# Optima SIM Saver

December 2017 Version 1.0.0

# INDEX

1.	What	is Optims SIM Saver		2
2.	Why	Optima SIM Saver		3
3.	Filter Management			
	A.	Callee/Caller Whitelist		4
	B.	Callee/Caller Blacklist		5
	C.	Manage Performance Filte	r	6
	D.	Manage Buckets		6
4.	Rout	e Management		
	A.	Incoming Prefix		7
	B.	Outgoing Prefix		8
	C.	Callee Route Mapping		9
	D.	Caller Route Mapping		11
5.	Utility	,		
	A.	Reload Filter Settings		12
	B.	Global Settings		12
6.	Gate	way Configuration		
	a.	Goip		14
	b.	Skyline		_
	C.	Dinstar		16
	d.	Addpac		17
	e.	E-Join		19
	f.	ETS (etross)		20
7.	Sip U	Iser		21
8.	Tips	& Tricks for Optima Sim	Saver	23
		Filtering Hierarchy		
		· ····· · · · · · · · · · · · · · · ·		

Assalamu Alaikum! Welcome to Optima Sim Saver User Guide.

- **1. What is Optima SIM Saver** Optima SIM Saver helps you to reduce your SIM blocking using two types call filtering system. E.g:
  - A. **Filtering Callee Number** by sending repeatedly called phone numbers on same assigned port numbers.
  - B. **Filtering Caller ID** by sending calls from same caller ID to same assigned port numbers.

Depending on blocking parameters or patterns of the Mobile Operator we need to select the appropriate filtering system. For that we need specific data of specific operator's blocking pattern e.g. Sims are blocking after how many minutes for which Operator?

**Real Life Scenario** After inserting new sims in your gateway as soon as you will send calls, call filter will start building its database and it will start binding Callee Numbers(Applicable for Callee Number filtering system) or Caller ID(Applicable for Caller ID filtering system) on each port number.

For callee number pattern, let's assume phone number 0987654321 was connected via port number 1. When this phone number 0987654321 will be dialed again, call filter will automatically connect that number using port 1.

For caller ID pattern, let's assume with caller ID "optima" a number was connected via port number 1. When from caller ID "optima", another call will come, our call filter will automatically connect the number with caller ID optima using port 1.

**Callee Number /Caller ID Blacklist** works efficiently using our call filter solution which will block unwanted Callee Numbers or Called IDs which will be added in the list.

**Bulk/ Global Settings** allows to to add your prefixes port wise in a moment with some specific values, which will save your time configuring your system.

Disclaimer: Our Solution does not provide any guarantee that sim will not be blocked. It will extend sim life. All Rules are not for all countries. It varies country to country, operator to operator.

- **2. Why Optima SIM Saver** Optima SIM Saver Application intelligently builds it's Buckets with Callee Numbers and Caller IDs which helps to send same Callee numbers/ different numbers from same Caller IDS to the particular sims of the gateway, resulting extended sim life. Here are some key features:
  - ★ Blacklists and whitelists of phone numbers/ Caller IDs to protect from the Operator's calls.
  - ★ Improvised multiple Call Gap pattern technique between calls to simulate HB.
  - ★ Monitoring number/Caller ID length pattern while receiving calls.
  - ★ Building the list of preferred numbers for each sim.
  - ★ Managing Performance filter for blacklisting as per necessity.
  - ★ Auto Outgoing Call Generation to simulate HB.
  - ★ Extending SIM lifetime with dual(Callee+Caller) filtering technology.
  - ★ Optimizing Bandwidth Efficiently.

# **For Optimal Performance**

- ★ To get satisfactory minutes and less sim blocking,
  - Use 64 sims to run 16 concurrent calls
  - Use 128 sims to run 32 concurrent calls.

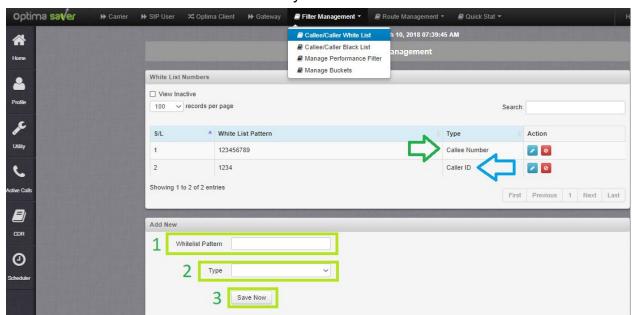
Primary idea is you need 4 times more sims, than your concurrent calls.

