Doc. Code

VOS3000 V2.1.4.0

Manual

Issue 01

Date 2013-09-10



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About This Document

Purpose

This document describes the functions and operations of VOS3000 client.

Intended Audience

This document is intended for:

- Installation and commissioning engineers
- NM configuration engineers

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description	
DANGER	Indicates a hazard with a high level or medium level of risk which, if not avoided, could result in service interruption.	
MARNING	Indicates a hazard with a low level of risk which, if not avoided, could result in data missing.	
A CAUTION	Indicates a potentially hazardous situation that, if not avoided, could result in unanticipated results.	
©—¹ TIP	Provides a tip that may help you solve a problem or save time.	
NOTE	Provides additional information to emphasize or supplement important points in the main text.	

About This Document

Change History

Changes between document issues are cumulative. The latest document issue contains all the changes made in earlier issues.

Issue 01 (2013-09-10)

This issue is used for first office application (FOA).

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$\mathbf{1}$ Guide

About This Chapter

This chapter describes the user guide of VOS3000 client.

Operation Guide

In VOS3000, most data managements can be completed through sheets. Sheets can be opened by double-clicking corresponding nodes in "Navigation". The following operations are supported:

- Open: open current management page.
- Filter: get current configuration from server.
- Copy: copy the currently selected sheet line into the clipboard.
- Paste: paste the line in the clipboard into a sheet with the same type.
- Add: insert new lines.
- Delete: delete sheet lines. If the data are at the server, the selected lines will be marked as "to be deleted".
- Apply: send currently specified operations (such as add, delete and modify) to the server to carry out.

☐ NOTE

Before clicking "apply", all the operations of data are saved only at the client end and will not affect the server's data; closing the management page would discard these operations.

- Export: export the current sheet into local files.
- Import: import data from local files into the sheet (supported by a few types of sheets).

Batch data operations can be fulfilled by "copy", "paste" and column "Filling downwards" functions supported by spreadsheets in VOS3000. See the figure below:

Figure 1-1 Filling downwards



2 Function

About This Chapter

This chapter describes the functions of VOS3000.

2.1 Login

Upon running VOS3000 client, the login dialogue will be shown.



- Server ip: IP address of the remote server.
- User name: user names allowed by the platform.
- Password: user password allowed by the platform.
- Uuid: during the first installation, system will generate this id.

Even password is correct, uuid is still needed. This id can be modified any time, please refer to <Configuration Guide>.

The system will record IPs typed by users for later use. Users can also delete these historical servers IP.

The initial user name and password are admin and 2005Ks#\$\$)Fp(!#.



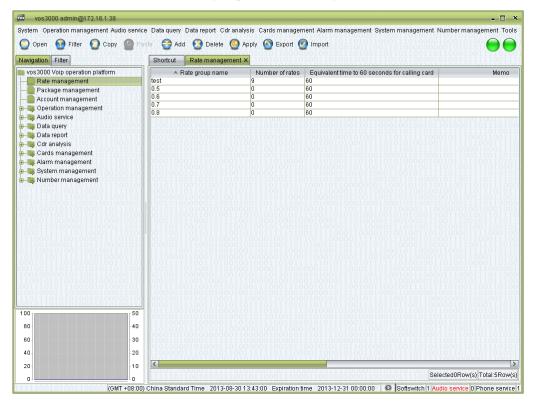
CAUTION

Please modify the initial login password as soon as possible.

2.2 Rate Management

2.2.1 Rate Group Management

This function is used to define rate groups used for billing.



How to Start

• Double-click "Navigation > Rate management"

Table Items

• Rate group name: the name of the rate group. When new accounts are created, one rate group must be specified and the name here will be used to identify the groups.

MOTE

Try to choose more informative names that remind people of the rate's details.

- Number of rates: the number of rates contained in the group.
- Equivalent time to 60 seconds for calling card: for calling card only.
- Memo: additional comments.
- Number of using account: the number of accounts using this rate group.
- Create user: the name of the user who created this rate group.
- Time of timing replace: replace time.
- Mode of timing replace: full replace or append replace.
- Name of timing replace: rate group name after replace.

Other Operations

- Double-click the numbers at "Number of rates" to enter the rate management page.
- Double-click the numbers at "Number of using account" to enter the account management page.

Right-Click Menu

- Open: enter the rate management page.
- Fee rate of timing replace: add timing replace fee rates.
- Authorization: enter the authorization management page.

M NOTE

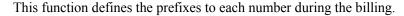
You can simultaneously select multiple rate groups.

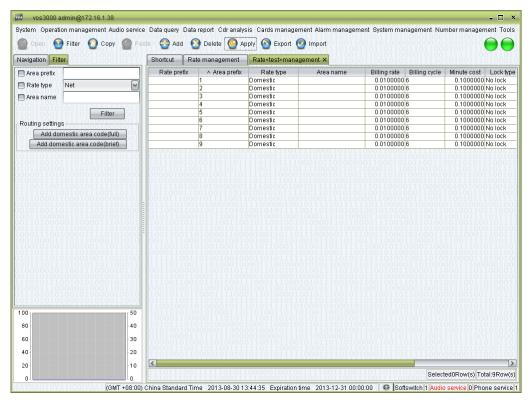




For agent, when login system, only those rate groups in the "Authorization" lists will be shown. As illustrated above, this rate group can be seen by "agent1", "agent2" and "agent3".

2.2.2 Rate Management





How to Start

- Select a line in the rate group management page and choose "Open" in the right-click menu.
- Double-click the "Number of rate" in the rate group management page.

Table Items

• Rate prefix: the prefix of the called number which matches this rate.

MOTE

The longest matching prefix will be used. For example, if there are two rate prefix, "0" and "01", the number "01117" will be match to "01" since it is the longest pattern that matches "01117".

- Area prefix: also used for rate matching, area name will be shown according this, please refer to "Number management > Area information".
- Rate type: available options are "Net", "Local", "Domestic" and "International".

M NOTE

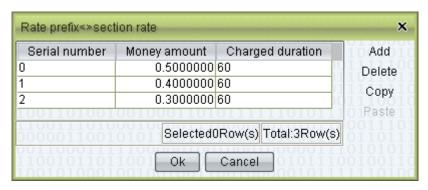
The type will not only be shown in CDR, but also used in many filters and statistics. Please correctly specify the rate type. Meanwhile, this type will be checked before calling. If a caller does not have the authorization to call the type of number specified here, the call will be banned.

- Area name: the area corresponding to the rate prefix. Non-editable, which is set by "Number management > Area information", displays the "Area information" of "Area prefix".
- Billing rate: the fee charged for each billing cycle.

• Billing cycle: the session time that exceeds the "First time duration" will be divided into units with length specified here. When the time cannot be divided clear, it will be rounded up to the nearest integer.

An example: if the "First time rate" is "0.21", the "First time duration" is "180", the "Billing rate" is "0.15", and the "Billing cycle" is 60, then according to this rate, a session that lasts 250s will be charged 0.21 + 0.15 * 2 = 0.51.

- Minute cost: calculate by "Billing rate" and "Billing cycle".
- Section rate:



- Serial number: time section.
- Money amount: money of this section.
- Charged duration: charge time.

Ⅲ NOTE

Section rate will be used first, sessions that exceeds this time will be charged according to the "Billing rate" and "Billing cycle". If none section is set, the "Billing rate" and "Billing cycle" will be used from the beginning. (Unit: Second).

- Lock type: enable or disable the rate.
- Billing rate for calling card prompt: used for IVR prompt remaining duration.
- Billing cycle for calling card prompt: used for IVR prompt remaining duration.

Other Operations

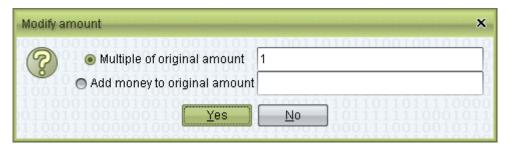
• The table supports "Import" and "Export" operations.

M NOTE

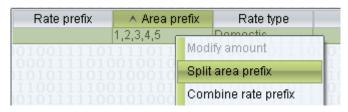
Refer to the exported files for the import format.

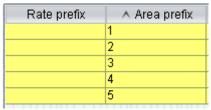
Right-Click Menu

Modify amount: on column "Billing rate".

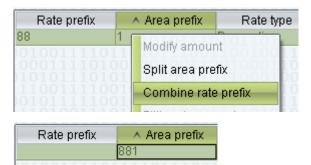


• Split area prefix: for new line only.





• Combine rate prefix: combine "Rate prefix" and "Area prefix" to "Area prefix".



- Add start bit of prefix: when selected lines are in the status of "to be added", the function can be used to modify their initials.
- Delete start bit of prefix: when selected lines are in the status of "to be added", the function can be used to modify their initials.

MOTE

Some international rate list use nonstandard initials. These functions can be used to adjust the initials after import.

When creating rate policies for national calls, try to use rate prefixes like "01" to "09" instead of using a single "0". Otherwise, if the international rate policies are incomplete, some international calls might be matched to "0" and misclassified as national calls.

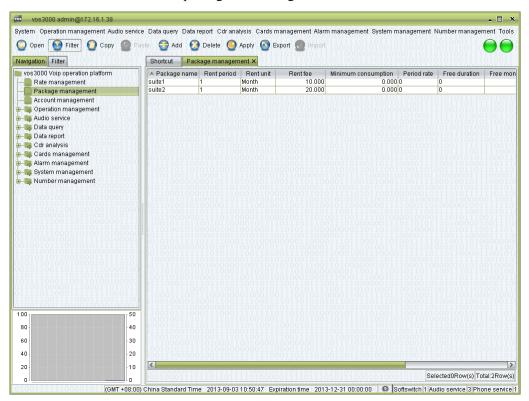
©[™] TIP

Some provider gives minute cost only, when import, you can set "Minute cost", system will calculate "Billing rate" automatically. You can use split area prefix and combine rate prefix to modify rates.

2.3 Package Management

2.3.1 Package Group Management

This function is used to define packages for billing.



How to Start

• Double-click "Navigation > Package management"

Table Items

- Package name: the name of the package.
- Rent period: value of time.
- Rent unit: Day/Month/Year

M NOTE

Package's period = Rent period * Rent unit, e.g. rent period: 7, rent unit: day, means 7 days package, every 7 days will effect until expire.

- Rent fee: Package cost.
- Minimum consumption: calculate when package expired, if account under consumption, the difference will be deducted.
- Period rate: the rate of a certain time period. Double-click to open the period rate management. Please refer to the next section for details.
- Free duration: free sessions provided by the package. Double-click to edit it.
- Free money amount: gift money provided by the package. Double-click to edit it.

Contents

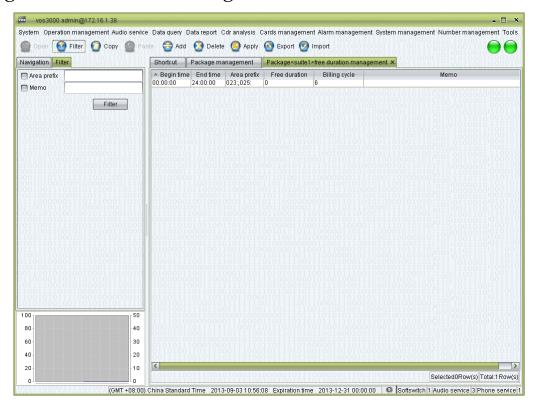
NOTE
The free duration will be used first, then the free money amount.

- Memo: additional comments.
- Create user: the name of the user who created this package.

Right-Click Menu

Authorization: refer to rate management.

2.3.2 Package Free Duration Management



How to Start

Double-click "Navigation > Package management > Package free duration management"

Table Items

- Begin time
- End time
- M NOTE

Call time within Begin Time and End Time, free duration will be used. If not whole day time, free duration is from call start to End Time.

- Area prefix: the prefix of free duration.
- Free duration: free time for the prefix.
- Billing cycle: charge cycle.
- Memo: comments on the package.

Right-Click Menu

- Authorization
- M NOTE

Please refer to: rate group management.

Contents

2.3.3 Package Period Rate Management

How to Start

Double-click the numbers at the "Package management > Package period rate"

Examples:

• The rate in the weekends is "0.5".

∧ Period type	Begin date	End date	Begin time	End time	Period rate
Week period	Sunday	Saturday	00:00:00	24:00:00	0.5

• The rate from 0:00 to 8:00 is "0.5" and "0.6" for the rest of the time.

∧ Period type	Begin date	End date	Begin time	End time	Period rate
Week period	Sunday	Saturday	00:00:00	08:00:00	0.5
Week period	Sunday	Saturday	08:00:00	24:00:00	0.6

• The rate from 0:00:00, September 1st, 2013 to 21:15:00, October 21th, 2013 is "0.5".

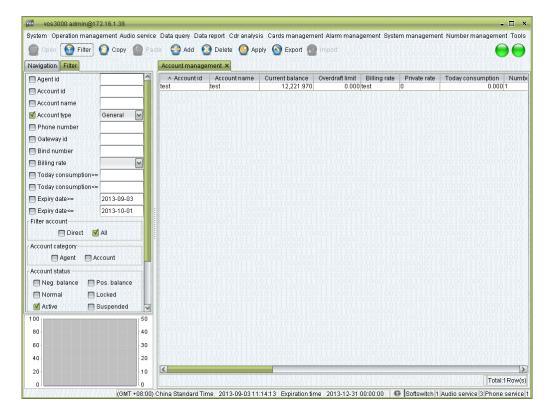
∧ Period type	Begin date	End date	Begin time	End time	Period rate
Year period	2013-09-01	2013-10-21	00:00:00	21:15:00	0.5



The start and expiration time for yearly periods are different from those for weekly or monthly ones.

2.4 Account Management

2.4.1 General Account



How to Start

• Double-click "Navigation > Account management"

Table Items

- Account id: the unique identification of the account. This must be unique and cannot be modified once the account is created.
- Account name: the name of the account (such as the full name of the user).
- Current balance: the current balance of the account.
- Overdraft limit: the maximum credit of the account.
- Billing rate: the rate group for billing.
- Private rate: rate for this account only, if billing rates contains private rate, the lower will be chosen.
- Today consumption: today's consumption.
- Number of gateway: non-editable. The number of gateways under this account. Double-click to enter the gateway management page of this account.
- Number of phone: non-editable. The number of phones under this account. Double-click to enter the phone numbers management page of this account.
- Number of active phone card: non-editable. The number of phone cards under this account. Double-click to enter the phone card management of this account.

- Bind number: non-editable. The bind numbers of this account.
- Number of package: non-editable. It shows the number of packages subscribed by this account.
- Current package: non-editable. The number of packages effected.
- Agent id: the "Account id" of its parent account. The parent account must exist. Upon designation, the parent account will become the "Agent" type.
- Customer information: information about the customer. Click "Edit" to change.
- Directory: non-editable. The number of this account's phonebook. Double click to enter short number settings.
- Directory limit: number of phonebooks.
- Account category: "Account" or "Agent", non-editable. When an account has sub accounts, it automatically becomes an agent.
- Account type: "General" or "Clearing".
- Memo: comments on the account.
- Account status: "Normal" or "Locked".
- Expiry date: the expiration date of the account.
- Date of open account: non-editable. The date when the account is created.

Other Operations

- Double-click the number at "Number of gateway" to enter "Mapping gateway management" page for the account.
- Double-click the number at "Number of phone" to enter "Phone number management" page.
- Double-click the number at "Number of package" to manage the packages subscribed by the account.
- Double-click the number at "Current package" to edit the effected package of the account.

Right-Click Menu

- Disable account: disable the account and all its sub accounts. Phone numbers belonging to these accounts will not be able to make phone calls.
- Enable account: enable the disabled account.

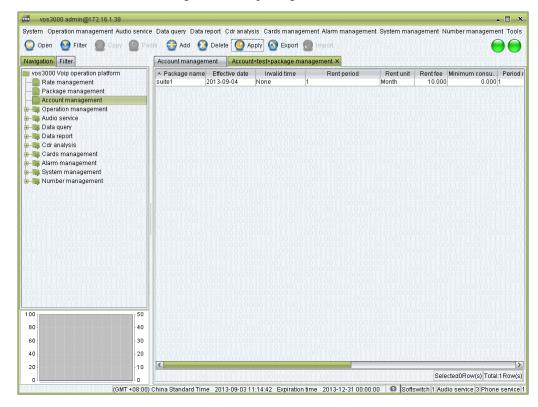
□ NOTE

If an account is deleted, his phone and gateway will belong to no account.

You cannot change clearing account into other type.

2.4.1.1 Customer Package Management

This function is used to manage account's packages.



How to Start

Double-click "Navigation > Account management > Number of package"

Table Items

Package name

Effective date

Invalid time



Add packages for the account then choose package name and set the effective date and invalid time of packages.

The "Invalid time" is the date after which the package cannot be subscribed. For example, if a monthly lease has effective date (2013-9-2) and invalid time (2013-9-15), on the 2th of September; the package will be subscribed, and effective through 2013-9-2 to 2013-9-30. But after September 15th, the package will not be available for subscription. That means this package cannot be used in October.

Rent period

Rent unit

Rent fee

Period rate

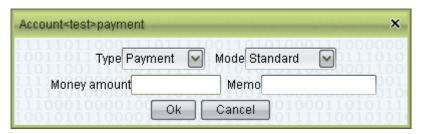
Free duration

Free money amount

Memo

2.4.2 Payment

This function is used to pay money for account.



How to Start

• Double-click "Navigation > Account management", select an account; click "Payment" in the right-click menu.

Operation Details

- Type of payment: If the phone card is selected, the card number and password will be asked.
- Payment type: Payment/Credit/Make Zero.
- Amount: the amount of payment.
- Memo: comments will be kept as historical records.

M NOTE

Historical payments can be view in the payment record page.

Payment will change account's expiration. Please refer to system parameter: SERVER ACCOUNTEXPIREDELAYAFTERPAYMENT

2.4.3 Agent Account

Agent accounts differ with ordinary accounts in that there are accounts belonging to agent accounts. Once an account becomes an agent account, it will occur in the navigation tree. Double-click the agent account in the navigation tree to open the "Sub account management".



Use the filter "Direct" and "All", respectively, to show the directly sub accounts and all (direct and indirect) affiliations of the account.

2.4.4 Billing

Phones, gateways and bind numbers will be charged according the account they currently belong to. If the number being called does not match any rate, the call will be terminated. And the cause of such termination will be shown in CDR. When the account belongs to other accounts, the call will cause the agent account to be charged according to its own rate (this backtracking process ends up at accounts that belong to no other accounts). If the billing turns the account or any of its agent accounts into "disabled" status, the phones, gateways and bind numbers will no longer be able to make calls.

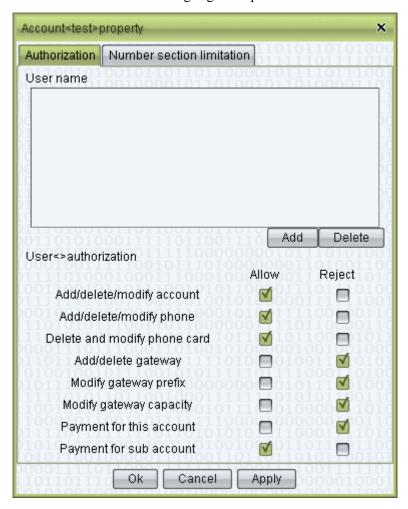
M NOTE

Billing principle: optimal rate, the deduction amount is calculated by period fee rate, account fee rate, account private fee rate or phone private fee rate, choose the cheapest.

When account is in debt, he can still make free call.

2.4.5 Authorization Management

This function is used for manage agent's operation of accounts.



How to Start

• Double-click "Navigation > Account management", select an account, click "Authorizations" in the right-click menu

Operation Details

- Authorizations
- Add/delete/modify account: the right to create delete or modify accounts.
- Add/delete/modify phone: the right to manipulate phones belonging to the account.
- Delete/modify phone card: the right to manipulate phone cards belonging to the account.
- Add/delete gateway: the right to manipulate gateways belonging to the account.
- Modify gateway information: the right to modify information about gateways except capacity.

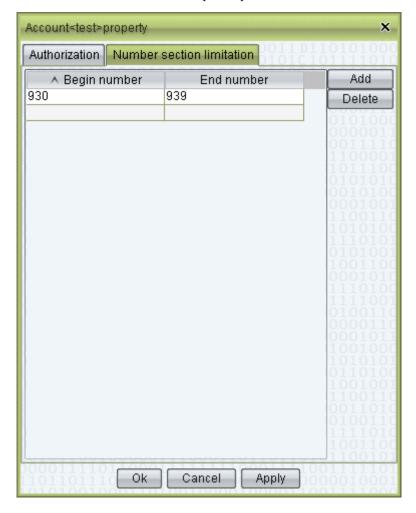
- Modify gateway capacity: the right to modify the number of lines.
- Payment for this account: the right to perform payment for the current account (including changing the amount of overdraft).
- Payment for sub accounts: the right to pay for the sub accounts.

M NOTE

This function is usually used to facilitate agent development. An agent user can have an agent-typed account in the system. Administrators can create one or more accounts for them, limiting their rights to recharge their own account, yet granting those authorizations to add new accounts, phones and gateways, and to recharge their sub accounts. The agent can create new accounts for its sub-agents. The agent account can only manipulate its sub accounts. Note that, accounts created by agent accounts must be designated to an agent account, and the creator must have the authorization to manipulate the designated agent account. Users logged in with an agent account can only see those accounts that authorized to the agent. This restriction applies to all account-related operations.

2.4.6 Number Section Limitation

This function is used to limit the phone prefix of the account.



How to Start

• Double-click "Navigation > Account management", select an account, click "Authorizations" in the right-click menu.

Operation Details

- Begin number: the smallest number of the segment (including the number itself).
- End number: the largest number of the segment (including the number itself).

MOTE

Number restriction specifies the phone numbers that can be added to the current account, in order to avoid competition of number resources among agents.

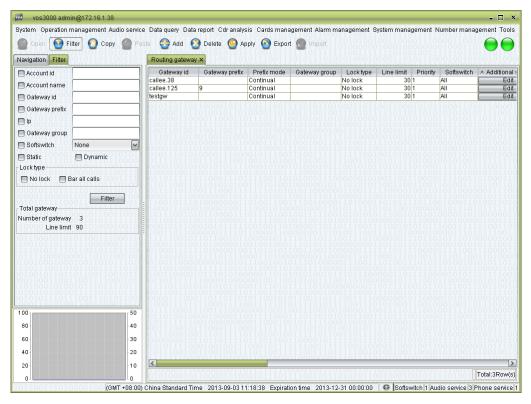
If account type is "agent", the numbers of its sub accounts should also be in this range. Otherwise there will be error prompt from the system. If the account type is "ordinary", the appropriate number segments will automatically added by the system.

2.5 Operation Management

2.5.1 Gateway Operation

2.5.1.1 Routing Gateway

This function is used to manage routing gateway.



How to Start

• Double-click "Navigation > Operation management > Gateway operation > Routing gateway"

Table Items

- Gateway id: the unique id of the device, used for the authentication of dynamic gateways. For static gateways (usually relay gateways), the only requirement is their ids do not conflict with each another.
- Gateway prefix: when the number being called is not registered in the system, the call will be routed only to gateways which match the prefix specified here. Multiple prefixes can be specified, separated by commas. Different gateways can be designated with the same prefix. When conflict occurs, the gateway will be chosen according to following numbers (the smallest comes first): priority number, the ratio of the number of current calls to the number of channels, the number of historical calls, and the gateway id.
- Prefix mode:
 - Extension: shorter prefixes will be tried if the routing gateway matched by this prefix cannot deliver the call.

- Expiration: no more prefixes will be tried if the routing gateway matched by this prefix cannot deliver the call.

Examples:

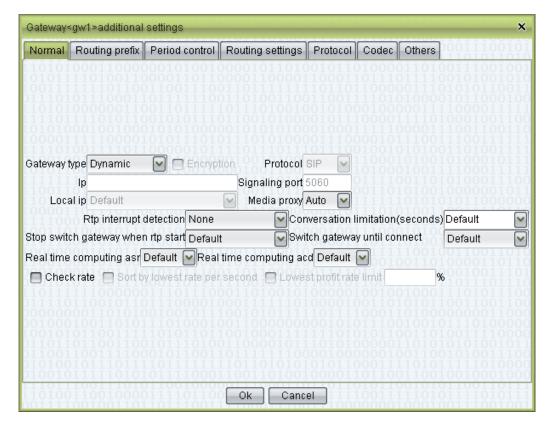
Gateway id	Gateway prefix	Prefix mode	Gateway group	Lock type	Line limit	Priority
gw1	9	Continual		No lock	30	1
gw2	900	Terminal		No lock	30	0
gw3	9	Continual		No lock	30	1
gw4	900	Continual		No lock	30	1

If the prefix mode of "gw2" is set to "Terminal", the prefixes being tried for the number "90080001" will be "gw2" and "gw4" in order.

