call list for all of them.

---- Finish Configuration & Good Job ----

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