Now we will demonstrate you about the panel configuration:

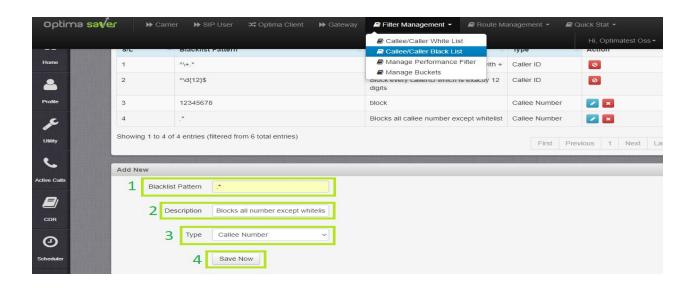
- **3. Filter Management** Our First Segment is Filter Management. Under this segment there are four(4) options:
  - a. Callee/ Caller Whitelist
  - b. Callee/ Caller Blacklist
  - c. Manage Performance filter
  - d. Manage Buckets.

Below we will describe the functions of the options gradually:

- **a.** Callee/ Caller Whitelist From Filter Management >> Callee/ Caller Whitelist option, you may add your desired whitelist numbers. Suppose, If you want that, calls will only pass from your whitelist numbers, that is also possible from our system. For that you need to config like below:
  - 1. Need to add the whitelist numbers in Whitelist pattern and whitelist type(callee number/ caller ID) for manual entry or if you have bulk numbers request us to upload.
  - Need to set rules in Callee/ Caller Blacklist option for manual entry.
  - 3. Save now to add whitelist manually.



4. Then add the regex value ".\* " (dot followed by asterisk without semicolon) as blacklist regex pattern to block the calls and pass only whitelist numbers from Callee/ Caller Blacklist Option(pic below)



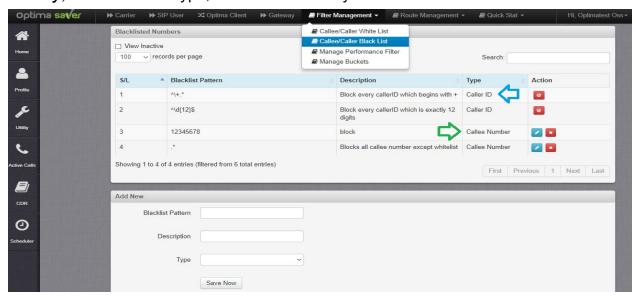
## b. Callee/ Caller Blacklist

In Callee/ Caller Whitelist / Blacklist option, we may enable and disable some entries, which will Block Caller ID with + sign or caller id with 12 digit etc. also may block numbers for Callee Numbers.

Firstly, Need to entry Blacklist Pattern.

Secondly, Need to Provide Description.

Thirdly, need to select type, then save the entry.



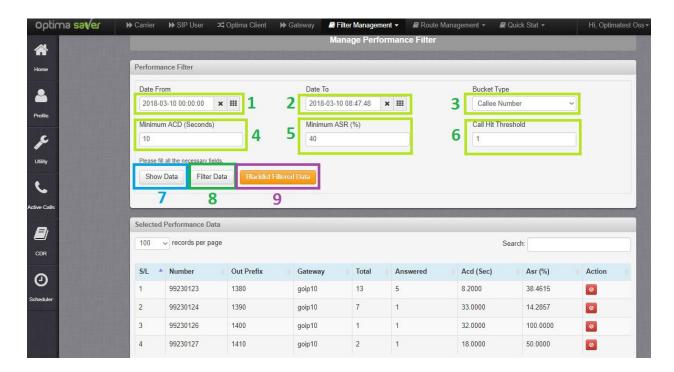
# Regex entry reference ( https://www.freeformatter.com/regex-tester.html )

- 1. ^228.\* Block every callerID which begins with 228
- ^\+.\* Blocks every callerID which begins with + or any special character.
- ^\d{12}\$ Block every callerID which is exactly 12 digits.
- 4. .\* Blocks All, and allow whitelist.

## ptima SIM Saver

# c. Manage Performance Filter

With Manage performance fitler, you may sort out the numbers with bad stat and blacklist them with a single click. I will explain you how it works, below:

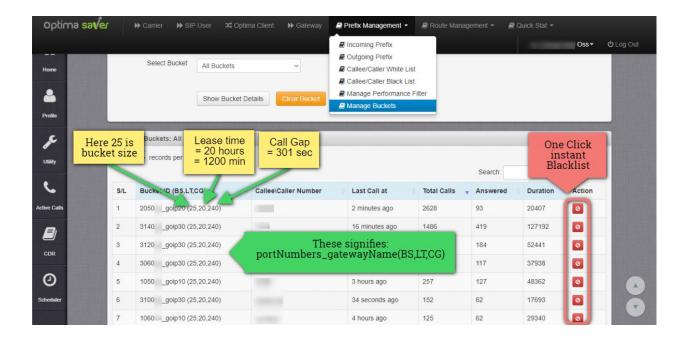


- a. First need to select the date range, then bucket type(caller/ callee), then if we press show data, all data will be shown below.
- b. Then we may filter the data upon 3 criterias:
  - i. Minimum Acd(Sec)-here we will put the minimum acd, we want to blacklist
  - ii. Minimum ASR (%) here we will put the minimum asr, we want to blacklist
  - iii. Call hit threshold here we we put the number , how many times the number was dialed and hit the system.
- c. Then we can see which data meets the criteria by clicking filter data.
- d. Blacklist selected data will immediately blacklist all the filter data and you may see those in the caller/ callee blacklist option under Filter management.