If the prefix mode of "gw2" is set to "Continual", while others remain the same, the prefixes being tried for the number "90080001" will be "gw2", "gw43", "gw3", and "gw1" in order.

- Gateway group: the group which gateway belongs to.
- Lock type: "No lock" or "Bar all calls".
- Line limit: lines of this routing gateway.
- Priority: when the prefixes are the same, gateway with high priority will be used firstly.
- Softswitch: specify the softswitch used by this routing gateway.
- Additional settings
- Ip: see descriptions in the "Additional settings".
- Configuration password: the password used for gateway registration, which is also the password used for web configuration.
- Self service password: the password used for web query.
- Caller black/white list group: can set numbers in "Number management > Black/white list group".
- Callee black/white list group: can set numbers in "Number management > Black/white list group".
- Memo: comments on the gateway.
- Routing clearing account id: the billing account charged when the gateway is called.
- Routing clearing account name: the name of the billing account.
- Routing clearing account balance: the balance of the billing account.
- Clearing billing number
 - Before rewrite
 - After rewrite

Additional settings > Normal



Gateway type

- Static: no registration is required. These are usually relay gateways (i.e. routing gateway). Static IP addresses and ports can be specified for them.
- Dynamic: registration is required before use.
- Registration: register to other server; please refer to "Registration management".
- Encryption: check to enable.
- Protocol: H323 or SIP.
- Ip: gateway's IP.
- Signaling port
- Local ip: set IP of local network used for sending, use "Auto" to choose by Linux routing table.
- Media proxy:
 - Auto: let the system decide whether enable media proxy. (Recommended)
 - On: always enable media proxy.
 - Off: always disable media proxy.
- RTP interrupt detection
 - None: disable detection.
 - Server to remote: detect audio send from server to device.
 - Remote to server: detect audio send from device to server.
 - Bidirection: detect both side, if any one side no audio, the call will be interrupt.
- Conversation limitation (seconds): set the max call duration of the gateway.
 - None: no limit.

- Default: set by "Operation management > Softswitch management > Additional settings > System parameter > SS MAXCALLDURATION".
- Stop switch gateway when rtp start
 - Default: set by "Operation management > Softswitch management > Additional settings > System parameter > SS GATEWAY SWITCHSTOPAFTERRTPSTART".
 - On: if using media proxy, when softswitch received RTP packet from the gateway, won't try next gateway any more.

☐ NOTE

This option is NOT affected by "Switch gateway until connect". When "Switch gateway until connect" is on, if received RTP packet, stop switch gateway.

- Off: ignore the RTP starting conditions for gateway switch.
- Switch gateway until connect
 - Default: set by "Operation management > Softswitch management > Additional settings > System parameter > SS GATEWAY SWITCHUNTILCONNECT".
 - On: switch gateway until softswitch got connect signal (SIP 200 OK/ H323 Connect).

M NOTE

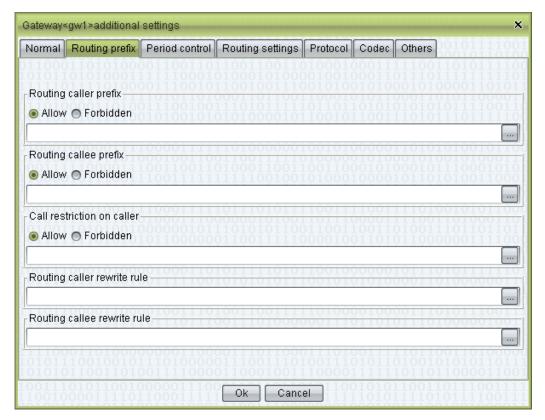
This option priors to "Protocol > Stop switch gateway after olc" and "Stop switch gateway after receive sdp".

- Off: try next gateway except: call connected, ringing, receive busy or no answer and settings in "Protocol".
- Real time computing asr
 - On: softswitch will calculate this gateway's ASR.
 - Off: softswitch will not calculate this gateway's ASR.
 - Default: set by "Operation management > Softswitch management > Additional settings > System parameter > SS GATEWAYASRCALCULATE".
- Real time computing acd
 - On: softswitch will calculate this gateway's ACD.
 - Off: softswitch will not calculate this gateway's ACD.
 - Default: set by "Operation management > Softswitch management > Additional settings > System parameter > SS GATEWAYACDCALCULATE".
- Check rate: if the call has clearing fee rate, this gateway will be tried.
- Sort by lowest rate per second: use rate per second when sorting. Sort order can be set in "System management > System parameter >

SS_GATEWAY_GATEWAYFEERATEROUTESORTCONFIG" and "SERVER_GATEWAY_ROUTE_FEE_RATE_SORT_CONFIG".

- Enable: during fee rate sorting, use actual fee rate.
- Disable: during fee rate sorting, see the gateway has the lowest fee rate.
- Lowest profit rate limit: lock this gateway when profit below settings. When the difference, calculate by rate per second, between caller fee rate and clearing fee rate lower than the value, this gateway won't be tried.

Additional settings > Routing prefix



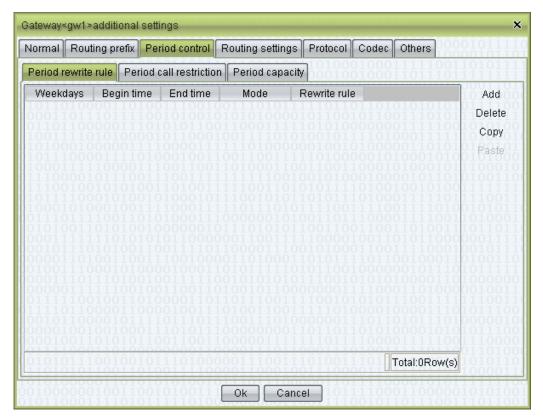
- Routing caller prefix
 - Allow: prefixes of the caller numbers allowed to pass through (left blank to allow all numbers)
 - Forbidden: prefixes of the caller numbers disallowed to pass through

■ NOTE

Only one of the "Allow" and "Forbidden" options can be chosen.

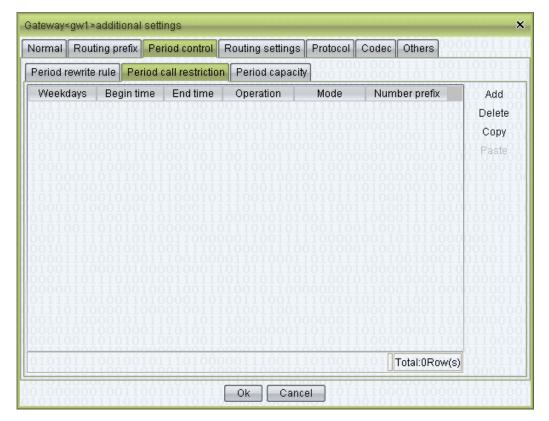
- Routing callee prefix
 - Allow: prefixes of the called numbers allowed to pass through
 - Forbidden: prefixes of the called numbers disallowed to pass through
- Call Restriction on Caller
 - Allow: allow the caller with particular prefix to dial callee with particular prefix.
 - Forbidden: forbidden the caller with particular prefix to dial callee with particular prefix.
- Routing caller rewrite rule: rewrite rules for the caller number when called out through this gateway.
- Routing callee rewrite rule: rewrite rules for the called number when called out through this gateway.

Additional settings > Period control > Period rewrite rule



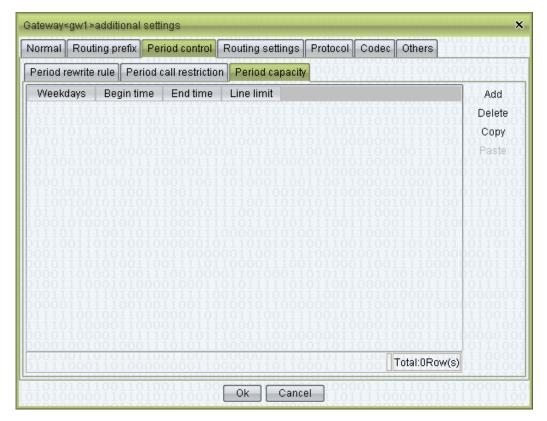
- Begin time: time when the rewrite rule comes into effect.
- End time: time when the rewrite rule expires.
- Mode
 - The called: the rewrite rule applies to the called number.
 - The caller: the rewrite rule applies to the caller number.
- Rewrite rule: the content of the rule.

Additional settings > Period control > Period call restriction



- Weekdays
- Begin time: time when the rule comes into effect.
- End time: time when the rule expires.
- Operation
 - Forbidden: forbidden operations for the matched prefixes.
 - Allow: allow operations for the matched prefixes.
- Mode
 - By caller: matches the prefixes of the caller numbers.
 - By callee: matches the prefixes of the called numbers.
- Number prefix: the prefix of the number. Multiple prefixes can be specified, separated by commas.

Additional settings > Period control > Period capacity



- Weekdays
- Begin time: time when the rule comes into effect.
- End time: time when the rule expires.
- Line limit: the maximum number of channels allowed for this period.

Additional settings > Period control > Routing settings

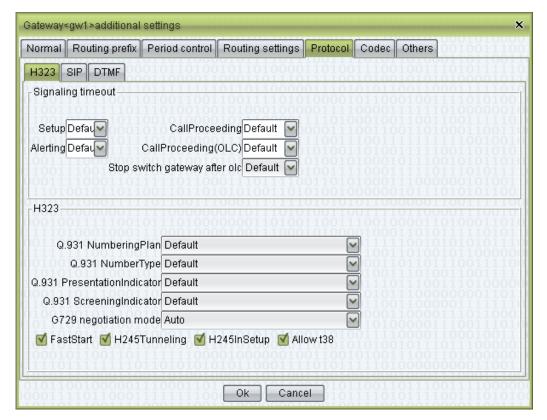


- Automatically add area code for mobile: "Number management > Mobile area" is needed, default: Off. Softswitch will automatically add area code for mobile number.
- Regional restriction for mobile: restrict callee e.g. allow 25, means caller can dial callee with prefix 21 only.
- Call restriction on local city: e.g. allow 25, means only allow area 25 to dial local number.
- Number restriction on caller: only allow specified caller number. "Number management > Mobile area" and "City code" is needed.
- Number restriction on callee: only allow specified callee number.

M NOTE

This function can reduce invalid numbers.

Additional settings > Protocol > H323



M NOTE

Default value is set in "Operation management > Softswitch management > Additional settings > H323 parameter".

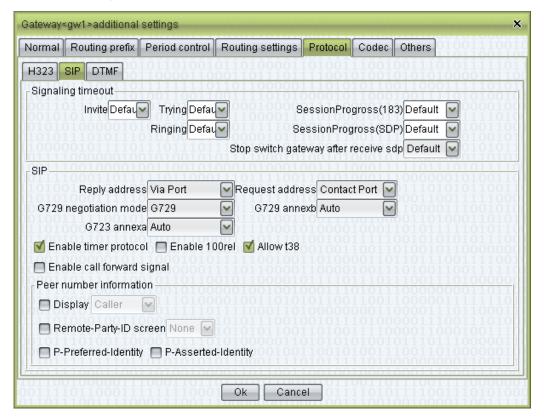
- Setup/CallProceeding/Alerting/CallProceeding(OLC): if signal timeout, softswitch will try next gateway or hang up.
- Stop switch gateway after olc:
 - Off: won't affect gateway switch.
 - On: stop switch gateway after receive faststart or OpenLogicalChannel (H245).

MOTE

If "Switch gateway until connect" is on, this setting is invalid.

- Q931 NumberingPlan: see H323's RFC.
- Q931 NumberType: see H323's RFC.
- Q931 PresentationIndicator: see H323's RFC.
- Q931 ScreeningIndicator: see H323's RFC.
- G729 negotiation mode:
 - Auto: keep original G729 codec.
 - G729: treat G729a or G729 as G729.
 - G729a: treat G729 or G729a as G729a.
 - G729&G729a: treat G729 or G729a as G729 and G729a.
- FastStart: check to enable.
- H245Tunneling: check to enable.
- H245InSetup: check to enable.
- Allow t38: check to enable.

Additional settings > Protocol > SIP



u NOTE

Default value is set in "Operation management > Softswitch management > Additional settings > SIP parameter".

- Invite/Trying/Ringing/SessionProgress: if signal timeout, softswitch will try next gateway or hang up.
- Stop switch gateway after receive sdp:
 - Off: won't affect gateway switch.
 - On: stop switch gateway after receive SDP.

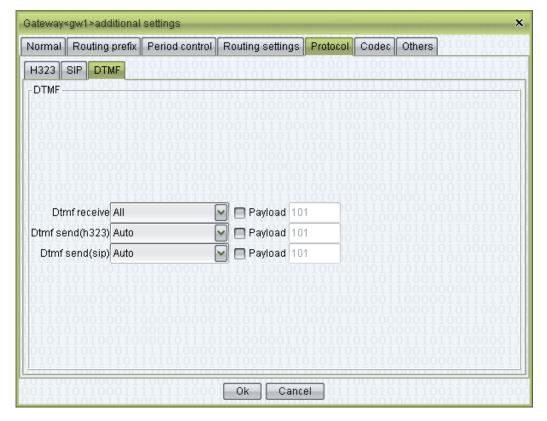
MINOTE

If "Switch gateway until connect" is on, this setting is invalid.

- Reply address: after receive sip request message, send reply signal to which address.
 - Socket: send reply signal to request address (recommend).
 - Via port: send reply signal to request IP and use port from Via. (Due to network reasons, some systems will use this mode.)
 - Via: send reply signal to address from Via. (May have security risk.)
- Request address: after call establish, send request signal to which address.
 - Socket: send request signal to sender address (recommend).
 - Contact Port: send request signal to sender IP and use port from Contact.
 - Contact: send request signal to address from Contact.
- G729 negotiation mode
 - Auto: keep original G729 codec.
 - G729: treat G729a or G729 as G729.
 - G729a: treat G729 or G729a as G729a.

- G729&G729a: treat G729 or G729a as G729 and G729a.
- G729 annexb
 - Auto: send routing's G729 annexb setting to routing.
 - yes: annex=yes
 - no: annexb=no
 - None: no annexb
 - Transmit: send caller's G729 annexb setting to routing.
- G723 annexa: refer to G729 annexb.
- Enable timer protocol: enable routing gateway's timer protocol to detect over time.
- Enable 100rel: send 1xx to routing gateway (intermediate state like 183).
- Allow t38: allow send T38 signal to routing gateway.
- Enable call forward signal: if call from mapping gateway uses call forward format or phone's call forward, then use call forward signal format to send the call.
- Peer number information: set select mode to SIP signal's caller.

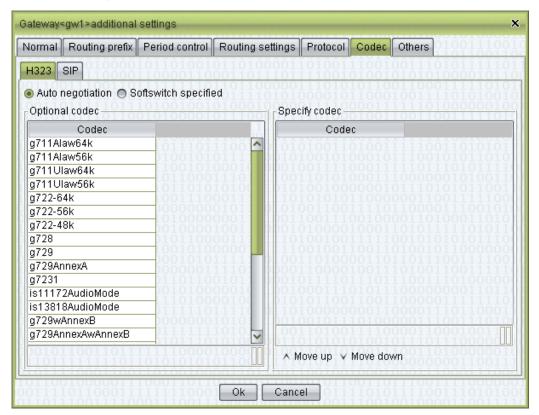
Additional settings > Protocol > DTMF

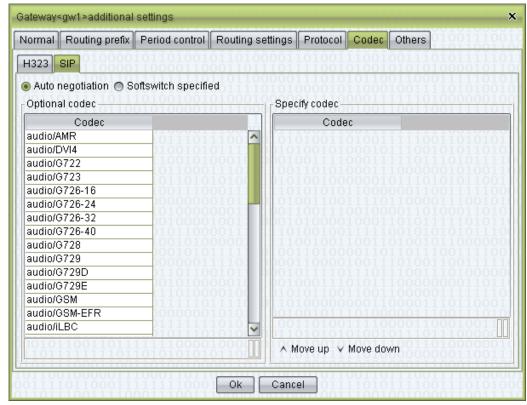


- Dtmf receive: specifies the way by which DTMF signals are received. The <All> option is recommended, which asks the system to accept all kinds of DTMFs. Once a certain kind of DTMF is received, this channel will accept the same kind of DTMFs only, thus effectively avoiding duplicate receptions.
- Payload: the payload value in RTP, for the DTMF of the RFC2833 mode.
- Dtmf send(h323): it is set to "Auto" by default, indicating that the system would determine the best way to send DTMFs based on the receiver's capacity. If the receiver provides no capacity set, the system will send according to the default mode. The RFC2833 mode can only be specified for media proxy.

• Dtmf send(sip): it is set to "Auto" by default. The details are the same as those of "Dtmf send(h323)" described above.

Additional settings > Codec > H323/SIP





- Auto negotiation: determined by caller and callee.
- Softswitch specified: codec can only be sent.

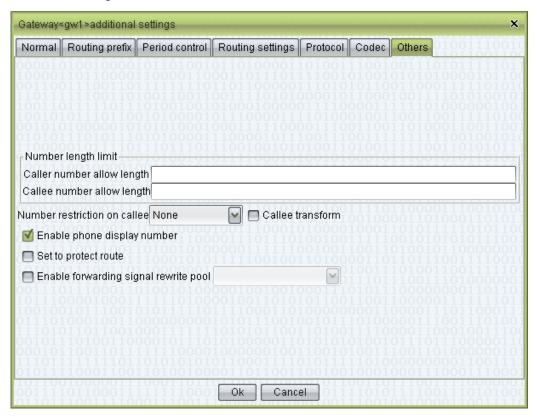
©—™ TIP

Select one codec, and then double click to add or delete. Select some codecs, and then right click to add or delete.

∭ NOTE

For specified codec, "Softswitch specified" is needed.

Additional settings > Others



Number length limit

- Caller number allowable length: the lengths of the caller numbers allowed to pass through the gateway (e.g. fill in "11, 14" to allow numbers of 11 digits or 14 digits only.)
- Callee number allowable length: the lengths of the called numbers allowed passing through the gateway.

M NOTE

Left blank to allow numbers of all length to pass through, and fill in "0" to allow no numbers to pass through.

- Number restriction on callee:
 - None: no restriction.
 - Phone number: allow call platform's phone numbers only.
 - Other number: allow call numbers except platform's phone number.
- Callee transform
- Enable phone display number: when caller is phone, check to use phone's display number, uncheck to use phone number.

M NOTE

Gateway's rewrite rule will still be used.

- Set to protect route: if set to protect route, this gateway will not be used to sort with other gateways. Between protect routes, sort order as normal. If normal gateways are not connected, the call will switch to protect routes. Protect route enable time can be set, within the time call is not connected, will be send to protect routes.
- Enable forwarding signal rewrite pool: use number in pool as caller.

Other Operations

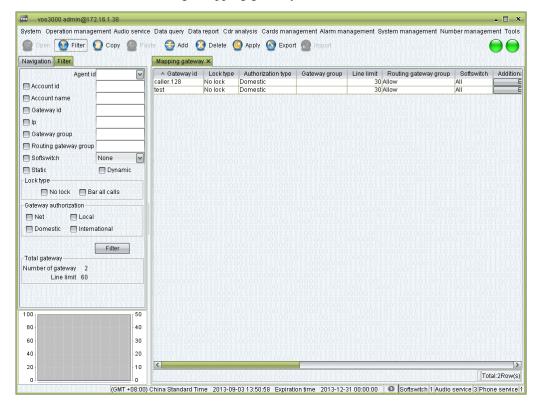
• Double-click the content of "Routing clearing account name" to open the account management page for this account.

Right-Click Menu

- Current call: open the list of "Current call" for this gateway
- Condition monitoring: monitor the gateway status and show the connection information of this gateway in the "Gateway status" page.
- Connect analysis: open "Connect analysis" sheet for this gateway.
- Interrupt analysis: open "Interrupt analysis" sheet for this gateway.
- Alarm monitoring: open "Routing gateway alarm" settings for selected gateways.
- Total gateway: get total capacity of the selected gateways.
- Filling downwards
- Random generate: to generate password.

2.5.1.2 Mapping Gateway

This function is used to manage mapping gateway.



How to Start

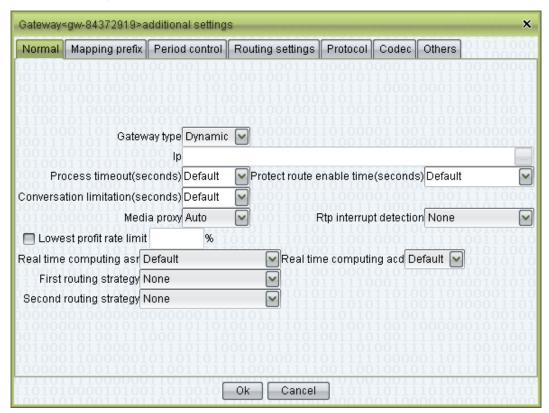
• Double-click "Navigation > Operation management > Gateway management > Mapping gateway"

Table Items

- Gateway id: see the descriptions in "Routing gateway".
- Lock type: see the descriptions in "Phone management".
- Authorization type: see the descriptions in "Phone management".
- Gateway group: set the gateway's group, used for control several gateways' total currency.
- Line limit: the number of concurrent calls allowed by the gateway.
- Routing gateway group: allow or forbidden.
- Softswitch: see the descriptions in "Routing gateway".
- Additional settings
- Ip: see the descriptions in "Additional settings".
- Account id: the number of the billing account for this mapping gateway.
- Account name: the name of the billing account for this mapping gateway.
- Configuration password: see the descriptions in "Routing gateway".
- Self service password: see the descriptions in "Routing gateway".
- Priority: for static gateway with the same IP, use this priority to match.

- Caller black/white list group: see the descriptions in "Routing gateway".
- Callee black/white list group: see the descriptions in "Routing gateway".
- Memo: comments on this gateway.

Additional settings > Normal



- Gateway type
 - Dynamic: registration is required.
 - Static: gateway mapping is achieved directly through IP addresses.
- Ip: IP addresses of mapping gateways. Multiple addresses can be specified, separated by commas.
- Process timeout: the maximum time waited after the call has reached the gateway. If the connection has not been establish within the time limit, the system server will send a reject signal to the mapping gateway.
 - Default: set by "Operation management > Softswitch management > Additional settings > System parameter > SS_MAPPINGGATEWAYTIMEOUT".
 - None: no limitation.
- Conversation limitation
 - Default: set by "Operation management > Softswitch management > Additional settings > System parameter > SS_MAXCALLDURATION".
 - None: no limitation.
- Media proxy: see the descriptions in "Routing gateway".
- RTP interrupt detection: see the descriptions in "Routing management".
- Lowest profit rate limit: this gateway will be locked if profit below this value.
- Real time computing asr: see the descriptions in "Routing management".

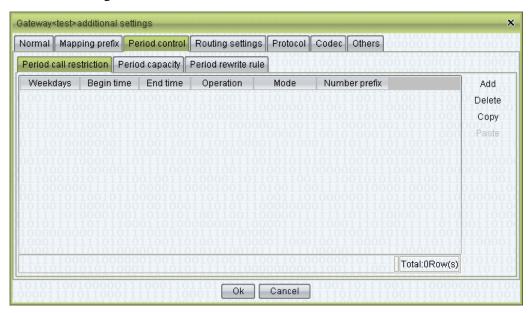
- Real time computing acd: see the descriptions in "Routing management".
- First routing strategy
 - None: System default.
 - Asr: Sort by ASR.
 - Lowest rate per second: sort by rate per second.
- Second routing strategy: see "First routing strategy".

Additional settings > Mapping prefix



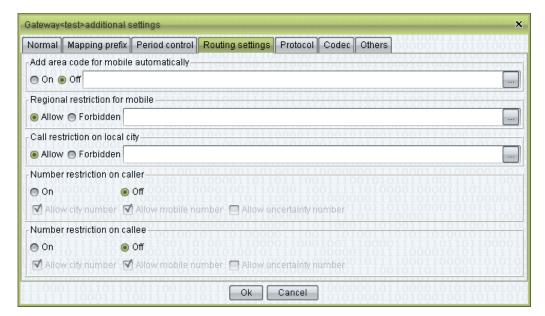
See the descriptions in "Routing gateway".

Additional settings > Period control



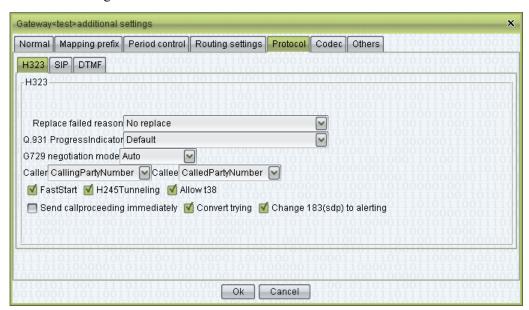
See the descriptions in "Routing gateway".

Additional settings > Routing settings



See the descriptions in "Routing gateway".

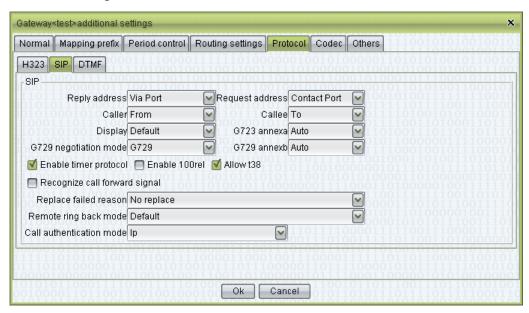
Additional settings > Protocol > H323



- Replace failed reason: specify the error message sent to the mapping gateway when the call cannot be established.
- Q.931 ProgressIndicator: see the standard reference for H323. See the descriptions in "Phone management" for details about signaling checkboxes.
- G729 negotiation mode
- Caller: CallingPartyNumber/SourceAddress/Display
- Callee: CalledPartyNumber/DestinationAddress
- FastStart: check to enable.
- H245Tunneling: check to enable.
- Allow t38: check to include T38.
- Send callproceeding immediately: check to send callproceeding when receives setup.

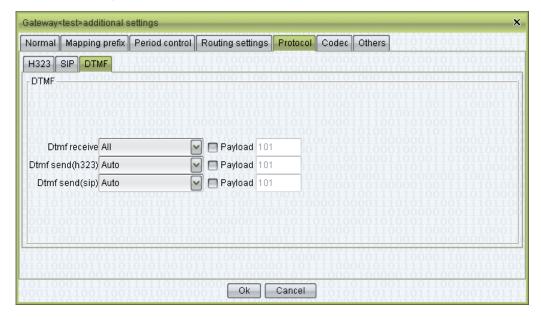
- Convert trying: check, if caller uses H323 and callee uses SIP, when callee returns Trying, VOS will send callproceeding to caller.
- Change 183(sdp) to alerting: check, if caller uses H323 and callee uses SIP, when callee returns 183 with SDP, VOS will send alerting to caller; Uncheck, VOS will send callproceeding to caller.

Additional settings > Protocol > SIP



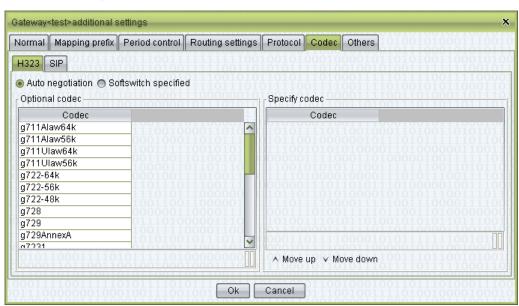
- Caller: get caller number from which field of signal.
 - From
 - Remote-Party-ID
 - Display
- Callee: get callee number from which field of signal.
 - To
 - Request-Line
- Replace failed reason: specify the error message sent to the mapping gateway when the call cannot be established.
- Remote ring back mode
 - Default: according to routing gateway.
 - 183 Session Progress + SDP: when callee ringing, send 183 Session Progress + SDP to mapping gateway.
 - 180 Alerting + SDP: when callee ringing, send 180 Alerting + SDP to mapping gateway.
- Call authentication mode
 - IP
 - IP Address and Port
 - Authenticate by Password
- Recognize call forward signal: if mapping gateway send calls in forward signal format, do recognize.

Additional settings > Protocol > DTMF



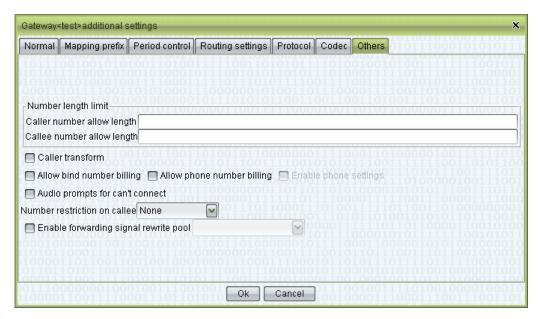
See the descriptions in "Routing gateway".

Additional settings > Codec



See the descriptions in "Routing gateway".

Additional settings > Others



See the descriptions in "Routing gateway".

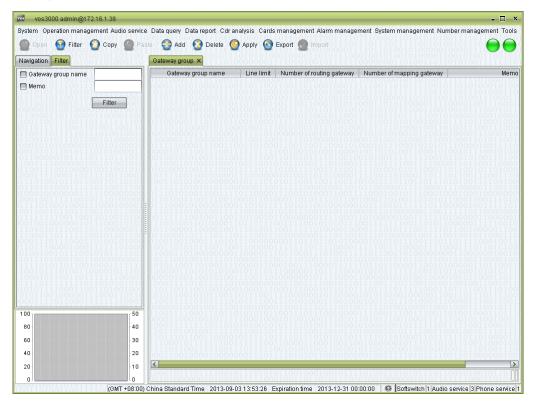
Other Operations

• Double-click the content of "Account name" to open the account management page for this account.

Right-Click Menu

2.5.1.3 Gateway Group

This function is used to define gateway groups, which is used to limit gateways during routing.



How to Start

• Double-click "Navigation > Operation management > Gateway management > Gateway group"

Table Items

- Gateway group name: the name of gateway group.
- Line limit: total capacity of the gateway group.
- Number of routing gateway: double-click to manage.
- Number of mapping gateway: double-click to manage.
- Memo

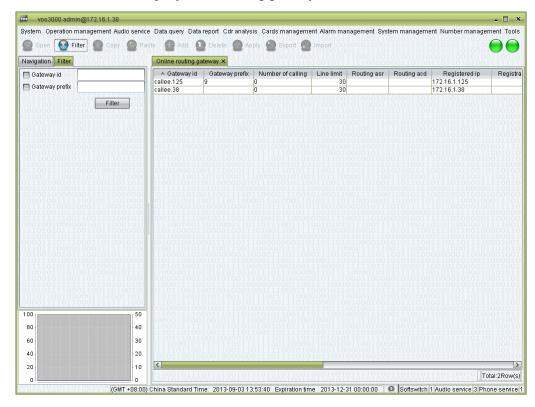
M NOTE

If phone or mapping gateway's Allow gateway groups is deleted totally, means forbidden all routing gateways.

If phone or mapping gateway's Forbidden gateway groups is deleted totally, means allow all routing gateways.

2.5.1.4 Online Routing Gateway

This function is used to query online routing gateway.



How to Start

• Double-click "Navigation > Operation management > Gateway management > Online routing gateway"

Table Items

- Gateway id: the device id of gateway.
- Gateway prefix: the prefix of gateway.
- Number of calling: the number of current sessions maintained by the gateway and the total capacity of it.
- Line limit
- Routing asr
- Routing acd
- Registered ip: the current IP of the gateway.
- Registration time: the server time of the platform's most recent registration.
- Update time: the time of the most recent confirmation that the platform is online.
- Duration: the time elapsed since the most recent registration (for dynamic gateways). (* There is no "Time elapsed" item for static gateways.)
- Encryption type: the type of encryption used by the gateway.
- Local ip
- Register name

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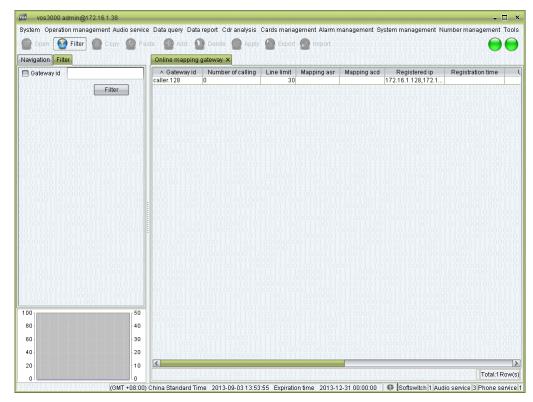
- Softswitch ip: the IP of softswitch that the gateway registered.
- Softswitch name: the name of the softswitch that the gateway registered.

Right-Click Menu

• Current call: open the "Current call" page for this gateway.

2.5.1.5 Online Mapping Gateway

This function is used to query online mapping gateway.



How to Start

• Double-click "Navigation > Operation management > Gateway management > Online mapping gateway"

Table Items

- Gateway id: the device ID of gateway.
- Number of calling
- Line limit
- Mapping asr
- Mapping acd
- Registered ip: the current IP of the gateway.
- Registration time: the server time of the platform's most recent registration.
- Update time: the time of the most recent confirmation that the platform is online.
- Duration: the time elapsed since the most recent registration (for dynamic gateways).

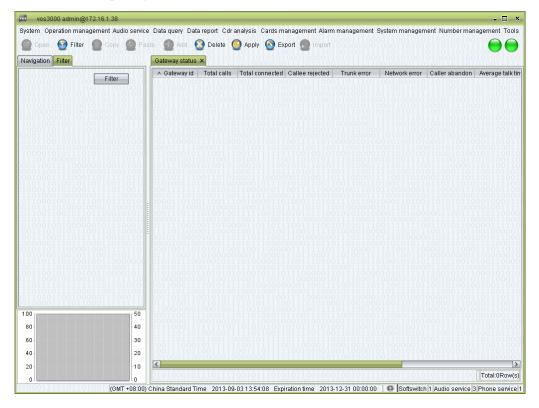
M NOTE

There is no "Time elapsed" item for static gateways.

- Encryption type: the type of encryption used by the gateway.
- Local ip
- Softswitch ip: the IP of softswitch that the gateway registered.
- Softswitch name: the name of the softswitch that the gateway registered.

2.5.1.6 Gateway Status

This function is query gateway status.



How to Start

• Double-click "Navigation > Operation management > Gateway management > Gateway status"

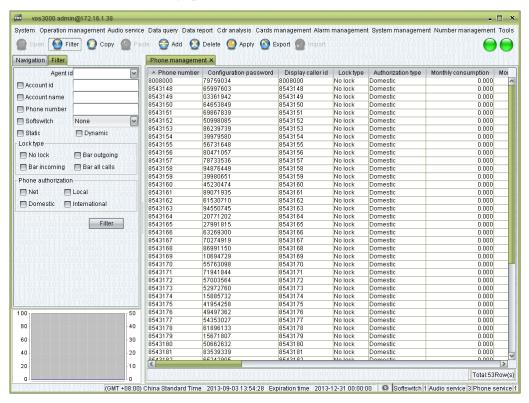
Table Items

- Gateway id
- Total calls
- Total connected
- Callee rejected
- Trunking error
- Network error
- Caller abandon
- Average talk time
- Total talk time
- Ip
- Starting time

2.5.2 Phone Operation

2.5.2.1 Phone Management

This function is used to manage phone.



How to Start

• Double-click "Navigation > Operation management > Phone operation > Phone management"

Table Items

- Phone number: the number used as caller ID and the called number for the terminal.
- Configuration password: the password used for terminal registration (For H32, will be the H323ID)
- Display caller id: the caller ID shown at the called end.
 - "Remote-Party-ID" to use the number of the original caller.
 - "Display" to use number in "From" field of SIP message.
- Lock type:
 - No lock: none restrictions to the terminal.
 - Bar outgoing: the terminal is not allowed to call out.
 - Bar incoming: the terminal is not allowed to be called.
 - Bar all calls: the terminal is denied from any service.
- Authorization type: when a call is initiated by this number, this type will be compared with the "Rate Type" of the rate. If the "Rate type" of the matching rate has higher precedence than the type specified here, the call will be denied.

☐ NOTE

The precedence of authorization is: International call > Domestic call > Local call > Net call.

- Monthly consumption
- Monthly min: consumption at least per month.

MOTE

At the beginning of the month, system will calculate the cost of last month. If the phone's consumption less than the value, system will take off the difference.

- Monthly max: consumption at most per month.
- Monthly service fee: rent fee.

M NOTE

Take off at the beginning of month.

- Billing rate: private rate of the phone.
- Supplementary service
- Advanced configuration
- Rewrite rule: rewrite rules for the called number.

©[™] TIP

Rewrite rules can be used to implement dial local number without add area code, please refer to "rewrite rule" chapter.

- Routing gateway group: allow routing gateways.
- Account id: editable. Designating the billing account for this terminal.

NOTE

Rate of this account will be used to bill and perform authorization checks upon calling. The operator that edits this number must have authorizations to manipulate phones of the concerned account.

• Account name: non-editable. When the account number is correctly set, the corresponding name of the account will be shown here.

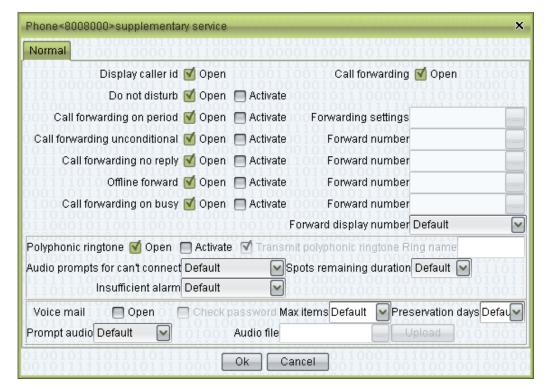
MINOTE

Changing the account number will cause changes to the account and the number segment restrictions of its agent.

Double-click to the account management page for this account.

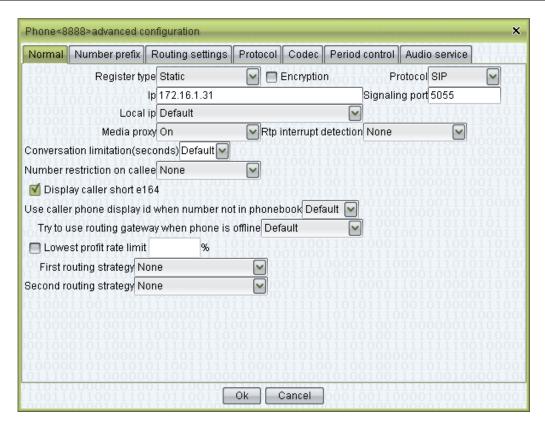
- Softswitch
- Reverse charging: if "On", any call to the number will be charge on this account, instead of the caller.
- Self service password: the password used by users to login from the web and query bills. When left blank, the "Configuration password" will be used.
- Call in limitation: when phone is called, maximum of incoming calls.
- Call out limitation: when phone is calling, maximum of outgoing calls.
- Line limit: the maximum number of channels for this phone, which limits the maximum sum of incoming and outgoing calls processed simultaneously.
- Directory: number of phone's phonebook.
- Directory limit: max number of phone's phonebook.
- Caller black/white list group: see the descriptions in "Routing gateway".
- Callee black/white list group: see the descriptions in "Routing gateway".
- Memo: descriptions to this phone.

Supplementary service:



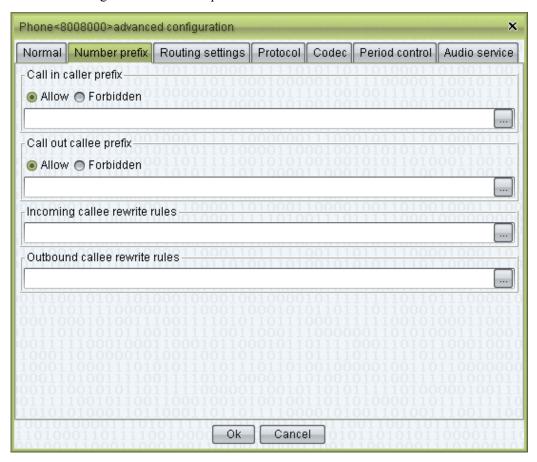
- Display caller id: display the caller's ID.
- Call forwarding: forward the calls.
- Do not disturb: reject all calls.
- Call forwarding unconditional: forward all calls to specified number.
- Call forwarding no reply: forward calls to specified number when the call is not answered or the phone is out of connection.
- Call forwarding on busy: forward incoming calls when the phone is busy.
- Call forwarding on period: forward calls in specified time period.
- Forward display number:
 - Default: Use "Softswitch management > Additional settings > System parameter > SS CALLFORWARDUSINGORIGINALCALLER".
 - Original caller: display caller's number.
 - Local number: display the phone's number.

Advanced configuration > Normal

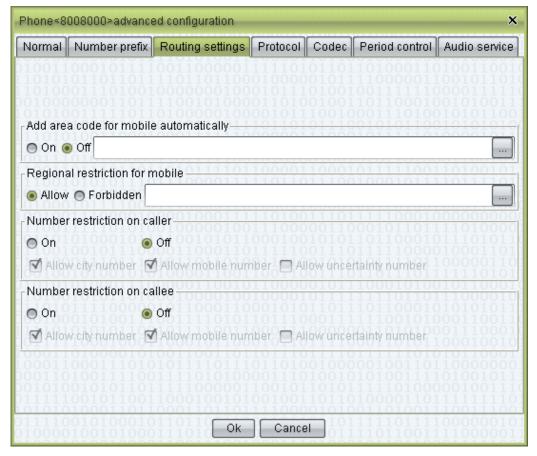


- Register type
 - Static: use IP to access.
 - Dynamic: use register to access.
 - Mapping gateway: use gateway id to access.
- Display caller short e164: if caller has short number in account's directory or phone's directory, then the short number will be shown.
- Try to use routing gateway when phone is offline: when the phone being called is offline, try to find a matching route in the routing gateway.
 - Default: set by "Operation management > Softswitch management > Additional settings > System parameter > SS REDIRECTOFFLINEPHONETOGW".
 - On: try routing gateway.
 - Off: won't' try routing gateway.

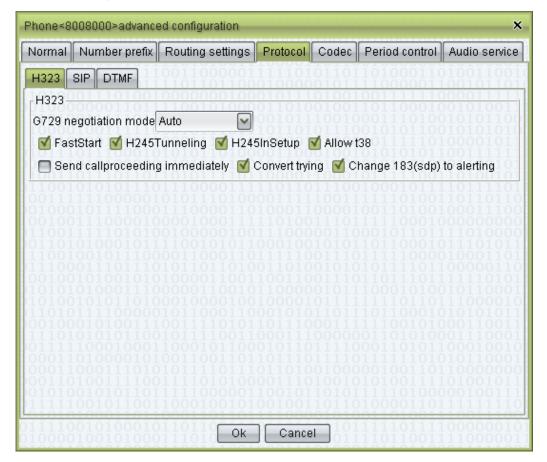
Advanced configuration > Number prefix



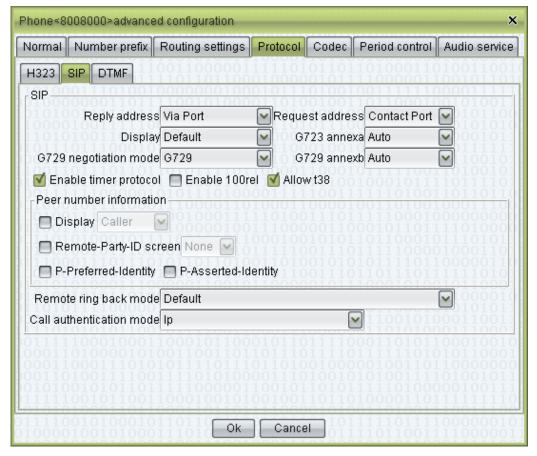
Advanced configuration > Routing settings



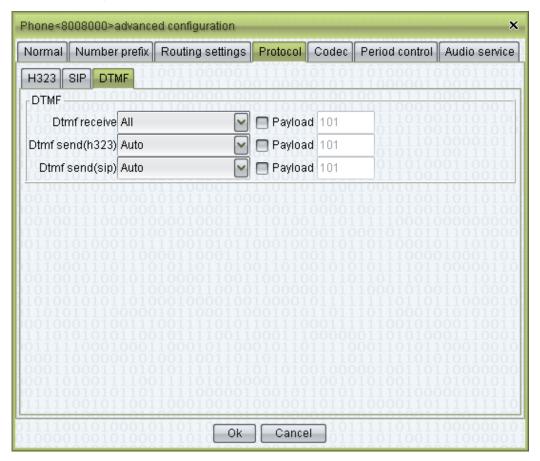
Advanced configuration > Protocol > H323



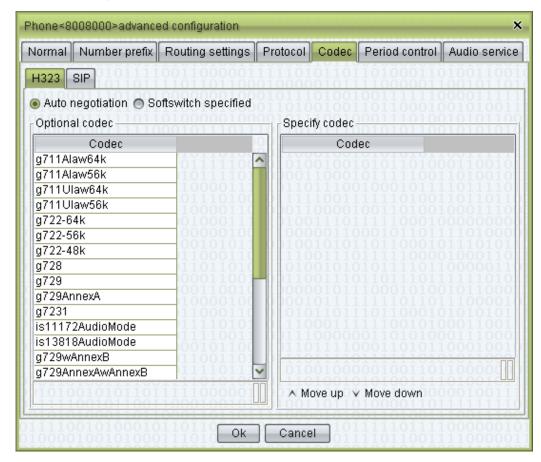
Advanced configuration > Protocol > SIP



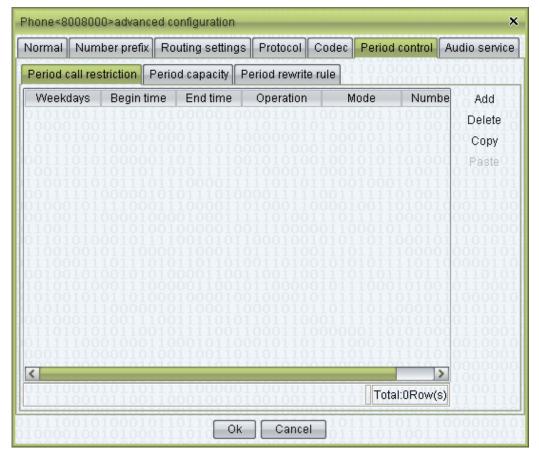
Advanced configuration > Protocol > DTMF



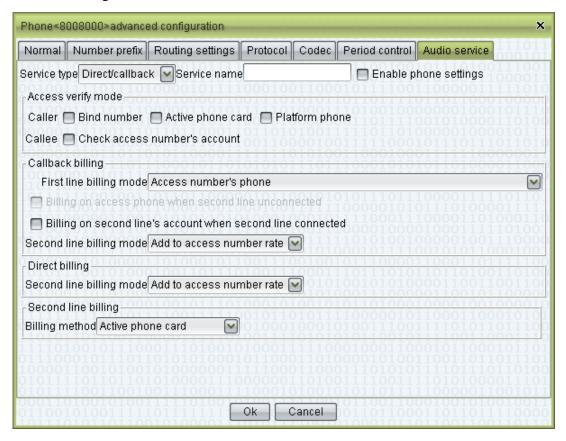
Advanced configuration > Protocol > Codec



Advanced configuration > Period control



Advanced configuration > Audio service



Other Operations

• Double-click the content of "Account name" to open the account management page for this account.

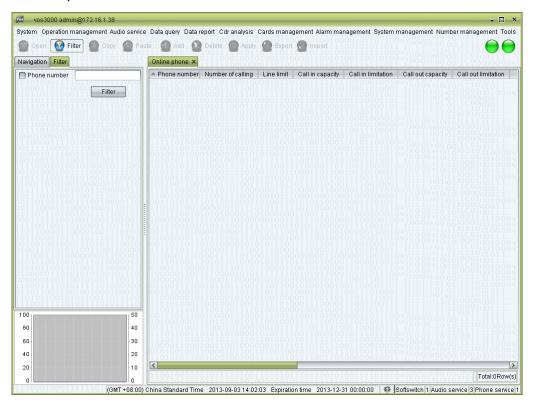
Contents

2.5.2.2 Online Phone

This function is used to query online phone.

M NOTE

Static phone is not shown.



How to Start

Double-click "Navigation > Operation management > Phone operation > Online phone"

Table Items

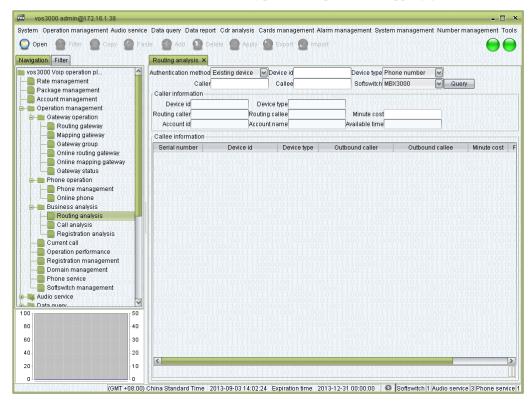
- Phone number: the number used by the terminal at registration (used as the caller ID and the called number).
- Number of calling
- Line limit
- Call in capacity
- Call in limitation
- Call out capacity
- Device id: Model of the device.
- Protocol: the protocol used at registration (SIP or H323).
- Registered ip: the remote address of the terminal used at the registration. If the connection is establish through a firewall, this address may be a local address.
- Registration time: the server time of the terminal's most recent registration.
- Update time: the time of the most recent confirmation that the terminal is online.
- Duration: the time elapsed since the most recent registration.