# d. Manage Buckets

In the Show Bucket Details, we may see the **callee numbers** and **caller IDs** record stored against each prefix separately. This is only view mode.

→ **Bucket ID (BS,LT,CG)**, here for e.g 2050\_goip20(25,20,301) means 2050 is the specific prefix for the port no 5 in goip name goip20 from the Gateway option, BS=Bucket Size=25, LT= Lease Time=20 hours=1200 mins, CG=Call



Gap=301 Sec. This the view option for the entries in Outgoing Prefix Option under Prefix Management.

- → Callee/ Caller Number will show Caller ID or Callee Number as per our filter type selection in the Incoming prefix option under Prefix Management.
- → Call Count will show how many time numbers hit the port.
- → Last Calls at show last calls time of hitting the port
- → **Duration** show total duration of the numbers hitted the port.
- → Answers shows how many calls were answered among Call Count Numbers
- **4. Route Management** Our second segment is Route Management. This is very important segment of the solution. Here we will find 4 options:

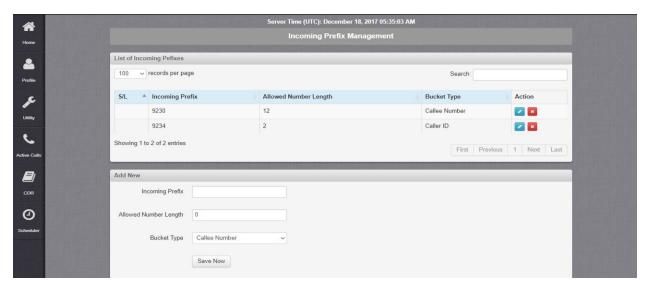
# a. Incoming Prefix

In Incoming Prefix option,

Firstly, we need to entry the Incoming Prefix for e.g 9230, then

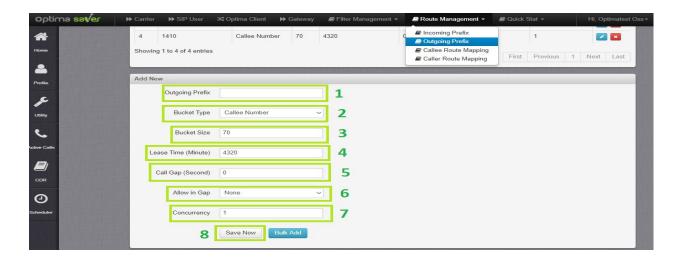
Secondly, need to enter the Allowed number length means the number length of the incoming prefix. If full number is 923026154910, then we can see there are 12 digits. So Allowed Number Length will be 12 here. Rule is, if any call comes with less number than 12 digit or more it will not pass.

Thirdly, we can see Bucket type which will be **Caller ID** or **Callee number**. Upon requirement we need to select the type, then press save to add the entry.



# b. Outgoing Prefix

In Outgoing Prefix option we may add/edit the values which we will add in the callee/caller route mapping, but for the deletion of the value here, we need to first delete the same entry in the Callee/ Caller Route mapping.



# For Single Entry:

*First*, we need to provide entry to Outgoing Prefix, e.g 1010. To be noted, the prefix you will provide here will replace the incoming prefix, so if your incoming prefix is suppose 9230, your outgoing prefix will be **101030**. Here first digit **1** represents the first gw, next **01** represents the gw port no 1, then **030** is the suffix.

We will map this prefix in the Gateway port wise later, then we will guide with the Gateway Port Wise Prefix Configuration.

Second, select the Bucket Type as per requirement e.g. Callee Number, Caller ID

# ptima SIM Saver

*Third,* Bucket Size, this is the list size of the Callee Numbers or Caller IDs means this is list of how many numbers or IDs we want to store against each prefix /port.

Fourth, Lease Time (Minutes), here we will set the max time duration to keep the numbers which will not be repeated within that time frame in the Bucket.

*Fifth,* Call Gap (Seconds), here we will set the call hit interval time from the last call which passed through this prefix/ port. e.g If call gap set 301 sec, then when any call (Active/ Ring) pass through this prefix, next call will not pass before 301 sec of the last call pass time or Bucket entry time.