- Encryption type: the type of encryption used by the gateway.
- Local ip
- Softswitch ip: the information on the softswitch that the gateway registered.
- Softswitch name

2.5.3 Business Analysis

2.5.3.1 Routing Analysis

This function is used to simulate the routing process of phone or mapping gateway.



How to Start

• Double-click "Navigation > Operation management > Business analysis > Routing analysis"

Input Items

- Authentication method:
 - Existing device: phone or gateway.
 - Static ip: IP of mapping gateway.
- Device id: phone number or gateway ID depends on device type.
- Device type:
 - Phone number
 - Mapping gateway
- Caller
- Callee
- Softswitch

Output Items

Caller information

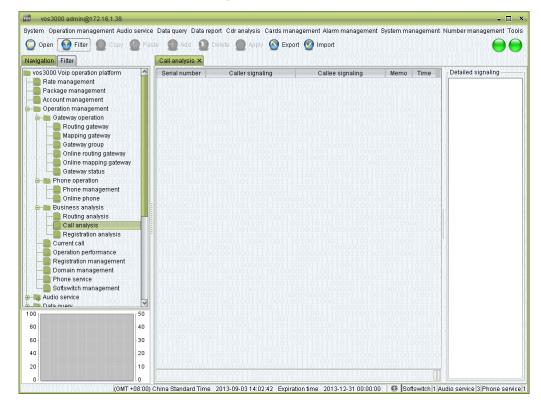
- Device id: actual caller device.
- Device type
- Routing Caller: caller after caller device's rewrite rule.
- Routing Callee: callee after caller device's rewrite rule.
- Minute cost: calculate by billing account's fee rate.
- Account id: billing account.
- Account name
- Available time: maximum duration.

Callee information

- Serial Number: routing sequence.
- Device id
- Device type
- Outbound caller: caller after callee device's rewrite rule.
- Outbound callee: callee after callee device's rewrite rule.
- Minute cost: calculate by callee device's fee rate.
- Rate deviation: difference between caller device's fee rate and callee device's cost.
- Detail: like prefix, priority, score and so on.

2.5.3.2 Call Analysis

This function is used to analysis call problem.



How to Start

• Double-click "Navigation > Operation management > Business analysis > Call analysis"

Table Items

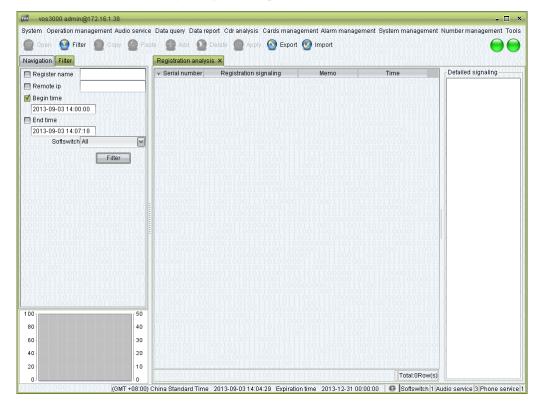
- Serial number: the serial number of signaling interaction.
- Caller signaling: content of signaling interaction with caller.
- Callee signaling: content of signaling interaction with callee.
- Memo: message of softswitch.
- time: time of signaling.

Other Operations

- Export: save the signaling as file.
- Import: import the signaling file to do analysis.

2.5.3.3 Registration Analysis

This function is used to analysis registration problem.



How to Start

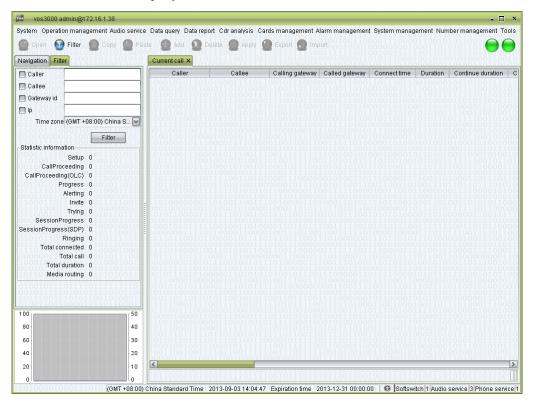
• Double-click "Navigation > Operation management > Business analysis > Registration analysis"

Table Items

- Serial number: the serial number of signaling interaction.
- Registration signaling: content of signaling interaction.
- Memo: message of softswitch.
- time: time of signaling.

2.5.4 Current Call

This function is used to query current call.



How to Start

• Double-click "Navigation > Operation management > Current call"

Table Items

- Caller: the number of the caller.
- Callee: the number of the called.
- Calling gateway: the gateway between the caller and the softswitch.
- Called gateway: the gateway between the called and the softswitch.
- Connect time: the time elapsed since the establishment of the connection.
- Duration
- Continue duration: time elapsed from platform received to call connected.
- Connect delay: time elapsed from send call to routing response.
- Calling code: the voice encoding used in the session.
- Caller audio traffic: the voice traffic of caller.
- Callee audio traffic: the voice traffic of callee.
- Caller coding: voice encodings supported by the caller (acquired by analyzing the signals).
- Callee coding: voice encodings supported by the called (acquired by analyzing the signals).
- Caller information: the IP and RTP IP of the caller.

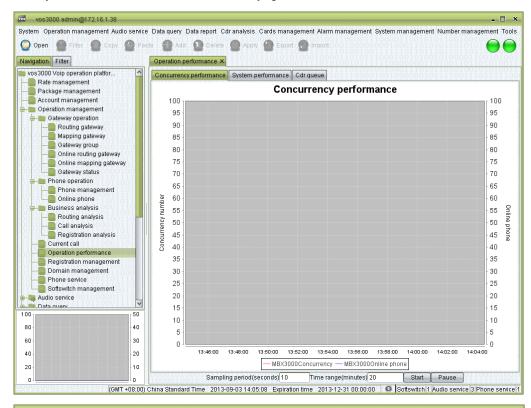
- Callee information: the IP and RTP IP of the callee.
- Caller dtmf: the DTMF mode of the caller.
- Callee dtmf: the DTMF mode of the called.
- Media routing: whether the RTP is routed by servers.
- Calling device name: the manufacturer of the caller device.
- Called device name: the manufacturer of the callee device.
- Caller encryption type: the encryption used by the caller.
- Callee encryption type: the encryption used by the called.
- Softswitch ip: the IP address of the softswitch.
- Softswitch name: the name of the softswitch.

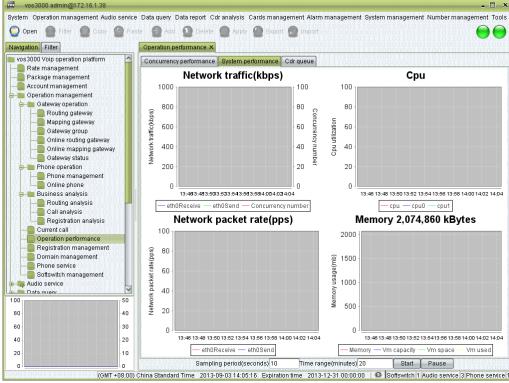
2.5.5 Concurrency Performance

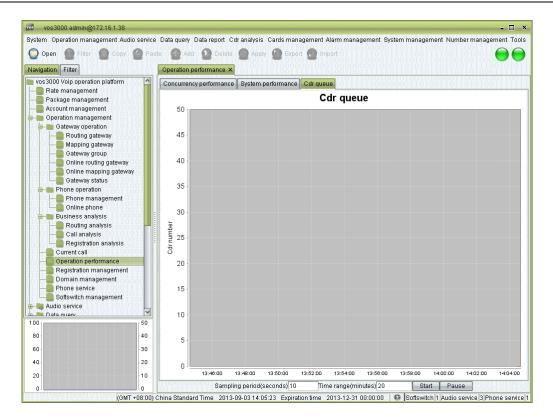
This function is used to monitor system performance.

M NOTE

System level information can not been seen by agent.





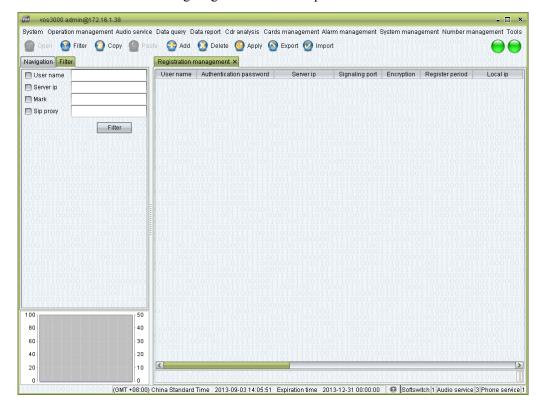


How to Start

• Double-click "Navigation > Operation management > Concurrency performance"

2.5.6 Registration Management

This function is used to manage registration to other platform.



How to Start

Double-click "Navigation > Operation management > Registration management"

Table Items

- User name
- Authentication password
- Server ip
- Signaling port
- Encryption
- Register period
 - Default: set by "Operation management > Softswitch management > Additional settings > System parameter > SS_SIPREGISTEREXPIRE".
 - Auto negotiation: decide by server.
- Local ip
- Local port
- Softswitch
- Mark: identifier of registration information.

M NOTE

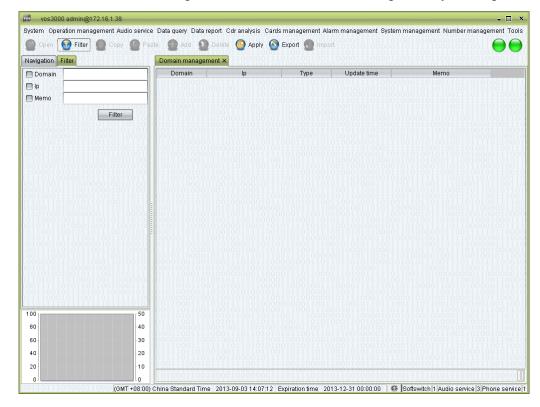
When routing gateway type is registration, use mark as registration identification.

• Registration time

- Update time
- Actual register cycle
- Last error: error of last time.
- Authentication user: username field of SIP 401/407 message, use user name as default.
- Host name: server address field of SIP REGISTER/FROM/TO, use server ip as default.
- SIP proxy: address of SIP Route.
- User-Agent: field of SIP User-Agent, use VOS3000 + version as default.
- Type
 - Third-party: created by third party.
 - BLANK: created by system.

2.5.7 Domain Management

This function is used to manage domain, which is used for Routing Gateway and Registration.



How to Start

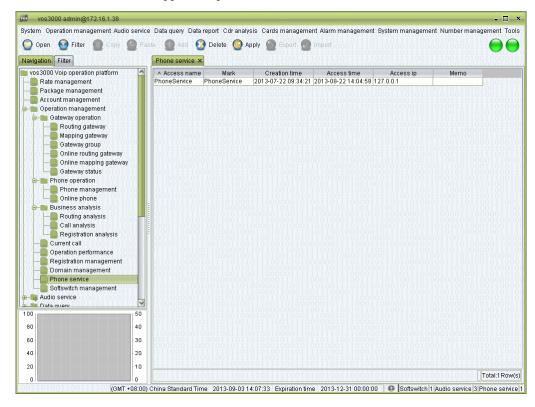
• Double-click "Navigation > Operation management > Domain management"

Table Items

- Domain: the domain name of routing gateway or registration.
- Ip: Domain's IP.
- Type
 - Dynamic: update DNS every several minutes, can be set by "System management > System parameter > SERVER_DNS_UPDATE_INTERVAL".
 - Static: won't check DNS.
- Update time: DNS last update time.
- Memo

2.5.8 Phone Service

This function is used to support KVphone interface.

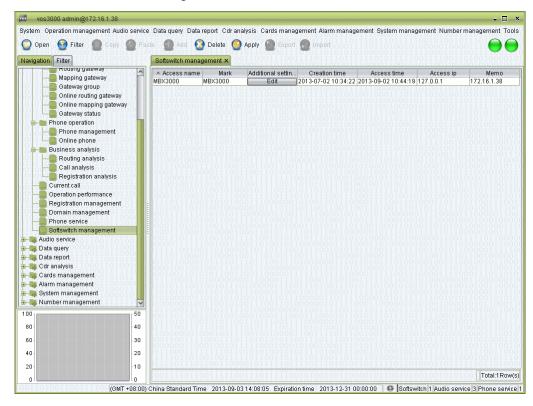


How to Start

• Double-click "Navigation > Operation management > Phone service"

2.5.9 Softswitch Management

This function is used to manage softswitch.



How to Start

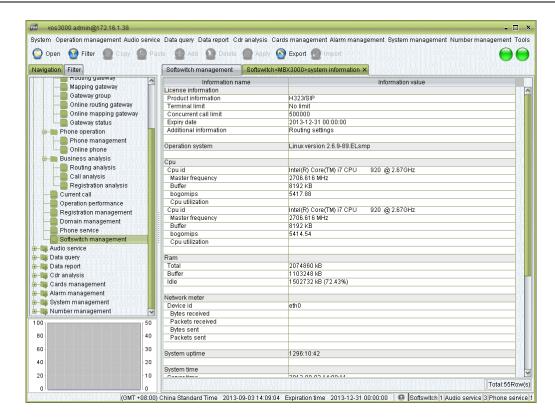
• Double-click "Navigation > Operation management > Softswitch management"

Table Items

- Access name: the name of the Softswitch.
- Mark
- Additional settings
- Creation time: the time of first access to the softswitch.
- Access time: the most recent access to the softswitch.
- Access ip: the IP address of the softswitch.
- Memo: comments on the softswitch.

Right-Click Menu

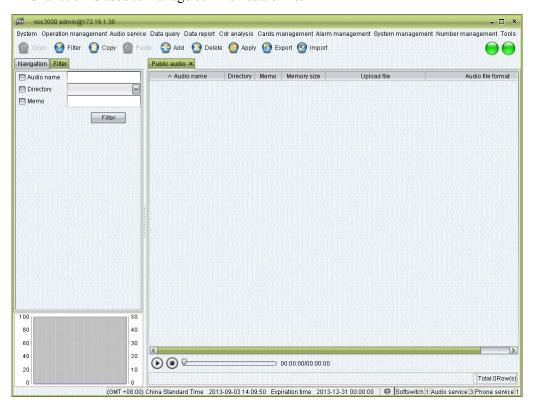
- Synchronize data: synchronize settings of the softswitch with VOS3000.
- Current call: current sessions on the softswitch.
- Registration track
- System information: information about the softswitch.



2.6 Audio Service

2.6.1 Public Audio

This function is used to manage common audio file.



How to Start

• Double-click "Navigation > Audio service > Public audio"

Table Items

Audio name

M NOTE

Special characters like "/*?" <> |!#%\^&" and ".." are not allowed for the name.

- Language directory: the language catalogue of the audio.
- Memo: comments on the voice file.
- Memory size: display of the size of the voice file. ("0" indicates the file has not been uploaded yet.)
- Upload file: specify the local path of the voice file for upload.
- Audio file format: display the format of the uploaded voice file.

Toolbar

- Filter: filter the items.
- Copy: copy the selected audio information.

\square NOTE

The actual audio file data will not be copied.

- Add: add contents to the service.
- Delete: delete selected contents.
- Import: import voice files in batch mode. The voices will be automatically named according to their file names.

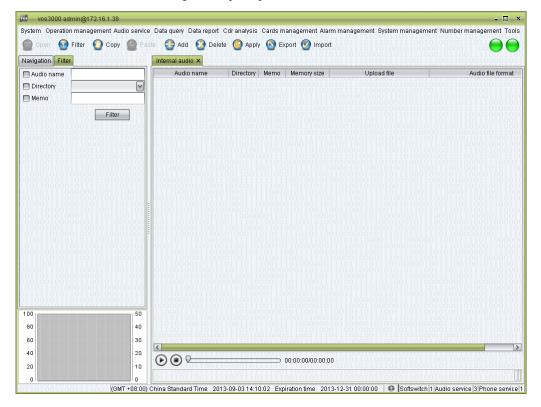


CAUTION

Supported formats include WAV files (8 KHz, 16 bit, monophonic).

2.6.2 Internal Audio

This function is used to manage error prompt audio file.



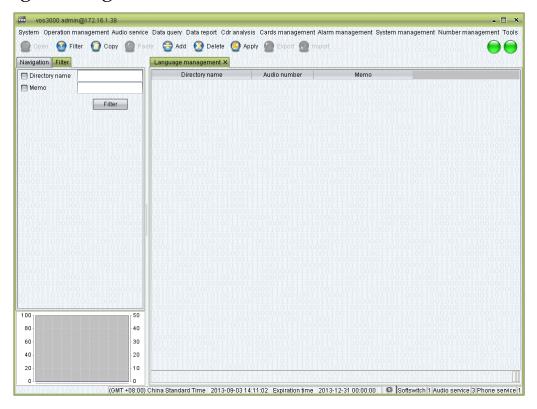
How to Start

• Double-click "Navigation > Audio service > Internal audio"

Table Items

See the descriptions in "Public audio".

2.6.3 Language Management



How to Start

• Double-click "Navigation > Audio service > Language management"

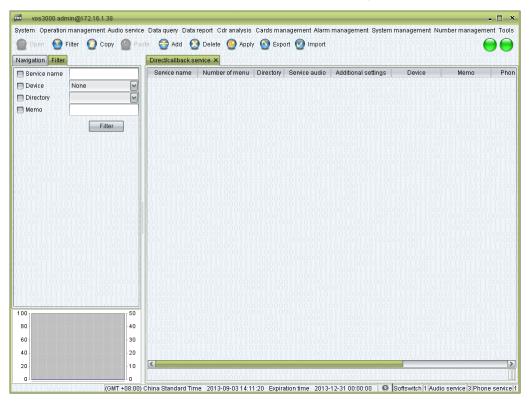
Table Items

- Directory name: the name of the language catalogue.
- Memo: information related to the language catalogue.

2.6.4 Direct/Callback

2.6.4.1 Direct/Callback Service

This function is used to define direct/callback service and billing.

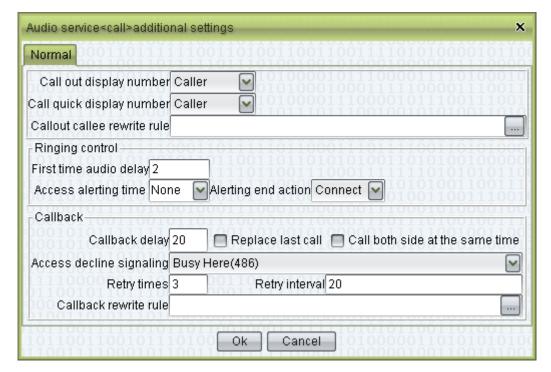


How to Start

Double-click "Navigation > Audio service > Direct/Callback > Direct/Callback service"

Table Items

- Service name: name of audio service, used in "Phone management > Advanced configuration > Audio service"
- Number of menu: number of IVR menu.
- Language directory: service's language.
- Service audio: service's private audio.
- Additional settings: see below.
- Device: service's devices.
- Memo
- Phone number: the number of phone which uses this audio service.
- Caller number group of record: record the call if caller is in the number group when second line is connected.
- Callee number group of record: record the call if callee is in the number group when second line is connected.



- Call out display number: "Ivr number" or "Caller".
- Call quick display number: "Ivr number" or "Caller" number is sent the called for quick calls.
- Call out callee rewrite rule: rewrite rules of the called number for calls initiated by the IVR.

Ringing control

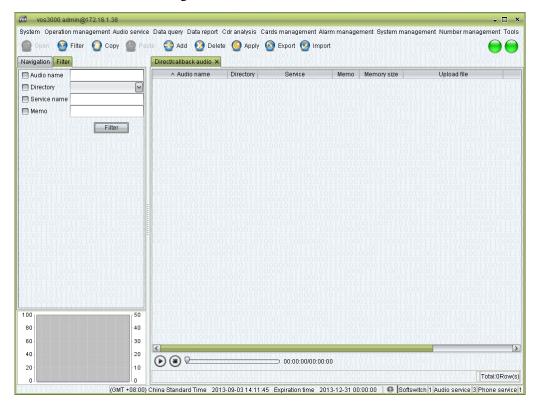
- First time audio delay: set the delay after which the voice will be played upon access to the IVR (Unit: second).
- Access alerting time: maximum time for call-in ringing (Unit: second).
- Alerting end action: "Connect" or "Hang up".

Callback

- Callback delay: time waited before calling back (Unit: second).
- Replace last call
- Call both side at the same time
- Access decline signaling: specify the rejection signal for IVR callback.
- Retry times: the number of retries for unsuccessful callback.
- Retry interval: the time interval between two retries (Unit: second).
- Callback rewrite rule: the rewrite rules applied to the called number during callback.

2.6.4.2 Direct/Callback Audio

This function is used to manage direct/callback's audio.



How to Start

Double-click "Navigation > Audio service > Direct/Callback > Direct/Callback audio"

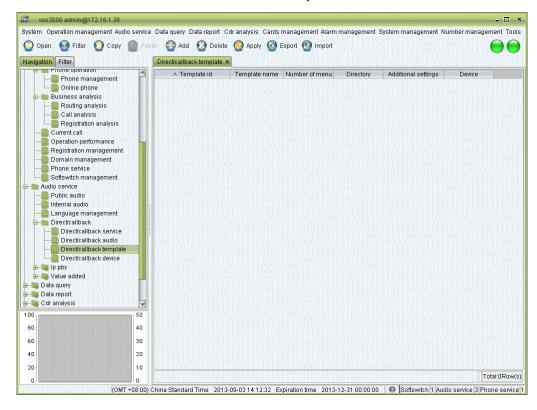
Table Items

See "Public audio".

• Service: audio belong to which service, blank means all services can use this audio.

2.6.4.3 Direct/Callback Template

This function is used to define direct/callback's template.



How to Start

• Double-click "Navigation > Audio service > Direct/Callback > Direct/Callback template"

Table Items

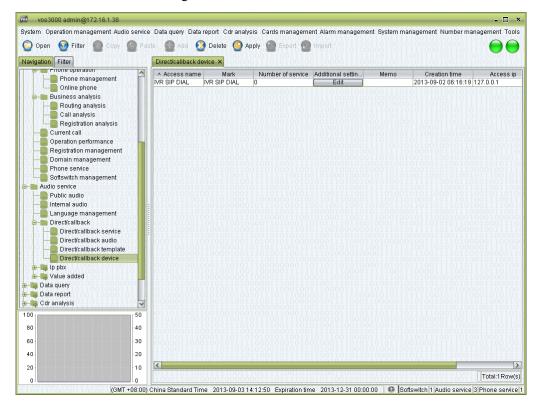
- Template id
- Template name
- Number of menu
- Language directory
- Additional settings
- Device

Others

• Template is used to configure service, right click to select template and apply to service.

2.6.4.4 Direct/Callback Device

This function is used to manage direct/callback device.



How to Start

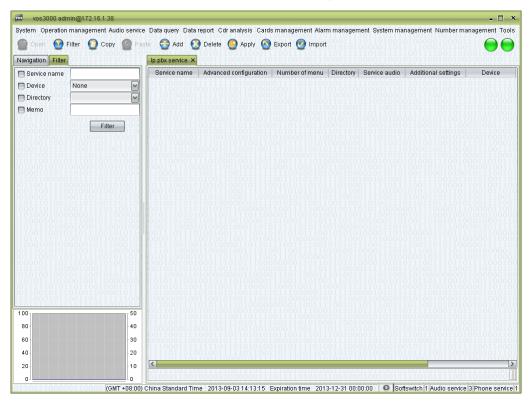
Double-click "Navigation > Audio service > Direct/Callback > Direct/Callback device"

Contents

2.6.5 IP PBX

2.6.5.1 IP PBX Service

This function is used to define IP PBX service and billing.



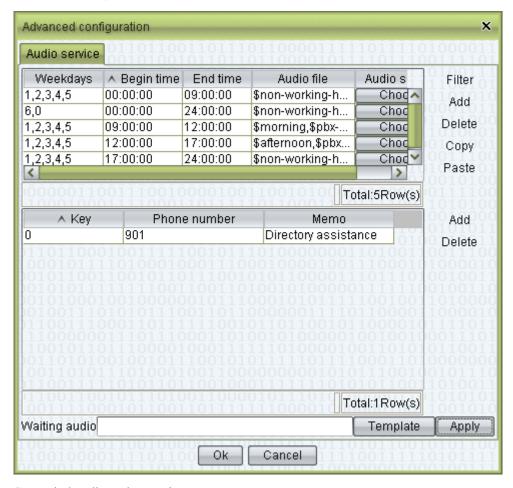
How to Start

• Double-click "Navigation > Audio service > Ip pbx > Ip pbx service"

Table Items

See "Direct/Callback service".

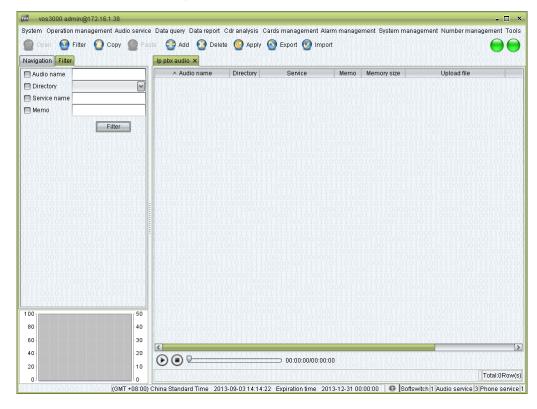
Advanced configuration



Set period audio and operations.

2.6.5.2 IP PBX Audio

This function is used to manage IP PBX's audio.



How to Start

• Double-click "Navigation > Audio service > Ip pbx > Ip pbx audio"

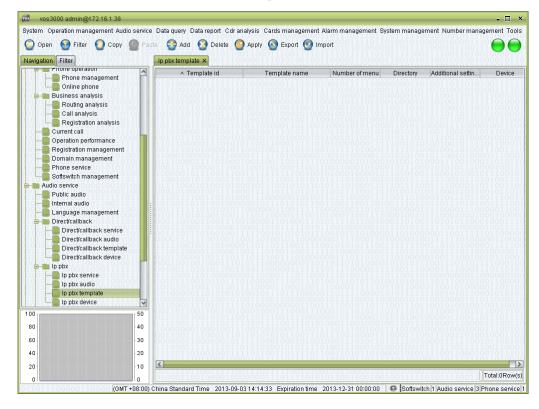
Table Items

See "Public audio".

• Service: audio belong to which service, blank means all services can use this audio.

2.6.5.3 IP PBX Template

This function is used to define IP PBX's template.



How to Start

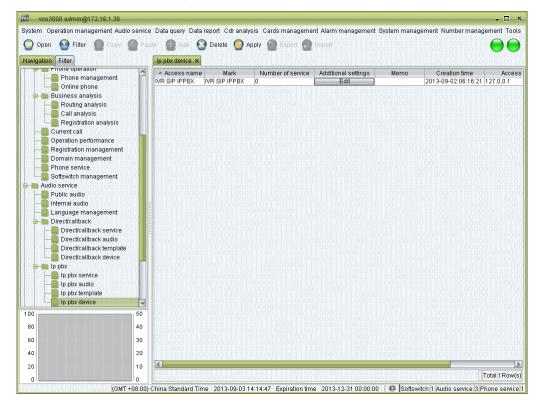
• Double-click "Navigation > Audio service > Ip pbx > Ip pbx template"

Table Items

See "Direct/Callback template".

2.6.5.4 IP PBX Device

This function is used to manage IP PBX device.



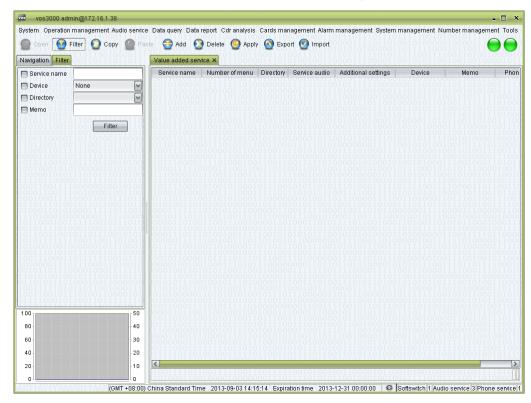
How to Start

• Double-click "Navigation > Audio service > Ip pbx > Ip pbx Device"

2.6.6 Value Added

2.6.6.1 Value Added Service

This function is used to define Value Added service and billing.



How to Start

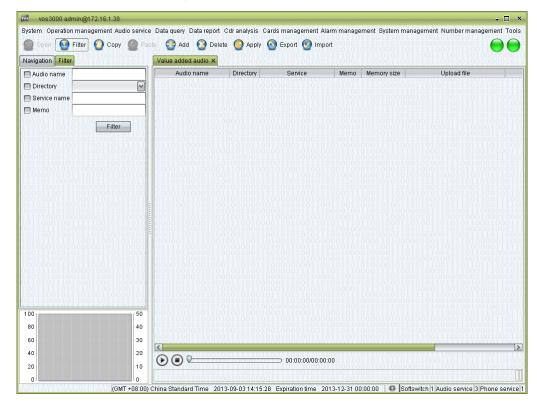
• Double-click "Navigation > Audio service > Value added > Value added service"

Table Items

See "Direct/Callback Service".

2.6.6.2 Value Added Audio

This function is used to manage Value Added audio.



How to Start

• Double-click "Navigation > Audio service > Value added > Value added audio"

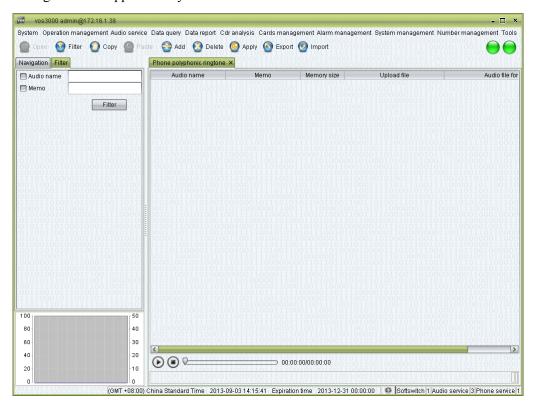
Table Items

See "Public audio".

• Service: audio belong to which service, blank means all services can use this audio.

2.6.6.3 Phone Polyphonic Ringtone

This function is used to manage polyphonic ringtone audio, which is used in "Phone management > Supplementary service".



How to Start

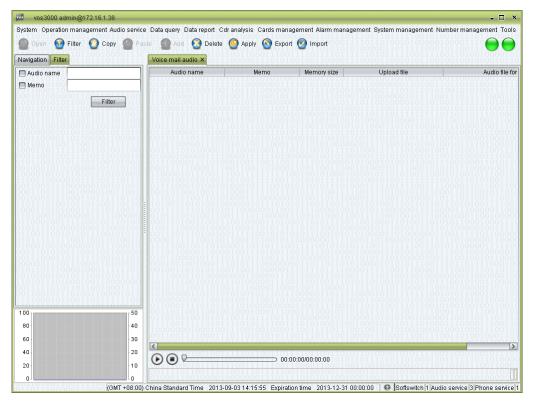
• Double-click "Navigation > Audio service > Value added > Phone polyphonic ringtone"

Table Items

See "Public Audio".

2.6.6.4 Voice Mail Audio

This function is used to manage voice mail audio, which is used in "Phone management > Supplementary service".



How to Start

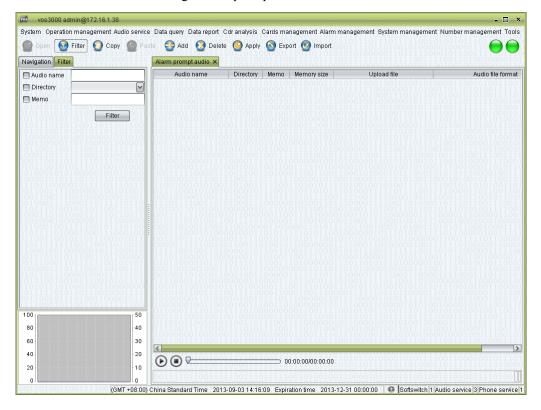
• Double-click "Navigation > Audio service > Value added > Voice mail audio"

Table Items

See "Public audio".

2.6.6.5 Alarm Prompt Audio

This function is used to manage alarm prompt audio.



How to Start

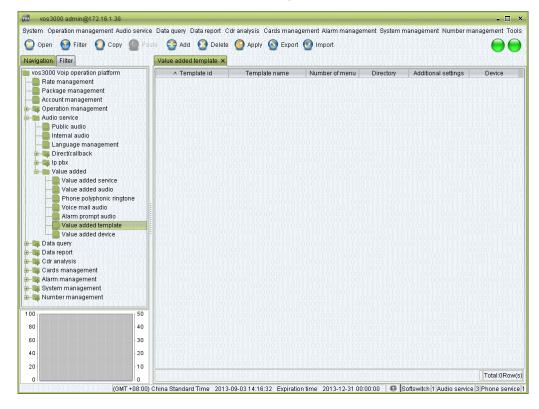
• Double-click "Navigation > Audio service > Value added > Alarm prompt audio"

Table Items

See "Public audio".

2.6.6.6 Value Added Template

This function is used to define Value Added template.



How to Start

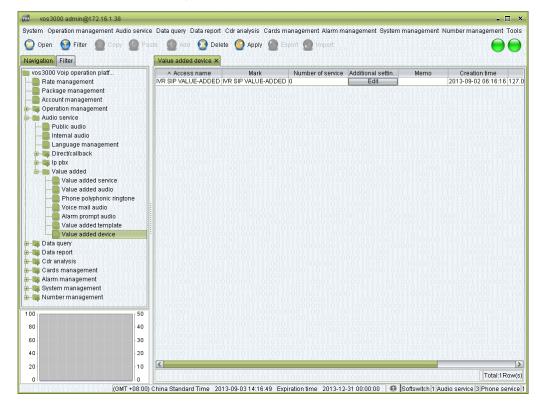
Double-click "Navigation > Audio service > Value added > Value added template"

Table Items

See "Direct/Callback template".

2.6.6.7 Value Added Device

This function is used to manage Value Added device.



How to Start

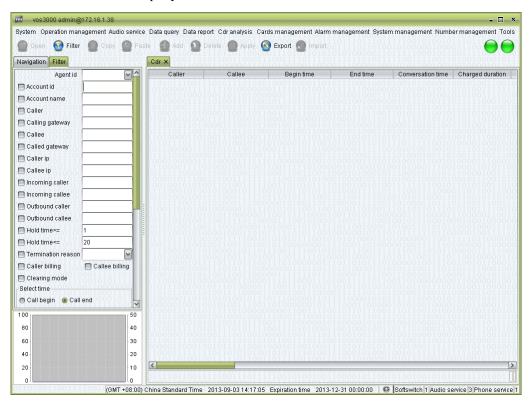
Double-click "Navigation > Audio service > Value added > Value added device"

2.7 Data Query

Historical data is independent, won't be affected by configurations, e.g. delete accounts won't remove account's CDR.

2.7.1 CDR

This function is used to query CDR.



How to Start

• Double-click "Navigation > Data query > Cdr"

Table Items

By default, the system displays 1000 records every page. This number can be changed in "System parameter > SERVER_QUERY_ONE_PAGE_SIZE".

- Caller: the phone number of the caller.
- Callee: the phone number of the caller.
- Begin time: the time when the call is initiated.
- End time: the time the call lasts.

M NOTE

In Normal Mode, End Time is begin time + conversation time.

In Clearing Mode, End Time is the actual stop time.

Accuracy of billing time makes the difference, e.g. call from 201304018:13:34:40.002 to 201304018:13:34:41.003, billing duration 1.001 second, according to accuracy should treat as 2 second, and display 201304018:13:34:42.002.

- Conversation time: Actual duration.
- Charged duration: the time used for billing, which is calculated according the Billing Cycle specified in rate policies.
- Call charges: the fee charged for this call.
- Call expense: the cost of delivering this call.
- Termination reason: see Appendix for details.
- Hangup side
- Calling gateway: the ID of the gateway between the caller and the Softswitch.
- Called gateway: the ID of the gateway between the called and the Softswitch.
- Caller ip: the IP address of the caller.
- Callee ip: the IP address of the called.
- Account name: the name of the account used for billing this call.
- Account id: the number of the account used for billing this call.
- Agent id
- Call type: "Network", "Local", "Domestic" or "International".

M NOTE

Call type depends on the matched fee rate's Rate Type.

- Area prefix: the prefix used for billing this call.
- Incoming caller: Original caller number sent to server.
- Incoming callee: Original callee number sent to server.
- Outbound caller: the caller number sent to the called after the application of rewrite rules.
- Outbound callee: the called number sent to the called after the application of rewrite rules.
- Calling device name
- Called device name
- Package duration
- Package charges
- Billing method
 - By caller: billing on caller account.
 - By callee: billing on callee account.
- Charge mode
- Continue duration: Time elapsed from platform received to call connected.
- Connect delay (PDD): Time elapsed from send call to routing response.

MOTE

PDD is defined as the time from send call to callee to receive signal (switch routing gateway will recalculate), see detail below:

Callee is SIP

- 1. Receive callee's 180/200
- 2. Receive callee's 486/600
- 3. If callee is phone, callee's signal contains SDP

Contents

 If callee is routing gateway and enabled "Stop Switch Gateway After Receive SDP", callee's signal contains SDP

Callee is H323

- 1. Receive callee's Progress/Alerting/Connect
- 2. Receive callee's ReleaseComplete (UserBusy)
- 3. Callee is phone, callee's Q931 contains faststart or H245 contains openlogicalchannel
- 4. Callee is routing gateway and enabled "Stop Switch Gateway After OLC", callee's Q931 contains faststart or H245 contains openlogicalchannel

Media Proxy Enabled

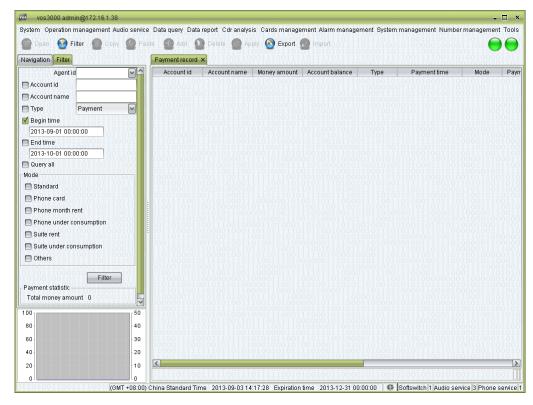
- 1. Callee is phone, receive callee's RTP
- 2. Callee is routing gateway and enabled "Stop Switch Gateway when RTP Start", receive callee's RTP

Right-Click Menu

- Corrected time: Correction of the start time. Only integers are supported (Unit: second)
- Call analysis: Open the "Call analysis" page.

2.7.2 Payment Record

This function is used to query payment.



How to Start

• Double-click "Navigation > Data query > Payment record"

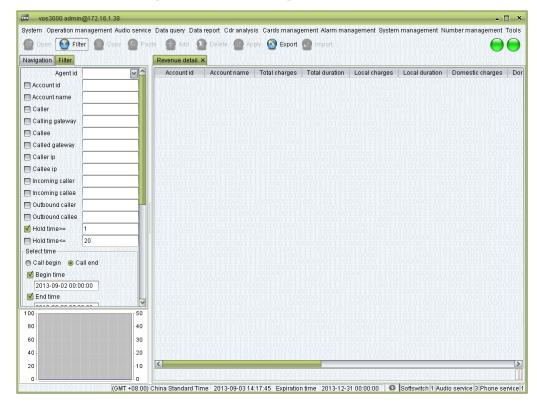
- Account id
- Account name
- Payment amount: the amount.
- Account balance: the balance after payment.
- Payment type: "Create Account", "Credit" or "Payment".
- Payment time: Time of the payment.
- Mode: Method of the payment.
- Payment user: the name of the user that fulfills this payment.
- Memo: Comments on the payment.
- Agent id
- Agent name
- Serial number

Contents

2.7.3 Bill Query

2.7.3.1 Revenue Details

This function is used to query account's consumption.



How to Start

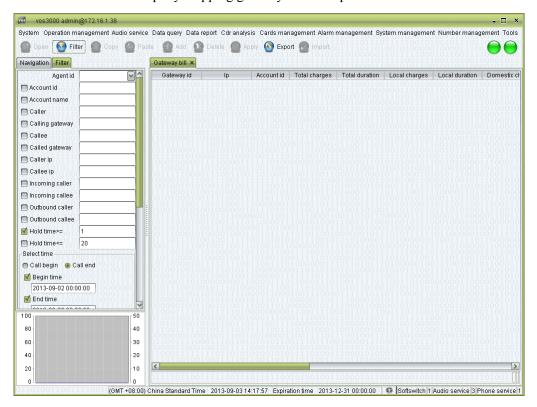
• Double-click "Navigation > Data query > Bill query > Revenue details"

- Account id
- Account name
- Total charges
- Total duration
- Local charges: total charge of CDRs which call type is Local.
- Local duration: total duration of CDRs which call type is Local.
- Domestic charges: total charge of CDRs which call type is Domestic.
- Domestic duration: total duration of CDRs which call type is Domestic.
- International charges: total charge of CDRs which call type is International.
- International duration: total duration of CDRs which call type is International.
- Intranet charges: total charge of CDRs which call type is Net.
- Intranet duration: total duration of CDRs which call type is Net.
- Total package: total charge of package's free money amount.
- Package duration: total duration of package's free duration.

• Number of CDR

2.7.3.2 Gateway Bill

This function is used to query mapping gateway's consumption.

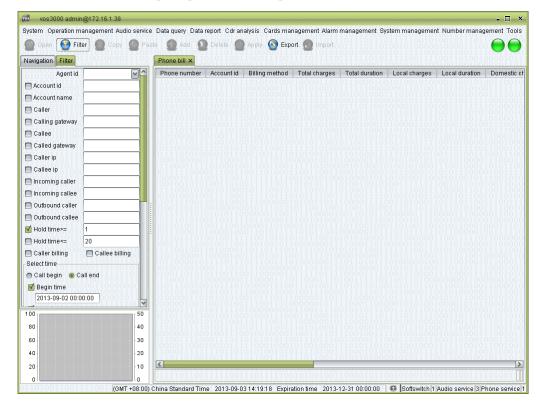


How to Start

• Double-click "Navigation > Data query > Bill query > Gateway bill"

2.7.3.3 Phone Bill

This function is used to query phone's consumption.

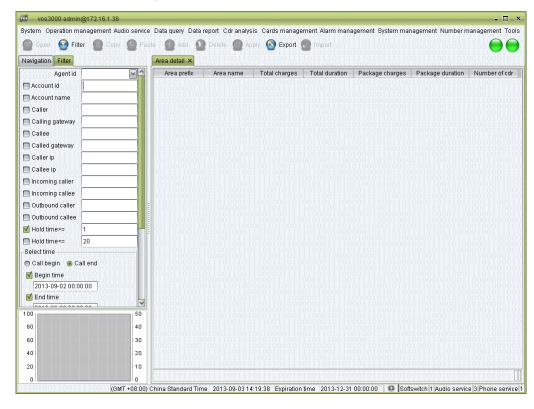


How to Start

Double-click "Navigation > Data query > Bill query > Phone bill"

2.7.3.4 Area Details

This function is used to query details of each area.

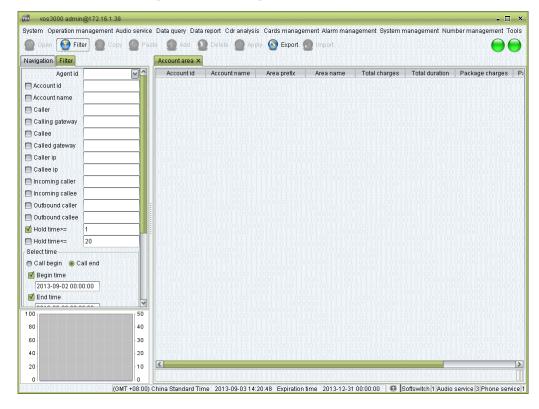


How to Start

• Double-click "Navigation > Data query > Bill query > Area details"

2.7.3.5 Account Area

This function is used to query area consumption of account.



How to Start

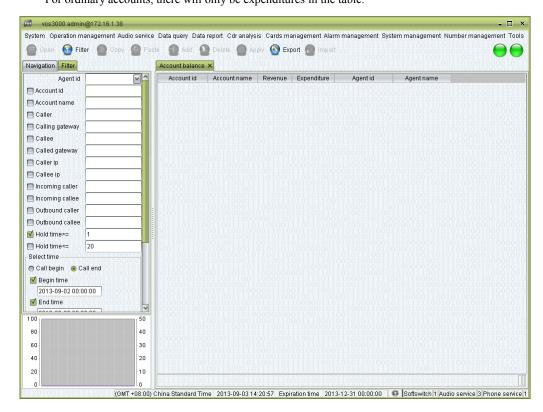
Double-click "Navigation > Data query > Bill query > Account area"

2.7.3.6 Account Balance

This function is used to query account and agent's revenue and expenditure.

M NOTE

Revenue is only for agent, which is the total expenditure of sub accounts. For ordinary accounts, there will only be expenditures in the table.



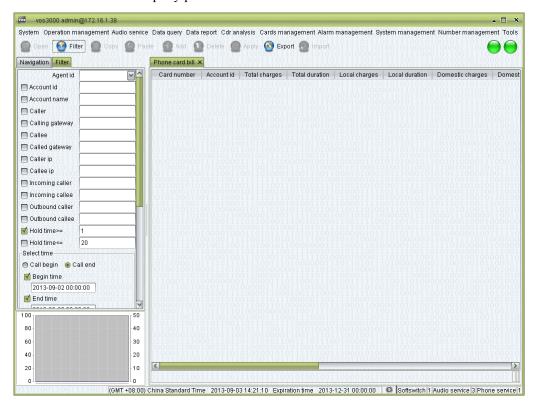
How to Start

• Double-click "Navigation > Data query > Bill query > Account balance"

2.7.4 Cards Query

2.7.4.1 Phone Card Bill

This function is used to query phone card bill.

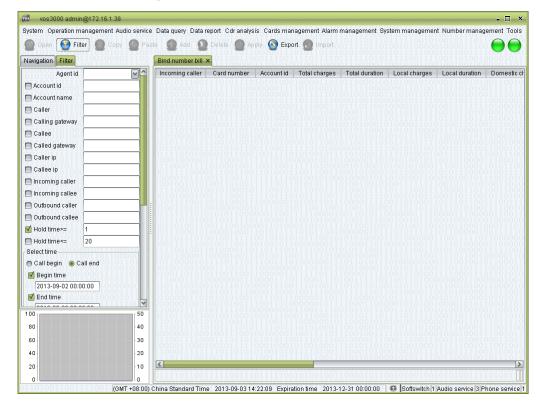


How to Start

• Double-click "Navigation > Data query > Cards query > Phone card bill"

2.7.4.2 Bind Number Bill

This function is used to query bind number bill.



How to Start

• Double-click "Navigation > Data query > Cards query > Bind number bill"

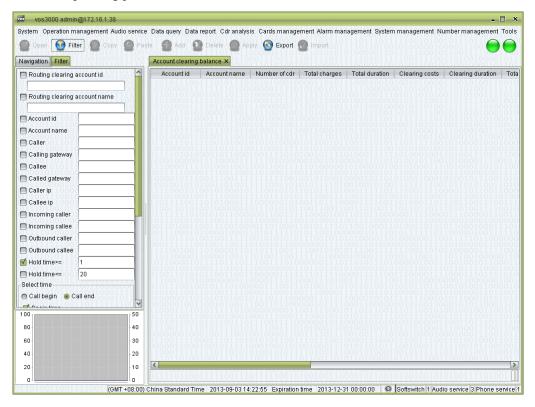
Contents

2.7.5 Clearing Query

2.7.5.1 Account Clearing Balance

This function is used to query account's clearing consumption.

Display the expenditures on each account on different clearing account in order to quickly calculate operating profits.



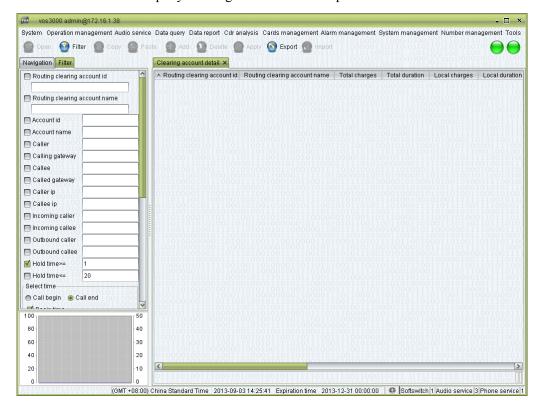
How to Start

Double-click "Navigation > Data query > Clearing query > Account clearing balance"

- Clearing costs: total charge of clearing account.
- Clearing duration: total duration of clearing account.
- Clearing package amount: total package amount of clearing account.
- Clearing package duration: total package duration of clearing account.

2.7.5.2 Clearing-Account Detail

This function is used to query clearing account's consumption.