**Sixth**, Allow in Gap, means from here you may select how the call gap feature will function. There are 4 types of Call Gap functionality here:



- A. None Call gap will applicable for all calls
- B. Repeating Call Call gap will be ignored only for the last dialed call but for the new numbers and bucket list numbers , call gap will be applicable.
- C. Listed Call Call gap will be ignored for only the numbers in the bucket list but for new numbers, gap will be applicable.
- D. Random Call gap will be applicable for all calls but it will ignore for some random numbers in a random manner(more like human behavior).

**Seventh**, Concurrency, that means how many calls may pass with that specific prefix, it will be 1 always for 1 port vs 1 Prefix.

Bulk Add will be convenient in the Callee/ Caller Route Mapping, so it will be explained later in that particular segment below.

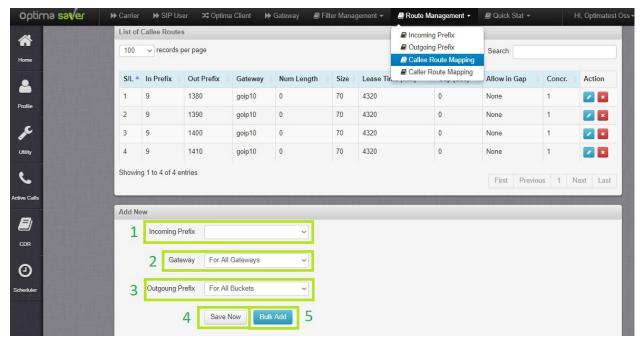
# c. Callee Route Mapping

In Callee Route Management, we will map the Outgoing Prefixes with Incoming Prefix along with Gateway for Callee.

*Firstly,* we will select the Incoming Prefix for Callee number type, you will see the incoming prefix here if you assigned bucket type as callee number in the incoming prefix segment.

**Secondly**, we will select the particular Gateway/ For all gateways for the incoming Prefix for Callee

*Thirdly,* we will select the Outgoing Prefix according to the incoming Prefix for single or for all Buckets for Callee.



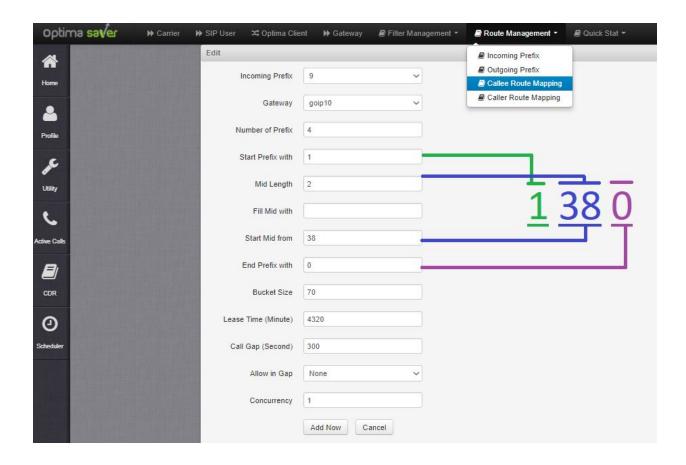
Now i will explain you how Bulk Add callee route mapping :

- I. First we need to select the incoming from the incoming prefix option.
- II. Then need to select the Gateway
- III. Then we need to enter the value for how many prefixes we want to add, for example if you have 32 port gateway, then value will be 32 for number of prefix.

Suppose our first prefix will be 1 38 0

- IV. So, here value for start prefix will be 1
- V. Mid length will be 2 as 38 consists 2 digits.
- VI. End prefix with **0**
- VII. Assign value for bucket size as per necessity.
- VIII. Assign value for Lease time
- IX. Assign value for Call Gap as per necessity.
- X. Allow in GAP criterias as per necessity (explained in outgoing section)
- XI. Assign value for concurrency as per necessity.

The facility of adding bulk entries from Callee Route Mapping is, we may add prefixes for any range with any gateway easily from here but to edit any value we have to edit that from outgoing prefix Segment.



# d. Caller Route Management

In Caller Route Management, we will map the Outgoing Prefixes with Incoming Prefix along with Gateway for Caller ID type filtering.

Firstly, we will select the Incoming Prefix for Caller ID, you will see the incoming prefix here if only you assigned bucket type as Caller ID in the incoming prefix segment.

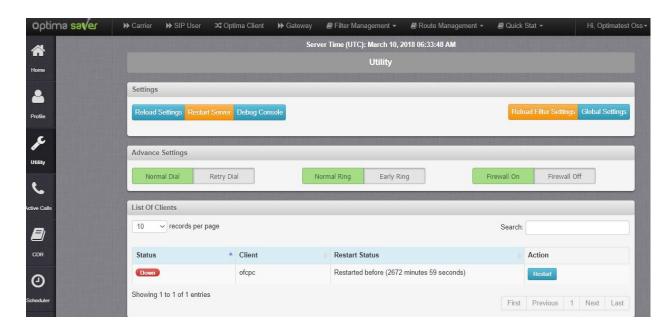
Secondly, we will select the particular Gateway for the incoming Prefix for Caller ID

Thirdly, we will select the Outgoing Prefix according to the incoming Prefix for Caller ID (pic above)

Bulk Add technique is same as callee Route Management, please check above for reference.