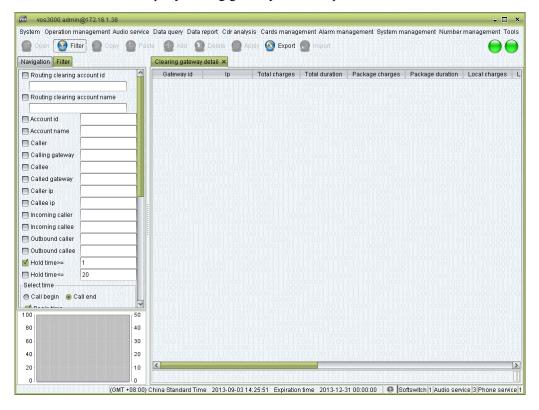


How to Start

• Double-click "Navigation > Data query > Clearing query > Clearing account detail"

2.7.5.3 Clearing-Gateway Details

This function is used to query routing gateway's consumption.



How to Start

Double-click "Navigation > Data query > Clearing query > Clearing gateway detail"

2.8 Data Report

Users can specify in the "System parameter" whether to generate certain data report.

SERVER_REPORT_CLEARING_CUSTOMER_FEE	Off	Auto generate clearing account detail report
SERVER_REPORT_CLEARING_CUSTOMER_IO	Off	Auto generate account clearing balance report
SERVER_REPORT_CLEARING_CUSTOMER_LOCATION_FEE	On	Auto generate clearing account area detail report
SERVER_REPORT_CLEARING_GATEWAY_FEE	Off	Auto generate clearing gateway detail report
SERVER_REPORT_CUSTOMER_FEE	On	Auto generate revenue detail report
SERVER_REPORT_CUSTOMER_IO	Off	Auto generate account balance report
SERVER_REPORT_CUSTOMER_LOCATION_FEE	On	Auto generate account area detail report
SERVER_REPORT_GATEWAY_FEE	On	Auto generate gateway bill report
SERVER_REPORT_GATEWAY_MAPPING_ASR_ACD	Off	Auto generate mapping gateway connect analysis report
SERVER_REPORT_GATEWAY_ROUTING_ASR_ACD	Off	Auto generate routing gateway connect analysis report
SERVER_REPORT_PHONE_CARD_E164_FEE	Off	Auto generate bind number bill report
SERVER_REPORT_PHONE_CARD_FEE	Off	Auto generate phone card bill report
SERVER REPORT PHONE FEE	On	Auto generate phone bill report

M NOTE

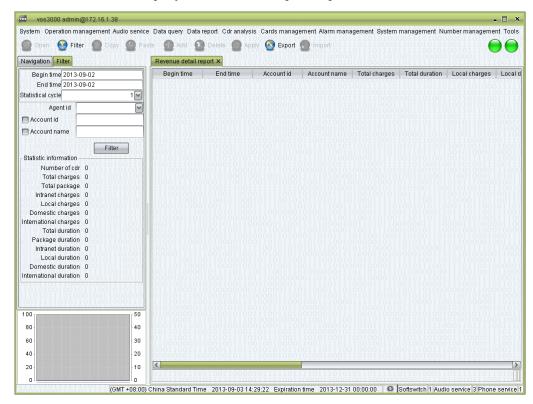
The generation of reports will begin at 1:00 A.M every day.

The time of completion depends on the capacity of the server and the amount of data.

2.8.1 Bill Report

2.8.1.1 Revenue Details Report

This function is used to query account's consumption report.



How to Start

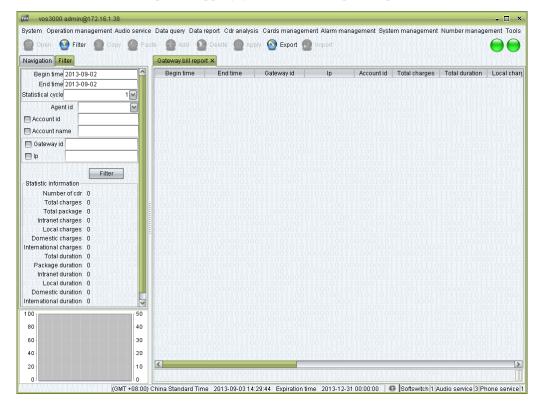
Double-click "Navigation > Data report > Bill report > Revenue detail report"

Contents

- Begin time
- End time
- Account id: the number of the account being displayed.
- Account name: the name of the account being displayed.
- Total charges: the total amount of charges.
- Total duration: the total amount of session time for all calls.
- Local charges: the amount charged for local calls.
- Local duration: the amount of session time for local calls.
- National charges: the amount charged for national calls.
- National duration: the amount of session time for national calls.
- International charges: the amount charged for international calls.
- International duration: the amount of session time for international calls.
- Intranet charges: the amount charged for net calls.
- Intranet duration: the amount of session time for net calls.
- Total package: the total consumption of gift amount.
- Package duration: the total consumption of free duration.
- Number of CDR: the total number of phone records.

2.8.1.2 Gateway Bill Report

This function is used to query mapping gateway's consumption report.



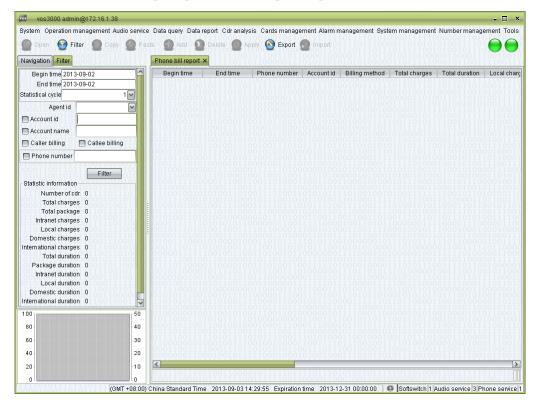
How to Start

Double-click "Navigation > Data report > Bill report > Gateway bill report"

- Gateway id: the unique id of the device, used for the authentication of dynamic gateways. For static gateways (usually relay gateways), the only requirement is that their ids do not conflict with one another.
- IP: the IP address of the gateway.
- Please refer to the descriptions in "Revenue detail report" for further instructions.

2.8.1.3 Phone Bill Report

This function is used to query phone's consumption report.



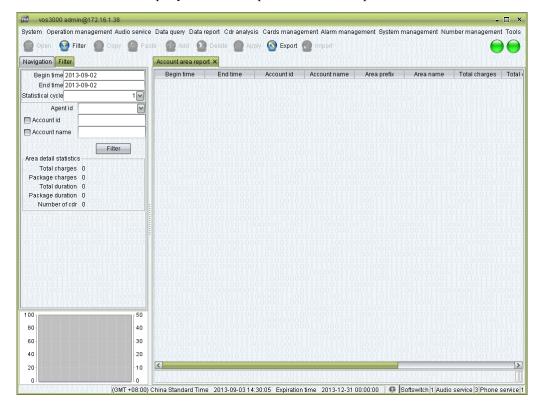
How to Start

Double-click "Navigation > Data report > Bill report > Phone bill report"

- Phone number: the number used as caller id and the called number for the terminal.
- Account id: the number of the account that the phone belongs to.
- Billing type: whether the caller or the called is charged.
- Please refer to the descriptions in "Revenue detail report" for further instructions.

2.8.1.4 Account Area Report

This function is used to query area consumption of account report.



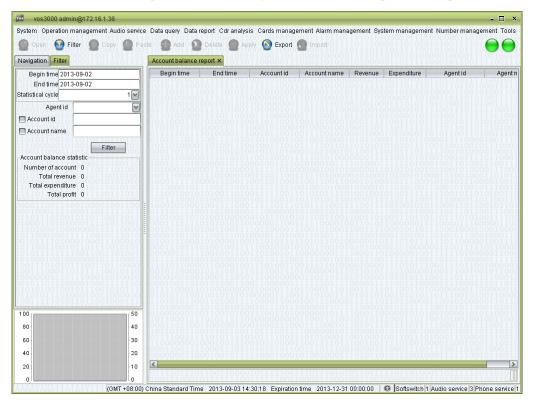
How to Start

• Double-click "Navigation > Data report > Bill report > Account area report"

Table Items

2.8.1.5 Account Balance Report

This function is used to query account and agent's revenue and expenditure report.



How to Start

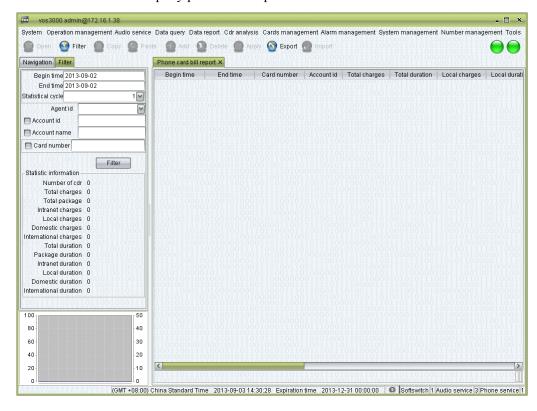
• Double-click "Navigation > Data report > Bill report > Account balance report"

Table Items

2.8.2 Cards Report

2.8.2.1 Phone Card Bill Report

This function is used to query phone card report.

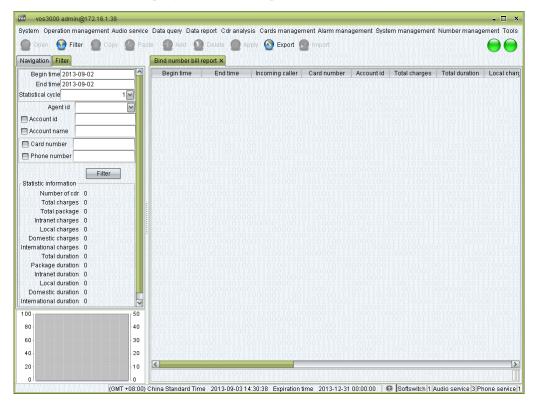


How to Start

Double-click "Navigation > Data report > Cards report > Phone card bill report"

2.8.2.2 Bind Number Bill Report

This function is used to query bind number report.



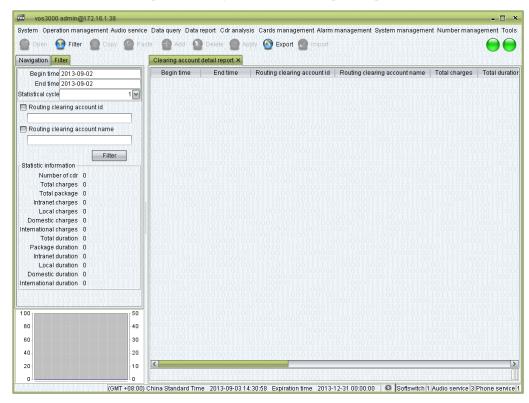
How to Start

Double-click "Navigation > Data report > Cards report > Bind number bill report"

2.8.3 Clearing Report

2.8.3.1 Clearing Account Detail Report

This function is used to query clearing account's consumption report.



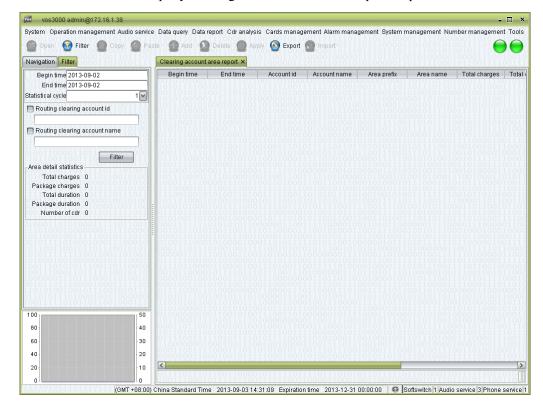
How to Start

• Double-click "Navigation > Data report > Clearing report > Clearing account detail report"

Table Items

2.8.3.2 Clearing Account Area Report

This function is used to query clearing account's area consumption report.



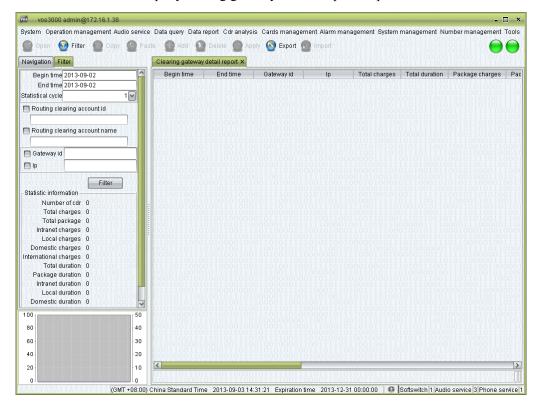
How to Start

• Double-click "Navigation > Data report > Clearing report > Clearing account area report"

Table Items

2.8.3.3 Clearing Gateway Detail Report

This function is used to query routing gateway's consumption report.



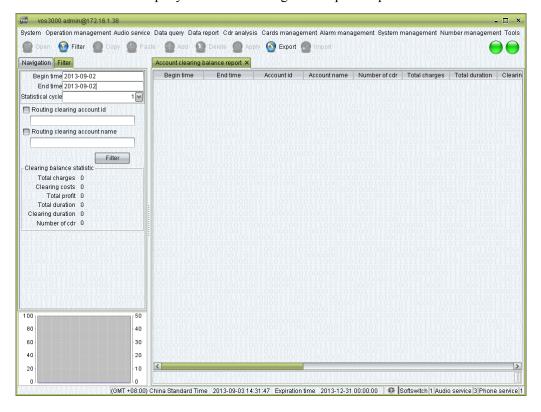
How to Start

 Double-click "Navigation > Data report > Clearing report > Clearing gateway detail report"

Table Items

2.8.3.4 Account Clearing Balance Report

This function is used to query account's clearing consumption report.



How to Start

 Double-click "Navigation > Data report > Clearing report > Account clearing balance report"

Table Items

Contents

2.8.4 Analysis Report

- Total calls: total unconnected and total connected.
- Total unconnected: unconnected calls.
- Total connected: calls with connect/busy/no answer/ringing signaling.

M NOTE

Ringing: callee sent SIP 180 or H323 Alerting.

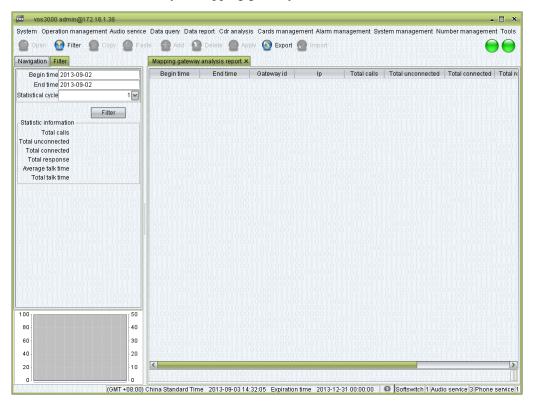
If callee is phone, sent SIP 183 with SDP or H323 CallProceeding(OLC).

If callee is routing gateway, sent SIP 183 with SDP or H323 CallProceeding(OLC) and enable SIP "Stop switch gateway after receive sdp" or H323 "Stop switch gateway after olc".

- Total response: calls with connect signaling.
- Average talk time: average call duration.
- Total talk time: total duration.

2.8.4.1 Mapping Gateway Analysis Report

This function is used to analysis mapping gateway.

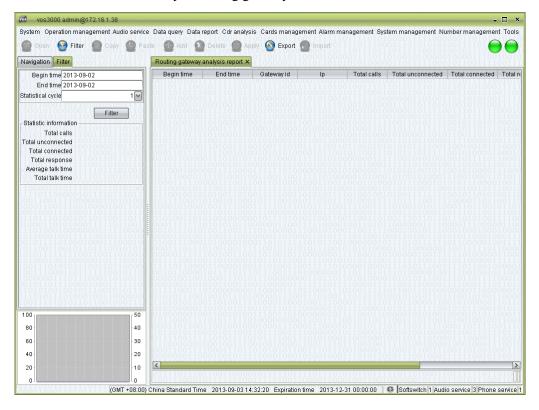


How to Start

• Double-click "Navigation > Data report > Analysis report > Mapping gateway analysis report"

2.8.4.2 Routing Gateway Analysis Report

This function is used to analysis routing gateway.

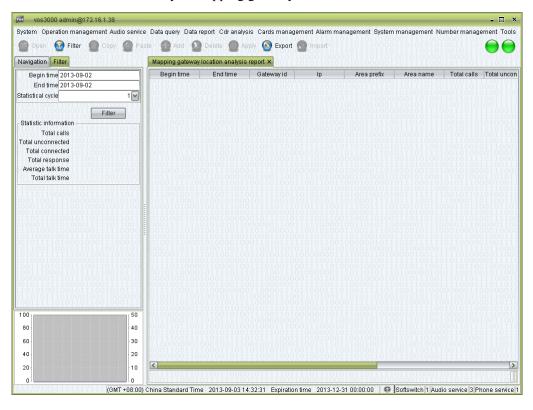


How to Start

• Double-click "Navigation > Data report > Analysis report > Routing gateway analysis report"

2.8.4.3 Mapping Gateway Location Analysis Report

This function is used to analysis mapping gateway location.

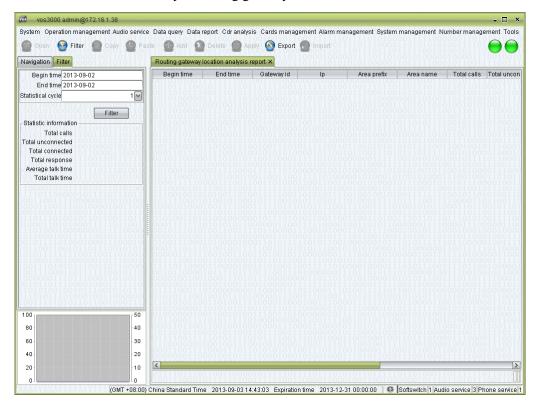


How to Start

• Double-click "Navigation > Data report > Analysis report > Mapping gateway location analysis report"

2.8.4.4 Routing Gateway Location Analysis Report

This function is used to analysis routing gateway location.

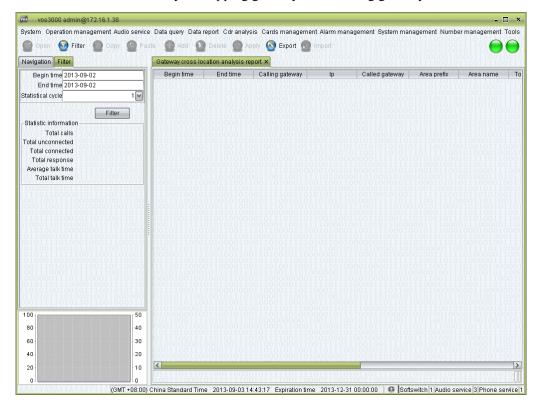


How to Start

• Double-click "Navigation > Data report > Analysis report > Routing gateway location analysis report"

2.8.4.5 Gateway Cross Location Analysis Report

This function is used to analysis mapping gateway cross routing gateway.

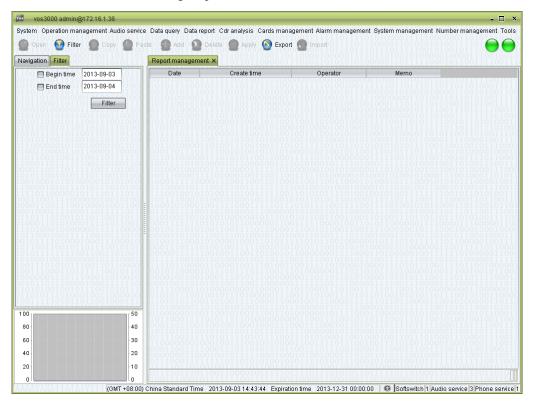


How to Start

• Double-click "Navigation > Data report > Analysis report > Gateway cross location analysis report"

2.8.5 Report Management

This function is used to manage reports.



How to Start

• Double-click "Navigation > Data report > Report management"

Table Items

- Date: date of records in the report.
- Create time: the date when the report is generated.
- Operator: the operator that generated the report.
- Memo: items included in the report.

Right-Click Menu

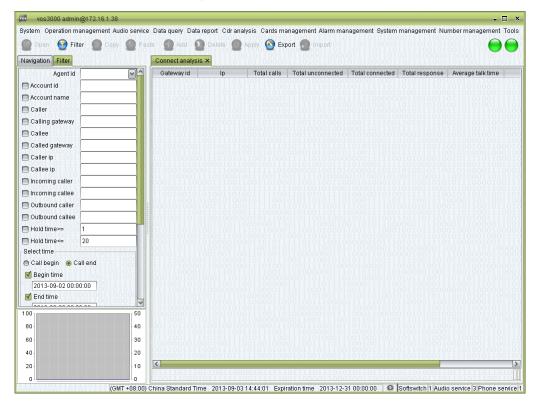
- Generate all reports
- Generate special report

2.9 CDR Analysis

See the descriptions in "Analysis report".

2.9.1 Connect Analysis

This function is used to analysis gateway connect.

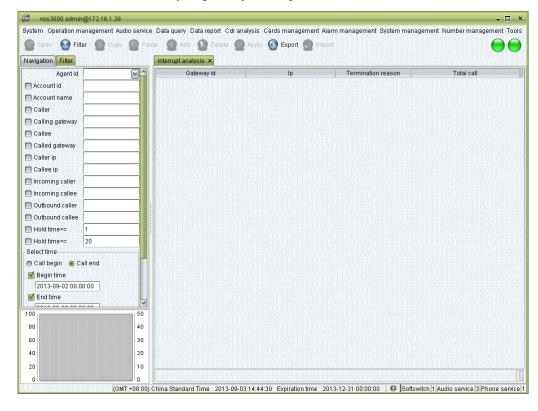


How to Start

• Double-click "Navigation > CDR analysis > Connect analysis"

2.9.2 Interrupt Analysis

This function is used to analysis gateway interrupt.

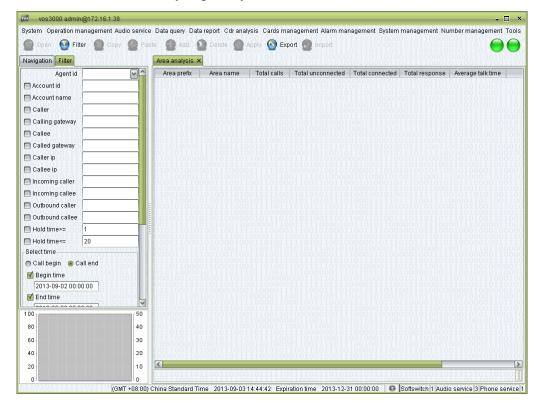


How to Start

• Double-click "Navigation > CDR analysis > Interruption analysis"

2.9.3 Area Analysis

This function is used to analysis gateway area.

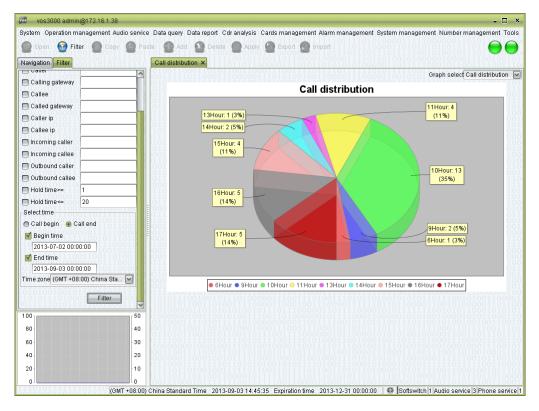


How to Start

• Double-click "Navigation > CDR analysis > Area analysis"

2.9.4 Call Distribution

This function is used to show call distribution of 24 hours.



How to Start

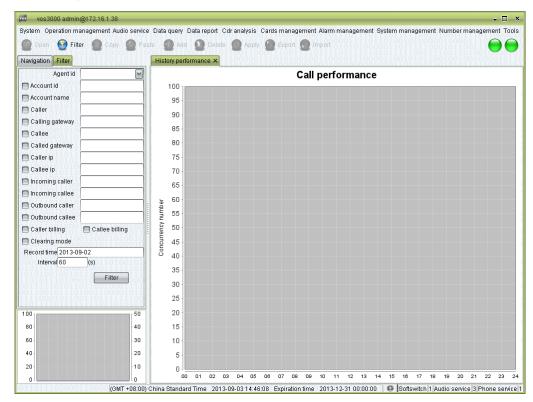
• Double-click "Navigation > CDR analysis > Call distribution"

2.9.5 Historical Performance

This function is used to show the concurrent calls on specified date.

M NOTE

Unsuccessful calls are not counted here, so the number shown in the chart will be slight lower than that in reality.



How to Start

• Double-click "Navigation > CDR analysis > Historical performance"

Contents

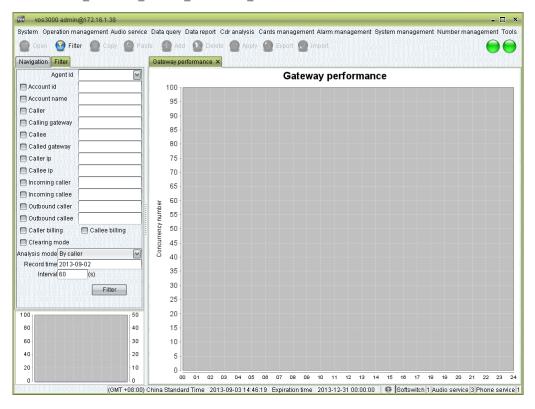
2.9.6 Gateway Performance

This function is used to show the concurrent calls of gateways on specified date.

M NOTE

Unsuccessful calls are not counted here, so the number shown in the chart will be slight lower than that in reality.

The number of gateway can be set by "System management > System parameter > SERVER DISPLAY CHART GATEWAY SIZE".

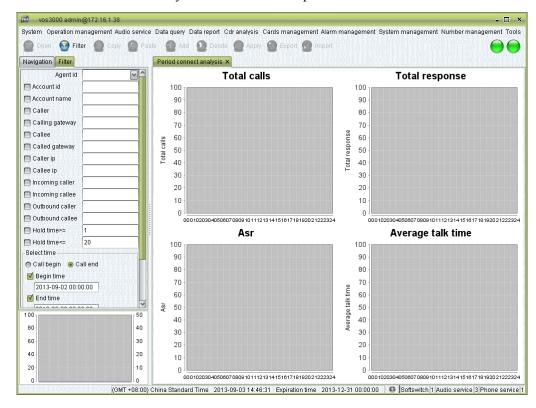


How to Start

• Double-click "Navigation > CDR analysis > Gateway performance"

2.9.7 Period Connect Analysis

This function is used to analysis total calls/total response/ASR/ACD.



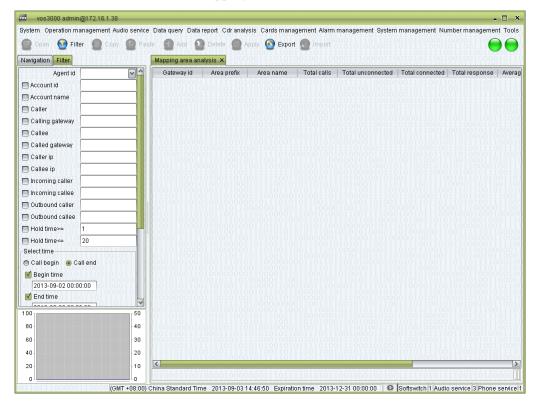
How to Start

• Double-click "Navigation > CDR analysis > Period connect analysis"

2.9.8 Gateway Area Analysis

2.9.8.1 Mapping Area Analysis

This function is used to analysis mapping area.

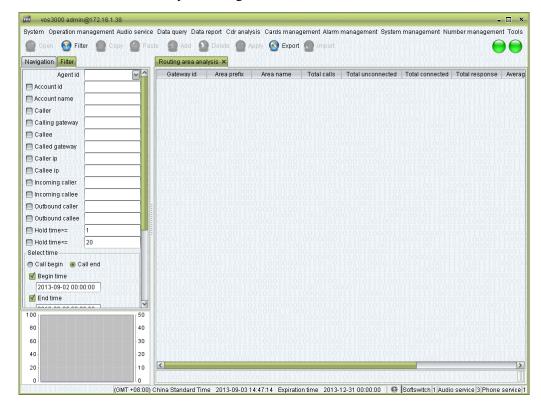


How to Start

• Double-click "Navigation > CDR analysis > Gateway area analysis > Mapping area analysis"

2.9.8.2 Routing Area Analysis

This function is used to analysis routing area.

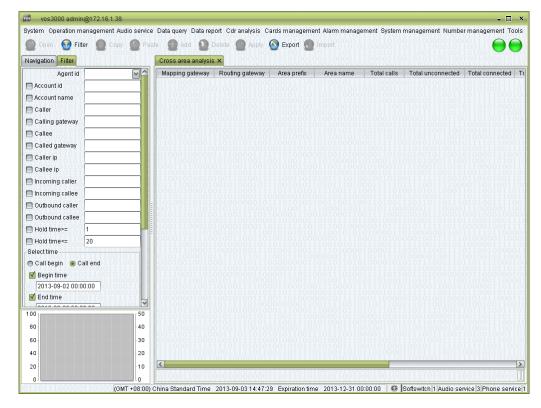


How to Start

• Double-click "Navigation > CDR analysis > Gateway area analysis > Routing area analysis"

2.9.8.3 Cross Area Analysis

This function is used to analysis cross area.



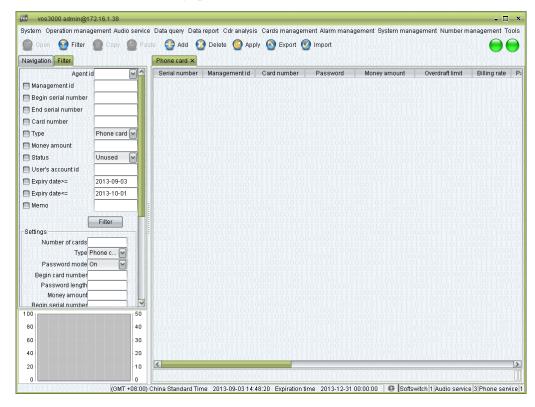
How to Start

• Double-click "Navigation > CDR analysis > Gateway area analysis > Cross area analysis"

2.10 Cards Management

2.10.1 Phone Card

This function is used to manage phone card.



How to Start

• Double-click "Navigation > Card management > Phone card"

- Serial number: the sequence number of activated cards. The initial number can be specified by users.
- Management id
- Card number: the unique id of a phone card. Card numbers of existing cards cannot be modified.
- Password: the password used for authentication in recharge.
- Money amount: the amount to be recharged.
- Overdraft limit
- Billing rate: the rate used for phone card.
- Package name: the name of the package used for phone card.
- Agent id: the agent account specified in account binding for phone card.
- Lock type: "No Lock" or "Locked"
- Sold

Contents

- Bind number limit
- Produce time: the date when the card is created.
- Expiration time: the date of expiration.
- Active(Day): the number of days when enabled before expiration time.
- Enable date
- Memo: descriptions of the card.
- Type
 - Phone card
 - Internet phone card
- User's account id: when used, the number of the account being recharged.
- User's account name: when used, the name of the account being recharged.

Batch creation of phone cards

• Number of cards: the number of cards to be created.

M NOTE

If the initial sequence number is left blank, it will be set to the number that is one plus the largest sequence number activated up to now.

• Type: Phone card/Internet phone card

M NOTE

Internet Phone Card will auto create both Account and Phone.

- Password mode: whether the cards being created have passwords.
- Begin card number: the initial card number of the cards.
- Password length: the length of the passwords. Passwords are generated automatically by the system.
- Money amount: the amount to be recharged.
- Begin serial number: the initial sequence number of the cards. The last sequence number will be automatically determined according to the number of card to be created.
- Card number prefix: the prefix number of the cards being created.
- Overdraft limit
- Active(Day): how many days will account's expiry date be extended after charging.

M NOTE

Set 0 to use system default days, if the expiration date extension is specified in "System management > System parameter > SERVER_PAY_DELAY_CUSTOMER_EXPIRE_DAY", the expiration date of an account will be re-calculated accordingly after recharge.

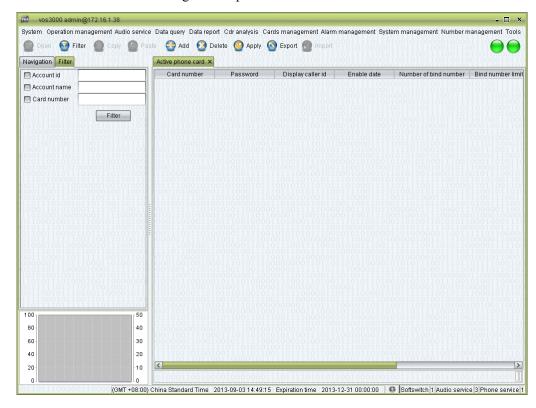
- Expire time
- Bind number limit
- Lock type
- Agent id: the agent account specified in account binding for phone cards.
- Memo

Ⅲ NOTE

Up to now, the card creation has not been completed yet. You can still modify items, such as adding "Memo". The creation will be completed after clicking "Apply".

2.10.2 Active Phone Card

This function is used to manage active phone card.



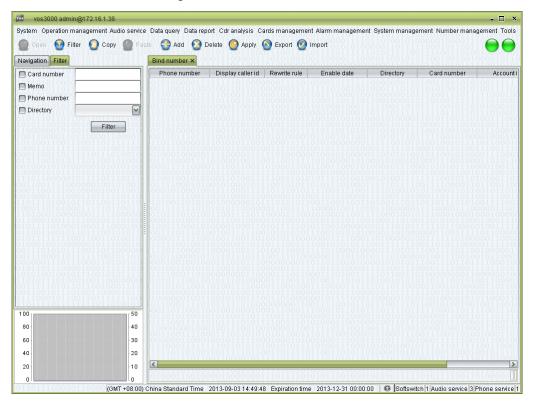
How to Start

• Double-click "Navigation > Card management > Active phone card"

- Card number
- Password
- Display caller id
- Enable date
- Number of bind number
- Bind number limit
- Account id
- Account name
- Memo

2.10.3 Bind Number

This function is used to manage bind number.



How to Start

• Double-click "Navigation > Card management > Bind number"

- Phone number
- Display caller id: can be set according to callee.
- Rewrite rule
- Enable date
- Language directory
- Card number
- Account id
- Memo

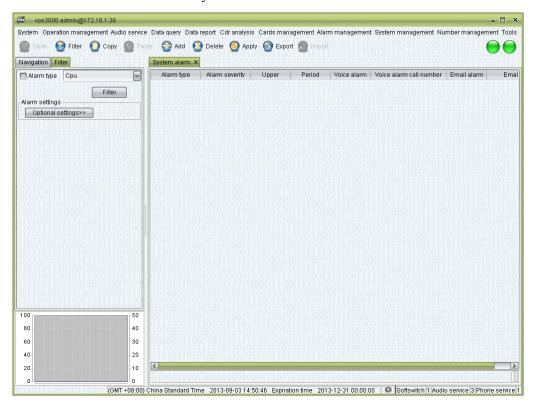
2.11 Alarm Management

- Alarm level: General/Minor/Major/Critical.
- Upper: upper bound which trigger the alarm.
- Lower: lower bound which trigger the alarm.
- Period: detection period.
- Email alarm: can be set by "System management > System parameter > SERVER ALARM ENABLE EMAIL".
- Email: can be set by "System management > System parameter > SERVER_ALARM_EMAIL".

2.11.1 Alarm Settings

2.11.1.1 System Alarm

This function is used to monitor system.

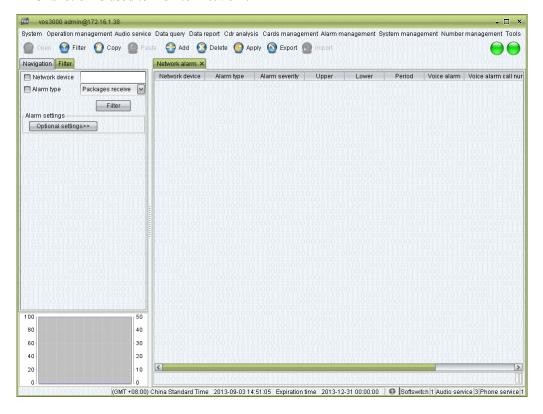


How to Start

• Double-click "Navigation > Alarm management > Alarm settings > System alarm"

2.11.1.2 Network Alarm

This function is used to monitor network.

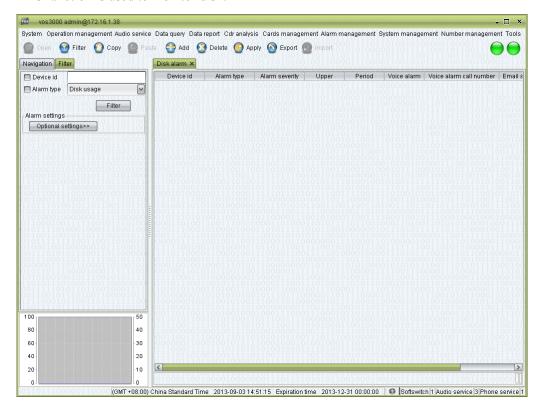


How to Start

• Double-click "Navigation > Alarm management > Alarm settings > Network alarm"

2.11.1.3 Disk Alarm

This function is used to monitor disk.

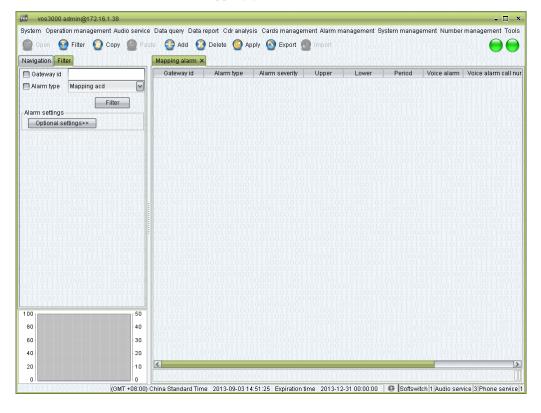


How to Start

Double-click "Navigation > Alarm management > Alarm settings > Disk alarm"

2.11.1.4 Mapping Alarm

This function is used to monitor mapping gateway.

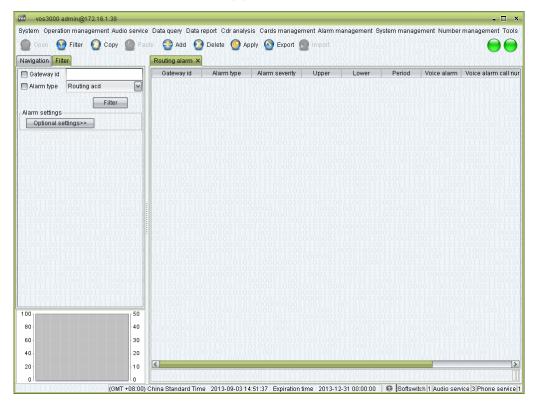


How to Start

Double-click "Navigation > Alarm management > Alarm settings > Mapping alarm"

2.11.1.5 Routing Alarm

This function is used to monitor routing gateway.



How to Start

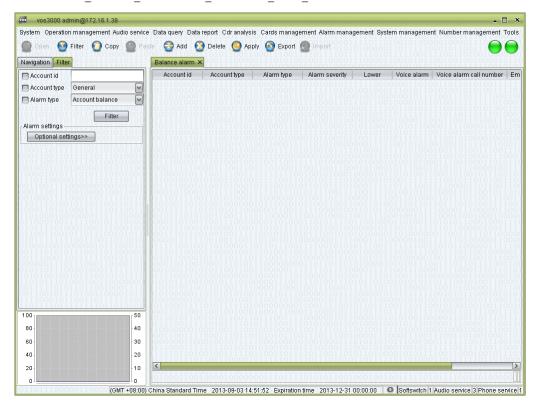
Double-click "Navigation > Alarm management > Alarm settings > Routing alarm"

2.11.1.6 Balance Alarm

This function is used to monitor account balance.

MOTE

The number of customer can be set by "System management > System parameter > SERVER_ALARM_CUSTOMER_BALANCE_MAX_SIZE".

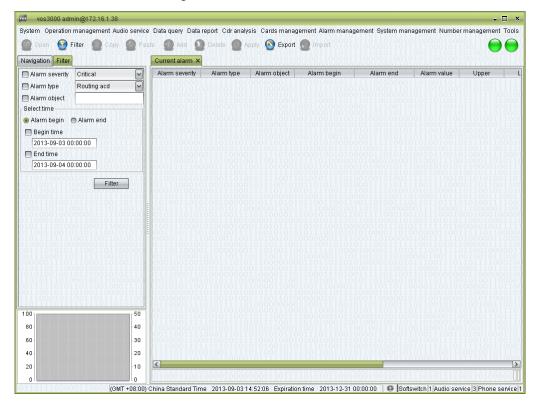


How to Start

• Double-click "Navigation > Alarm management > Alarm settings > Balance alarm"

2.11.2 Current Alarm

This function is used to manage current alarm.



How to Start

• Double-click "Navigation > Alarm management > Current alarm"

Table Items

- Alarm severity
- Alarm type
- Alarm object
- Alarm begin
- Alarm end
- Alarm value
- Upper
- Lower
- ACK user
- ACK time
- Memo

Right-Click Menu

- Confirm: input memo to confirm alarm.
- Empty: clear current alarm, and then change the alarm into history.

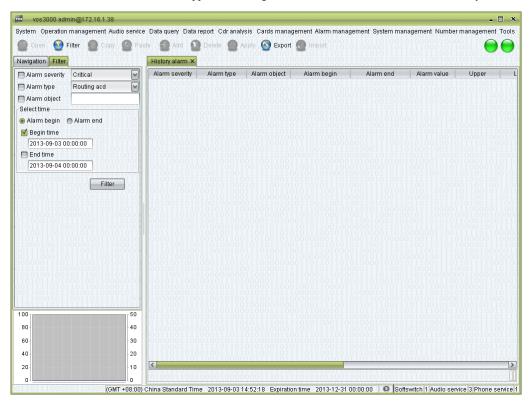
Contents

2.11.3 History Alarm

This function is used to query history alarm.

M NOTE

If the current alarm, which is stopped, occurs again, the former alarm will be become history alarm.



How to Start

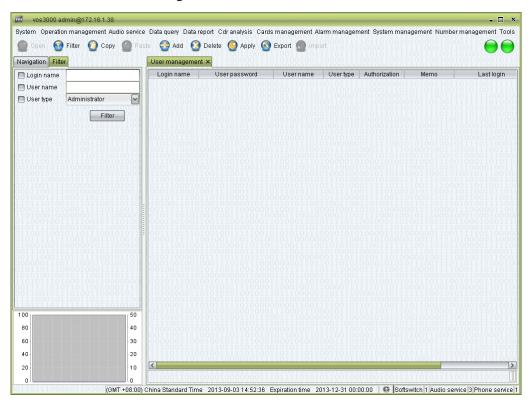
• Double-click "Navigation > Alarm management > History alarm"

- Alarm severity
- Alarm type
- Alarm object
- Alarm begin
- Alarm end
- Alarm value
- Upper
- Lower
- ACK user
- ACK time
- Memo
- Cleared user
- Cleared time

2.12 System Management

2.12.1 User Management

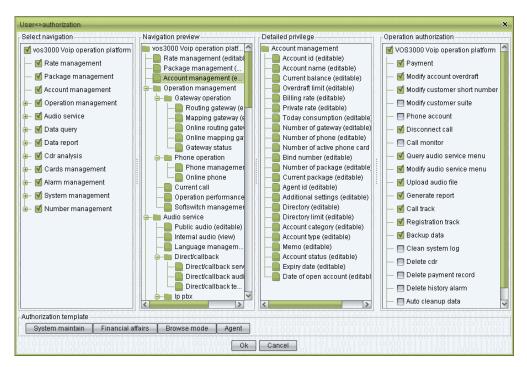
This function is used to manage user.



How to Start

• Double-click "Navigation > System management > User management"

- Login name: the id used for login.
- User password: the login password.
- User name: the name of the user.
- User type
 - Administrator: users with all authorizations.
 - Operator: users with certain authorizations for operations.
 - Agent: users that are only allow viewing the accounts, rate and service packages.
- Authorization: see below.
- Memo: comments about the user.
- Last login: last login time.
- Last change password: last change password time.



- Select navigation: define user's navigation tree.
- Navigation preview: preview user's navigation tree, double click to change privilege (view or editable).
- Detailed privilege:

Users can specify interfaces and operations available for a non-administrator user. All settings come into effect immediately.

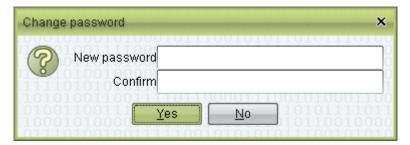
Authorization template: several templates for authorizations are provided. Users can select a template and then tune the configurations.

M NOTE

Users of the "agent" type who have the authorization to create users will be able to see all the users they created in the table, while other users are invisible to them. It is the same when they specify the availability of rates, packages, and accounts to other users.

Right-Click Menu

Change password



Password requirements:

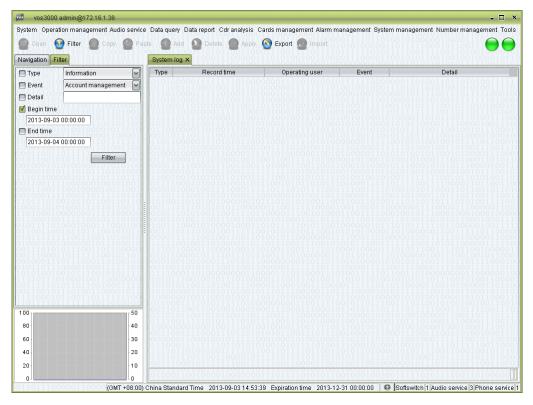
- at least 6 characters (at least 8 characters for administrator)
- at least 2 of the following character combination:
 at least one lowercase letter

Contents

- at least one uppercase letter
- at least one number
- at least on special character: `~!@#\$%^&*()-_=+\|[{}];:''',<.>/? and space (space cannot be used as starting or ending character.)
- cannot be the same as the name or the reverse of name

2.12.2 System Log

This function is used to query system log.



How to Start

• Double-click "Navigation > System management > System log"

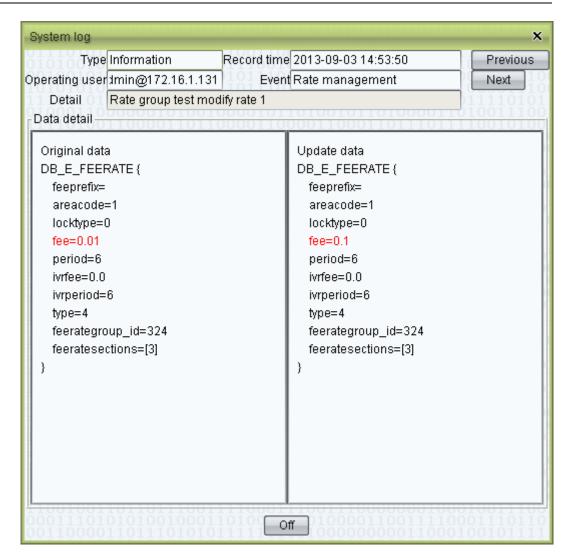
Table Items

- Type: Information/General/Error
- Record time: log time.
- Operating User
- IP: user's logging IP.
- Event
- Detail

Right Click Menu

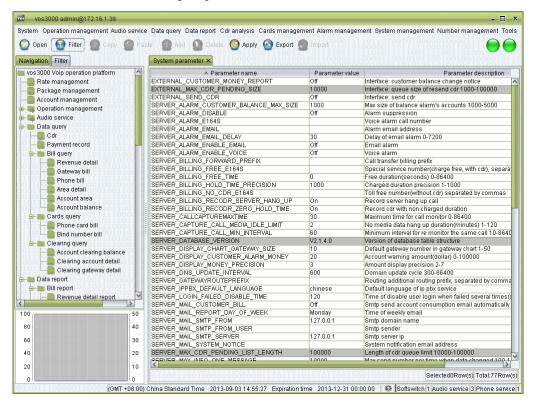
Detail

This function is used to show operating user and operation's detail.



2.12.3 System Parameter

This function is used to configure parameters.



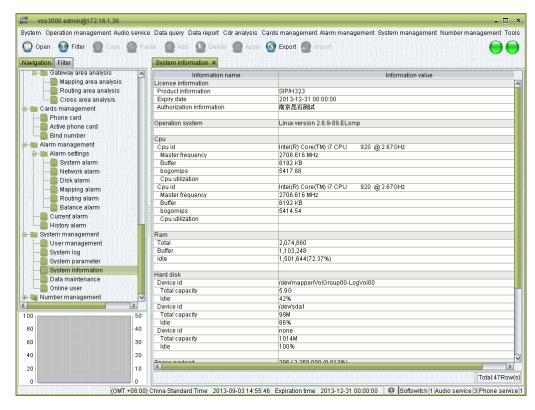
How to Start

• Double-click "Navigation > System management > System parameter"

- Parameter name
- Parameter value
- Parameter description

2.12.4 System Information

This function is used to show server's information.