# 5. Utility:

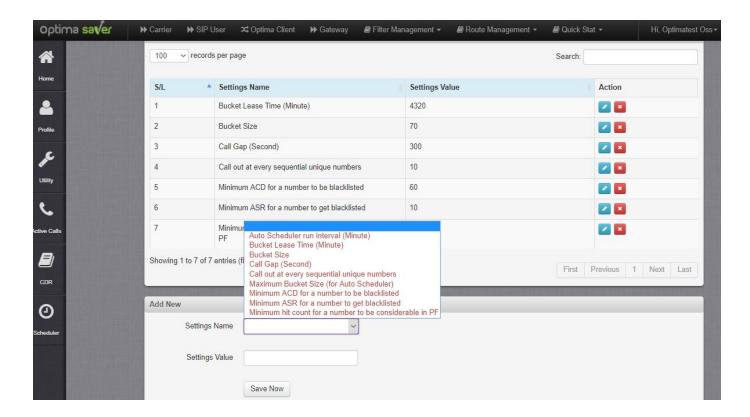
From Utility options we may find:



- A. Reload Filter Settings Reload all the rules of Call Filter System.
- B. **Global Settings** Here the entries which you will save, some will be effective as preset entry in the outgoing prefix & Manage Filter Performance and you may change the values in the outgoing prefix & Manage Filter Performance segments by pressing Apply to All from here, also you may edit each entry to particular segment manually.

After Saving all individual entry we need to press **Apply to Callee** or **Apply to Caller** or **Apply to All**(for Calle and Caller both) as per necessity. (pic below)

- I. Bucket Lease Time (Minutes) enter preset value for outgoing prefix
- II. **Bucket Size** enter preset value for outgoing prefix
- III. Call Gap (Seconds) enter preset value for outgoing prefix
- IV. Call out at every sequential unique numbers Our system may generate auto outgoing calls if you set the value for unique calls. Here value 10 means, our system will generate one auto outgoing call after each 10 unique numbers are dialed which will to avoid sim blocking. Its a great feature for some countries to bypass sim blocking.

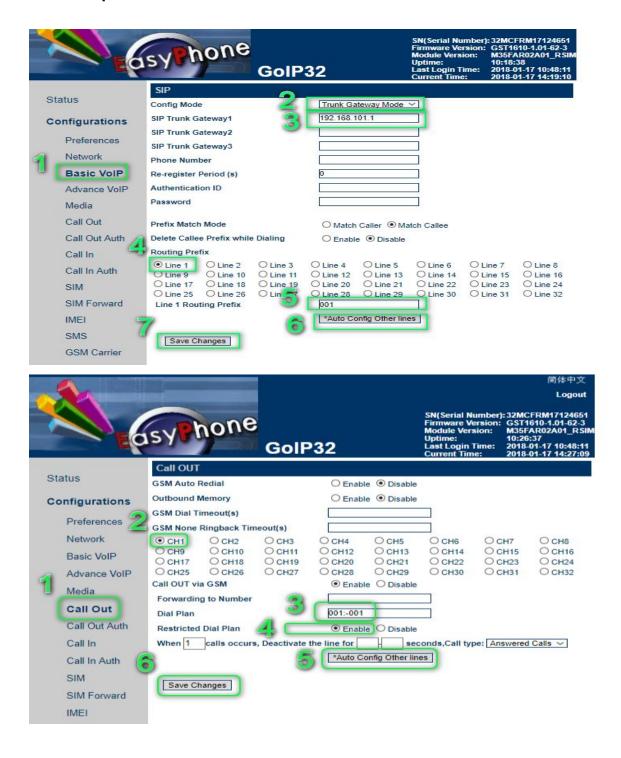


- V. MInimum ACD for a number to be blacklisted enter present value for Manage Performance Filter
- VI. Minimum ASR for a number to get blacklisted enter present value for Manage Performance Filter
- VII. Minimum hit count for a number to be considered in PF -enter present value for Manage Performance Filter

# 6. Gateway Configuration

Here we will guide you to configure your gateway according to outgoing Prefix to map the prefixes port wise:

# a. Goip



### **Skyline** b.

Call Status

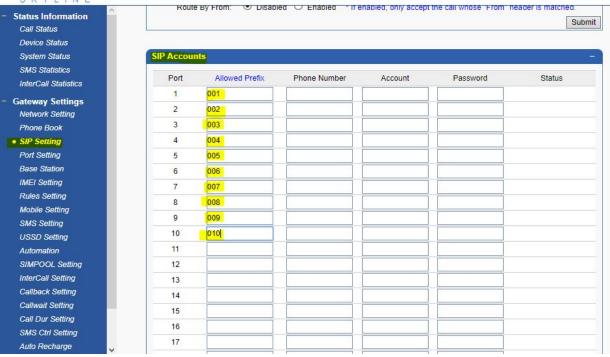
Port Setting

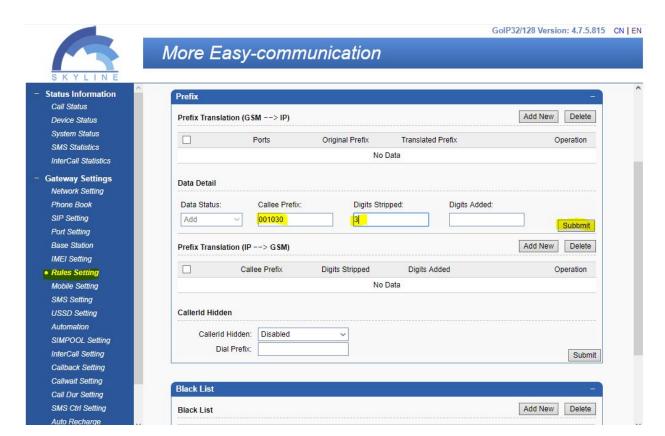
Automation



# More Easy-communication

GoIP32/128 Version: 4.7.5.815

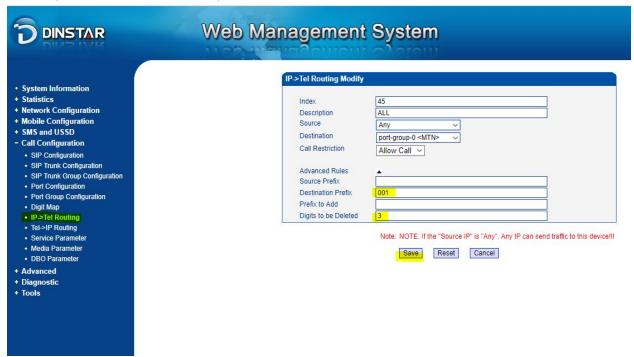




# optima SIM Saver

### c. Dinstar

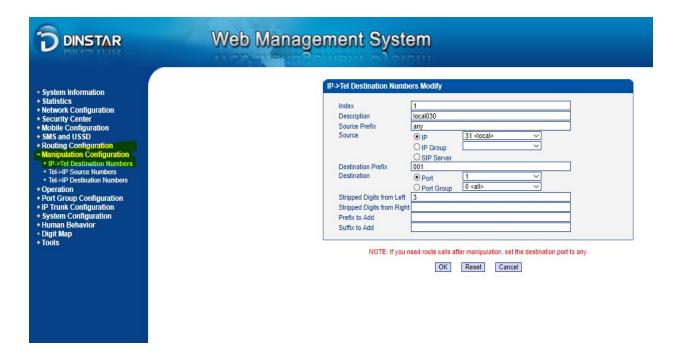
(Dinstar New Firmware):



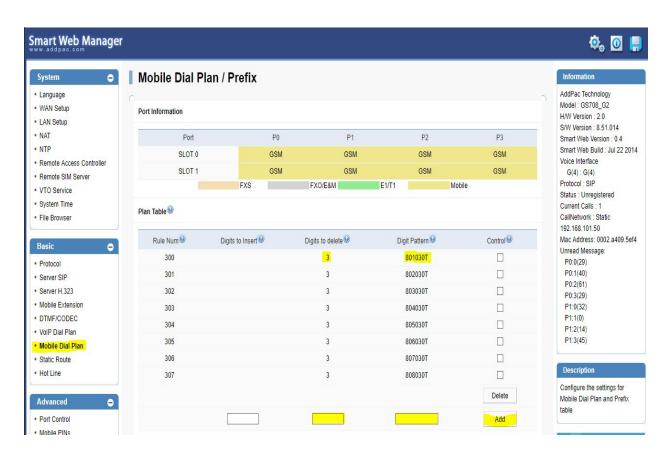
(Dinstar Old Firmware): Routing Configuration >> IP->Tel Routing

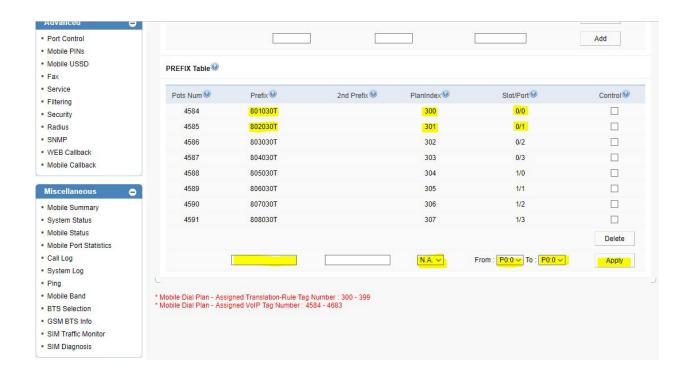


# (Dinstar Old Firmware): Manipulation Configuration >> IP->Tel Destination Numbers

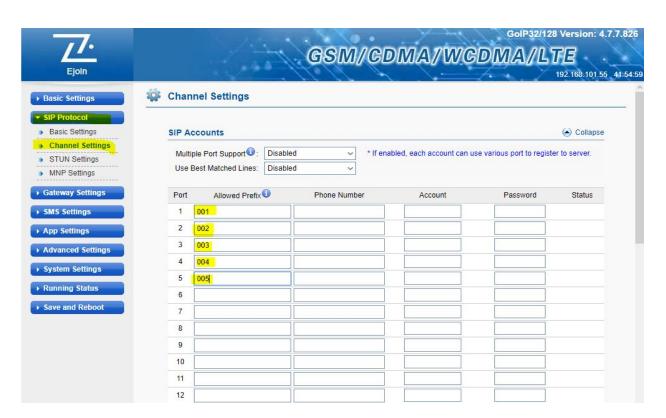


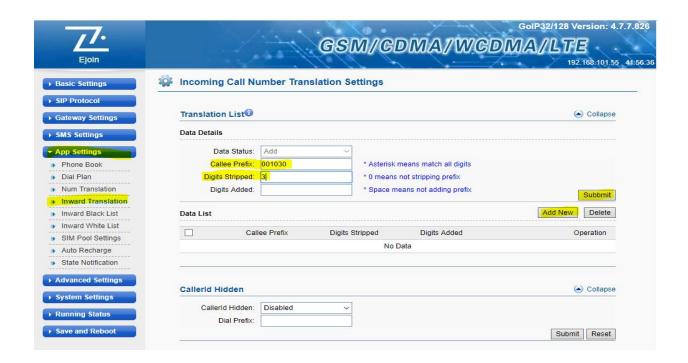
# d. Addpac



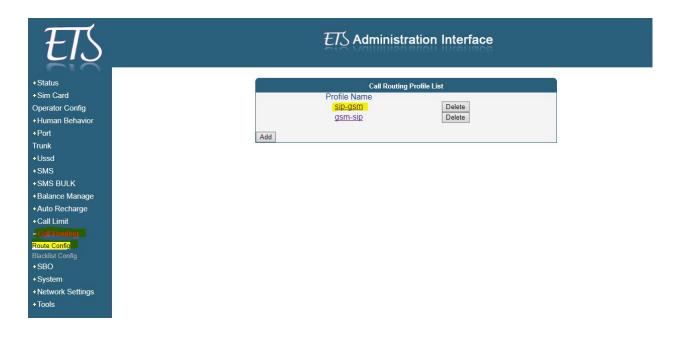


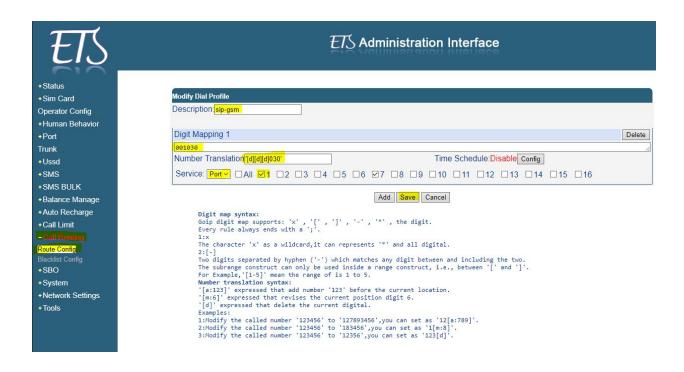
### e. E-Join



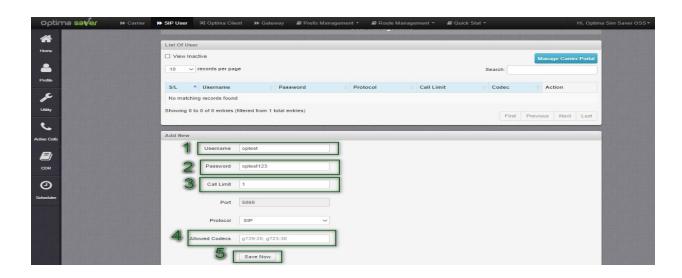


# f. ETS (Etross)



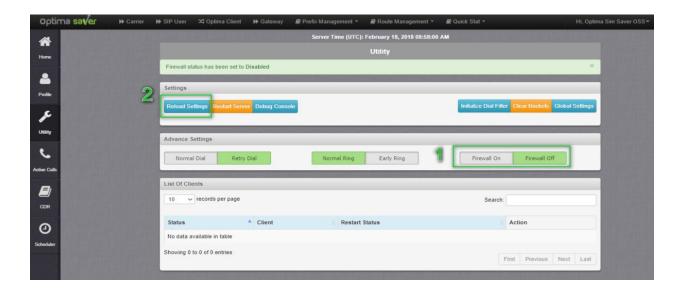


- **7. Sip User** Now you may create sip users directly from our Optima and test calls through any mobile sip dialer. Steps for creating sip users are:
  - 1. Assign a username. 2. Assign a password 3. Assign Call Limit. 4. Assign Codec.
  - 5. Save Now.

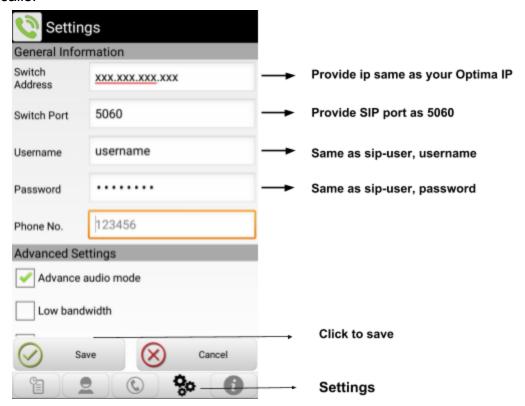


Now will explain steps for making calls:

- 1. From Utility , disable firewall.
- 2. Reload All Settings.



3. Now download the android application Optima Free Dialer from google play store, Open Optima free dialer, go to settings and provide info like below to test calls:





4. When Dialer got registered, then you may test call according to your dial plan in the panel. You may require VPN or BytePlex if your ISP blocks SIP Protocol.

# 8. TIPS AND TRICKS FOR OPTIMA SIM SAVER

- A. You should not turn off your GSM Gateway at your idle time and we recommend not to send calls after 12 PM as well start sending calls after 8AM as this is a human behavior, usually human sleeps at night.
- B. If your sims blocks or for new sim, try to change IMEI before inserting new sims as well use fixed IMEI.
- C. Do not send USSD code repeated times in a day, We recommend 3 times a day.
- D. We recommend not to recharge your account more than once in a day and use different types of recharging method.
- E. We recommend to keep your Base Station fixed from 12 AM to 9 AM
- F. We recommend to use retail traffic provider as well as you should not change traffic provider very soon.
- G. To get satisfactory minutes and less sim blocking, use 64 sims to run 16 concurrent calls or use 128 sims to run 32 concurrent calls. Primary idea is you need 4 times more sims, than your concurrent calls.
- H. Optima SIM Saver application needs to build its database slowly with repeatedly dialed phone numbers. 1st day, allow 2 numbers per port for new sims, then increase it slowly after 15 mins interval and at best allow 15 or 20 numbers per port for the whole day, then 2nd day increase 25 or 30. Keep increasing per port limit until you find out what is the best average range on your network operator. You need to run Optima SIM Saver for 4 days minimum to analyse the numbers and build our database with those numbers.

# 9. Call Filtering Hierarchy

- ★ Call Filter hierarchy for new number in bucket:
  - Whitelist (if the number or Caller ID is Whitelisted, even though same number/ID was in the blacklist, it will ignore and pass the call)
  - Blacklist (if the number or Caller ID is blacklisted and not in the whitelist, calls will not pass)
  - Call Gap (within the Call Gap period calls will not pass, call Gap counts after a number hits the specific prefix for the port, after the Call Gap time, call will pass)
  - Number length[ignore/ block] (will check the number length perimeter, will pass if number came with exact digits, otherwise will block)
  - Bucket size limit (will check Bucket is full or not, if full, call will not pass, if there is available bucket space, then callee number or Caller ID will be stored in bucket and call will pass)

# ★ Call Filter hierarchy for existing number in bucket :

- Whitelist (if the number or Caller ID is Whitelisted, even though same number/ID was in the blacklist, it will ignore and pass the call)
- Blacklist (if the number or Caller ID is blacklisted and not in the whitelist, calls will not pass)
- Call Gap (within the Call Gap period calls will not pass, call Gap counts after a number hits the specific prefix for the port)
- Number Length[ignore/ block] (if the number/ Caller ID is already in the bucket list, will ignore number current number length restriction)
- Bucket size limit (call will hit the specific port now as the number is already in the bucket list)