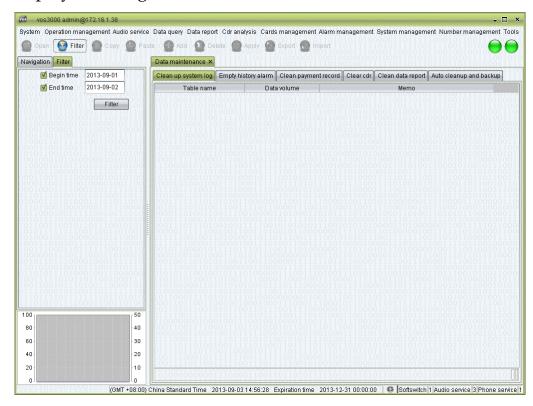


How to Start

• Double-click "Navigation > System management > System information"

2.12.5 Data Maintenance

2.12.5.1 Clean-Up System Log

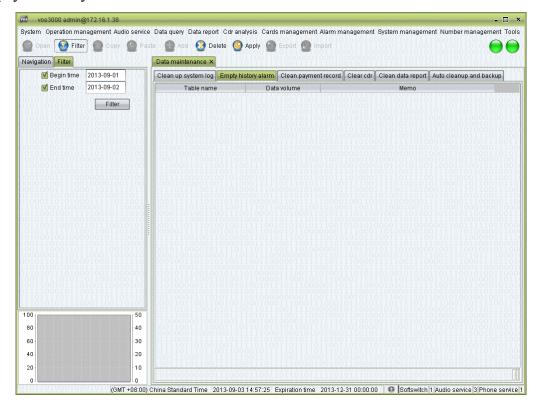


How to Start

Double-click "Navigation > System management > Data maintenance"

- Table name: suffix is the date of system log.
- Data volume: number of records.
- Memo

2.12.5.2 Empty History Alarm

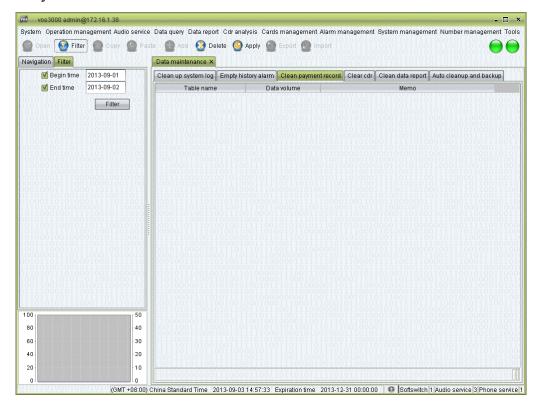


How to Start

• Double-click "Navigation > System management > Data maintenance"

- Table name: suffix is the date of history alarm.
- Data volume: number of records.
- Memo

2.12.5.3 Clean Payment Record

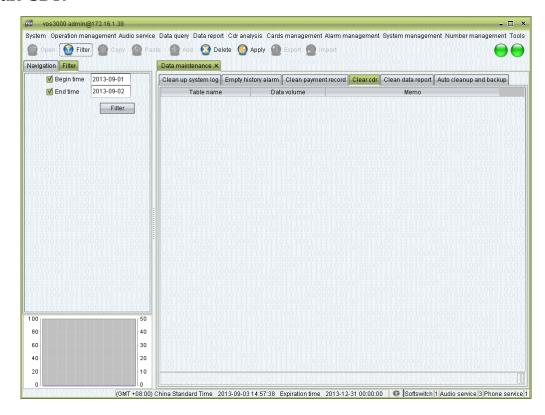


How to Start

• Double-click "Navigation > System management > Data maintenance"

- Table Name: suffix is the date of payment record.
- Data Volume: number of records.
- Memo

2.12.5.4 Clean CDR

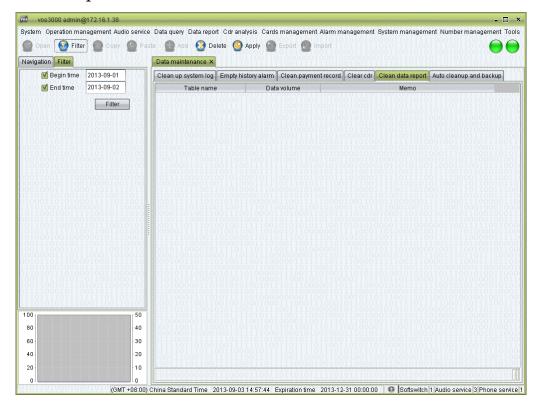


How to Start

• Double-click "Navigation > System management > Data maintenance"

- Table name: suffix is the date of CDR.
- Data volume: number of records.
- Memo

2.12.5.5 Clean Data Report

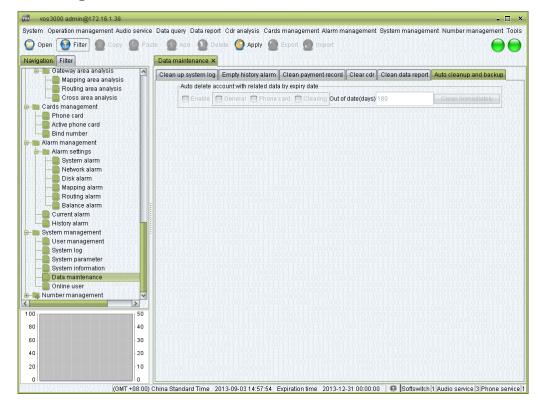


How to Start

• Double-click "Navigation > System management > Data maintenance"

- Table name: suffix is the date of report.
- Data volume: number of records.
- Memo

2.12.5.6 Auto CleanUp



How to Start

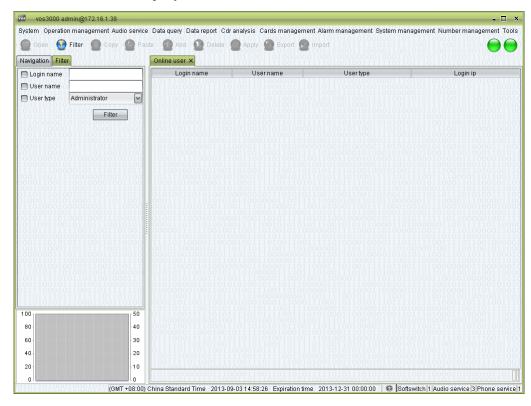
Double-click "Navigation > System management > Data maintenance"

Usage

- Use "Filter" to get current settings.
- If auto cleanup is enabled, vos will cleanup out of date data every day, including account/account's gateway/account's phone.

2.12.6 Online User

This function is used to query online user.



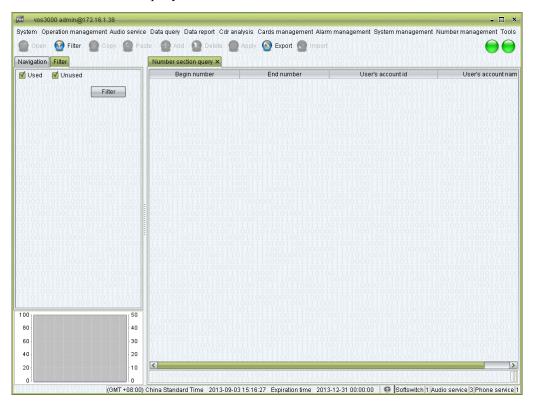
How to Start

• Double-click "Navigation > System management > Online user"

2.13 Number Management

2.13.1 Number Section Query

This function is used to query number section.



How to Start

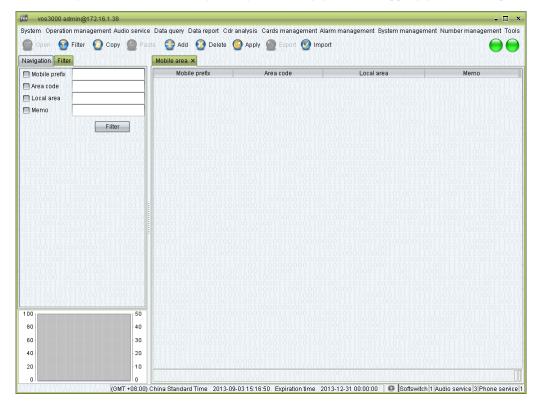
• Double-click "Navigation > Number management > Number section query"

- Begin number
- End number
- User's account id
- User's account name

2.13.2 Mobile Area

This function is used to automatically add area code for mobile and make area limitation.

This setting will be used in routing settings of routing gateway, mapping gateway and phone.



How to Start

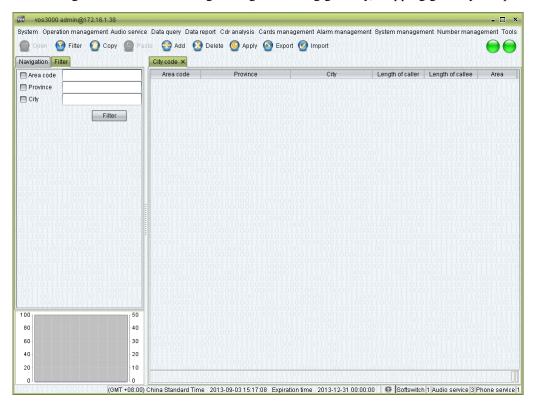
• Double-click "Navigation > Number management > Mobile area"

- Mobile prefix
- Area code
- Local area
- Memo

2.13.3 City Code

This function is used to manage city code.

This setting will be used in Routing Settings of routing gateway, mapping gateway and phone.



How to Start

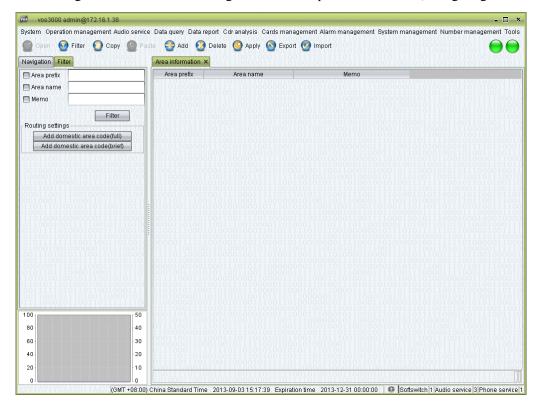
• Double-click "Navigation > Number management > City code"

- Area code
- Province
- City
- Length of caller: without area code, use comma to separate.
- Length of callee: without area code, use comma to separate.
- Area

2.13.4 Area Information

This function is used to define area prefix's area name, country code, dialing prefix.

This setting will be used in rate management to show prefix's area name, using longest match.

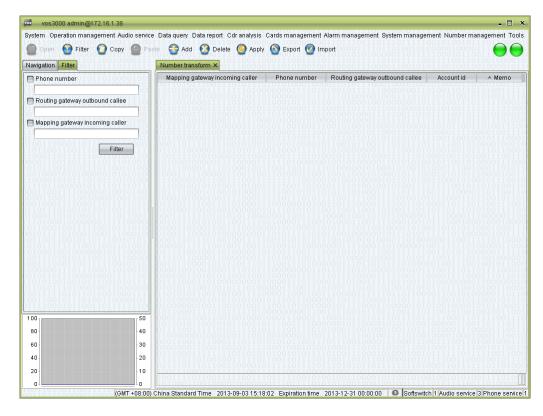


How to Start

• Double-click "Navigation > Number management > Area information"

- Area prefix
- Area name
- Memo

2.13.5 Number Transform



How to Start

• Double-click "Navigation > Number management > Number transform"

Contents

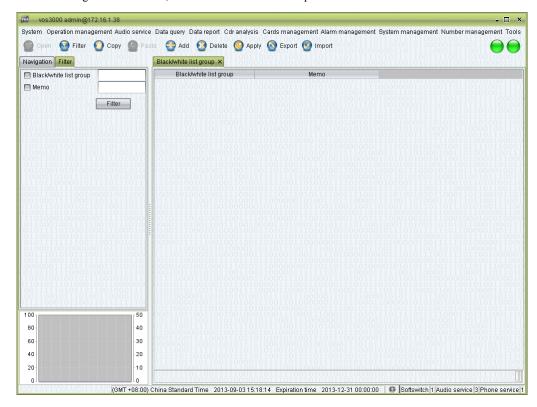
2.13.6 Black/White List Group

This function is used to define list group.

This setting will be used in caller/callee black/white list group of routing gateway, mapping gateway and phone.

©[™] TIP

Black/white list group is full match, more efficient than prefix match. For a large number match, use this function instead of prefix match.



How to Start

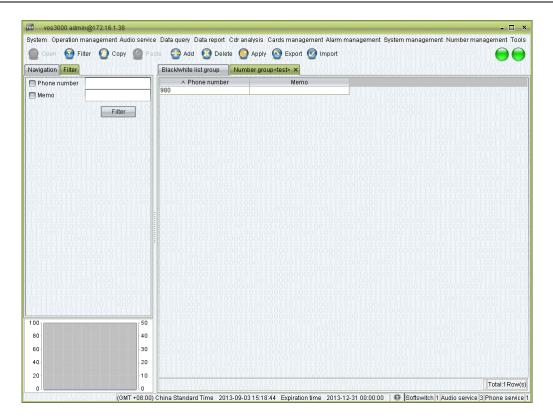
• Double-click "Navigation > Number management > Black/White List Group"

Table Items

- Black/white list group: name of the group.
- Memo

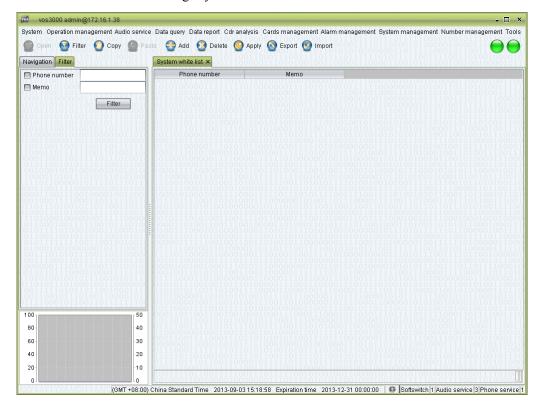
Other Operation

Double click black/white group to edit number list.



2.13.7 System White List

This function is used to manage system white list.



How to Start

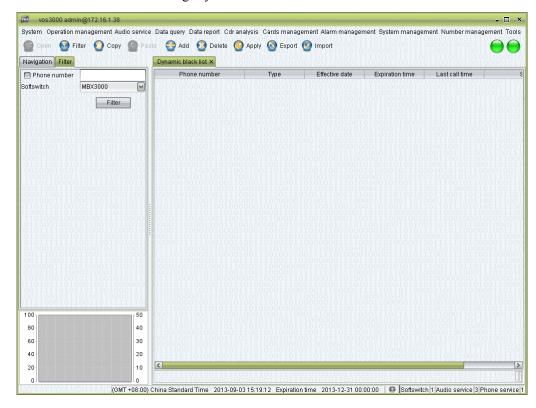
• Double-click "Navigation > Number management > System white list"

Table Items

- Phone number
- Memo

2.13.8 Dynamic Black List

This function is used to manage system black list.



How to Start

• Double-click "Navigation > Number management > Dynamic black list"

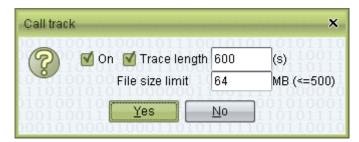
Table Items

- Phone number
- Type: malicious call or no answer
- Effective date
- Expiration time
- Last call time
- Softswitch

2.14 Other Operation

2.14.1 Call Track

This function is used to track call signaling.



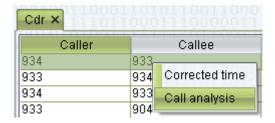
How to Start

• Click "System > Call track"

Usage

- Check "On" to enable track, uncheck to disable.
- Trace length: calculate from current time, stop track when timeout. Uncheck to track all the time.
- File size limit: size of the signaling file. If over the limitation, file will be recovered.

After enable track, right click in "Current call" or "Cdr" to see call analysis.



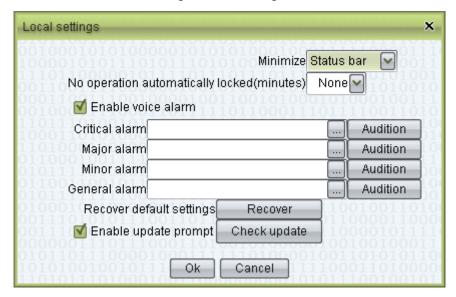
oxdiv note

System uses 2 files to record track signaling, so the actual space will be double. If one file over the file size limit, system will use the other file.

All track signaling will be saved, unless file has been covered.

2.14.2 Local Settings

This function is used to configure client settings.



How to Start

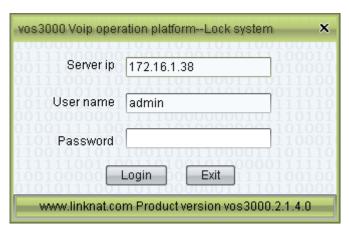
• Click "System > Local settings"

Usage

- Minimize: Status bar/System tray
- No operation automatically locked
- Enable voice alarm: customer alarm audios.
- Recover default settings
- Enable update prompt: click to enable.

2.14.3 Lock System

This function is used to hide client interface.



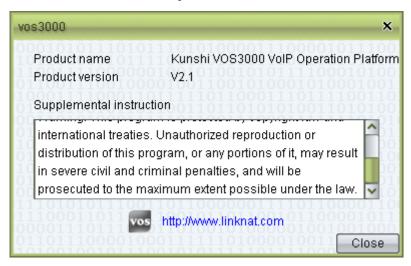
How to Start

• Click "System > Lock system"

2 Function

2.14.4 Product Instruction

This function is used to show product instruction.



How to Start

• Click "System > Product instruction"

3 Supplement

About This Chapter

This chapter introduces the characteristics of VOS3000 interface.

3.7 Interface Description

3.7.1 Filters

The wildcard characters "*" and "?" can be used to specify filter criteria. For example, the filter criterion "800*" indicates all strings starting with "800", and the filter criterion "888??000" represents all 7-digit strings that start with "888" and end with "00".

The time of filter criteria in CDR and related spreadsheets can be specified according to either "Beginning of the call" or "End of the call". When "Beginning of the call" is specified, then calls started in the specified time span will be matched. Otherwise, calls ended in the specified time span will be matched. Usually, operators use the time of the "End of the call" to classify calls.

3.7.2 Shortcuts

F5: Enable filtering

CTRL + C: Copy the selected table cells

ALT + F: Open "Rate management"

ALT + K: Open "Shortcuts"

ALT + S: Open "Package management"

ALT + D: Open "Mapping gateway"

ALT + G: Open "Routing gateway"

ALT + C: Open "Account management"

ALT + P: Open "Phone management"

ALT + A: Open "Current call"

ALT + H: Open "Cdr"

ALT + U: Open "User management"

ALT + L: Open "System log"

3.7.3 Cell Colors

Colors of Table Cell

White: Normal

: To be added after clicking the "apply" button

: To be modified after clicking the "apply" button

: To be deleted after clicking the "apply" button

: Selected

: Operation failed

Colors of Gateway Table Cell

: Bar outgoing/incoming calls

: Bar all calls

: Conflict IP address configurations for mapping gateways

Colors of Account Table Cell

: Insufficient balance

: Account terminated

3.8 System Description

3.8.1 Rewrite Rule

Original Prefix: prefix before rewrite.

Target Prefix: prefix after rewrite.

Table 3-1 Rewrite Rule Description

Original Prefix	Target Prefix	Number	Number after Rewrite	Memo
0	0	02584316146	02584316146	do not rewrite prefix 0
010	025	01012345678	02512345678	

Original Prefix	Target Prefix	Number	Number after Rewrite	Memo
025		02584316146	84316146	remove prefix 025
*	025*	117	025117	add prefix 025
025*	010	02584316146	010	change number with prefix 025 into 010
	010*	02584316146	0100258431614 6	add prefix 010
*		02584316146		delete all number
*	12345678	02584316146	12345678	change all number into 12345678
025*	8008100-80081 21	02584316146	8008100 or 8008101 or	change number into one of 8008100 to 8008121
*	12345?78	02584316146	12345178 or 12345278 or	? will become a random number
*	12345678;8008 100-8008121;12 345?78	02584316146	12345678 or number between 8008100 and 8008121 or 12345?78	randomly choose one of the rules, then rewrite
0??8431	8431	02584316146	84316146	for original prefix, there can be any two digits between 0 and 8

Multiple substitution targets can be specified, separated by the symbol ";".

When the symbol "?" exists in the substitution targets, each "?" will be replaced by randomly generated digit. The "?" can occur more than once in the target pattern.

When multiple Rewrite Rules exist, the longest matching pattern will be selected. For example, if there are two Rewrite Rules: one replaces "0" with "0", while the other replaces "010" with "025", then the number "01012345678" will be replaced with "02512345678" (since "010" is longer than "0").

The pattern "*" has the lowest priority and will only be matched when there are no other matching patterns.

3.8.2 Media Proxy

Parameters below can be set in "Operation management > Softswitch management > Additional settings > System parameter".

See SS MEDIAPROXYMODE:

- On: Enable Media Proxy.
- Off: Disable Media Proxy.
- Auto: decide by softswitch, see below.
- **Step 1** If caller or callee disabled media proxy, then disable.
- **Step 2** If caller or callee enabled media proxy, then enable.
- Step 3 If callee enabled local ring, then enable.
- **Step 4** If phone and gateway use dynamic register and encrypt, then enable.
- **Step 5** If SS_MEDIAPROXYBETWEENNET is on, caller and callee from different network, then enable.
- **Step 6** If SS_MEDIAPROXYBEHINDNAT is on.

 If phone and gateway in the same NAT, SS_MEDIAPROXYSAMENAT is on, then enable.

 If phone and gateway in different NAT, one of them in private network, then enable.
- Step 7 Finally, disable.

----End

3.8.3 Routing Gateway Sorting

Use callee to find routing gateway.

Parameters below, start with "SS_", can be set in "Operation management > Softswitch management > Additional settings > System parameter".

Parameters below, start with "SERVER_", can be set in "System management > System parameter".

- Step 1 Match longest prefix
- Step 2 Priority (the smaller the higher)
- Step 3 If SS_GATEWAYASRROUTESORTCONFIG is Before Line Usage, then sort by route's ASR. Routings which disabled real-time computing ASR priory than enabled one. If SS_GATEWAYFEERATEROUTESORTCONFIG is Before Line Usage, then sort by routing gateway's Lowest Rate per Second. Gateway which disabled Sort by Lowest Rate per Second is prior than enabled.

If the above 2 parameter values are the same, then sort by SS GATEWAYFEERATEROUTEBEFOREASR.

Step 4 Sort by Line Usage

If SS_GATEWAYASRROUTESORTCONFIG is Before Current Day Total Call, then sort by route's ASR. Routings which disabled real-time computing ASR priory than enabled one. If SS_GATEWAYFEERATEROUTESORTCONFIG is Before Current Day Total Call, then sort by routing gateway's Lowest Rate per Second. Gateway which disabled Sort by Lowest Rate per Second is prior than enabled.

If the above 2 parameter values are the same, then sort by SS GATEWAYFEERATEROUTEBEFOREASR.

Step 5 Sort by Current Day Total Call

If SS_GATEWAYASRROUTESORTCONFIG is Before Gateway ID, then sort by route's ASR. Routings which disabled real-time computing ASR priory than enabled one.

If SS_GATEWAYFEERATEROUTESORTCONFIG is Before Gateway ID, then sort by routing gateway's Lowest Rate per Second. Gateway which disabled Sort by Lowest Rate per Second is prior than enabled.

If the above 2 parameter values are the same, then sort by SS GATEWAYFEERATEROUTEBEFOREASR.

Step 6 Sort by Gateway ID

----End

M NOTE

If caller phone or mapping gateway set first routing strategy or second routing strategy, then uses all available routing gateways, according to selected strategy.

3.8.4 Package Billing Order

Step 1 Use Free Duration.

See time span of the free duration, the longer the later.

See invalid time, the earlier the prior.

See effective date, the earlier the prior.

Step 2 Use Free Money Amount

See rent type, prior is "Day > Month > Year".

See invalid time, the earlier the prior.

See effective date, the earlier the prior.

Step 3 Use Account Money

----End

3.8.5 Parameter Description

3.8.5.1 VOS3000 Parameter

Parameter Name	Default Value	Parameter Description
SERVER_ALARM_CUSTO MER_BALANCE_MAX_SI ZE	1000	Number of accounts in "Navigation > Alarm management > Alarm settings > Balance alarm"
SERVER_ALARM_DISAB LE	Off	Off: enable alarm. On: disable alarm.
SERVER_ALARM_E164S		Default e164 setting in "Navigation > Alarm management > Alarm Setting"

Parameter Name	Default Value	Parameter Description
SERVER_ALARM_EMAIL		Default email setting in "Navigation > Alarm management > Alarm Setting"
SERVER_ALARM_EMAIL _DELAY	300	Unit: second. Interval for email alarm.
SERVER_ALARM_ENAB LE_EMAIL	Off	Default email alarm setting in "Navigation > Alarm management > Alarm Setting"
SERVER_BILLING_CUST OMER_DEFAULT_FEERA TE		Default fee rate group for HW interface
SERVER_BILLING_FORW ARD_PREFIX		Billing prefix for Call Transfer
SERVER_BILLING_FREE _E164S		Service Number for free, no time limit
SERVER_BILLING_FREE _TIME	0	Unit: second. Charged Duration will cut this value, but won't change conversation time.
SERVER_BILLING_GATE WAY_ROUTE_PREFIX		Routing gateway additional prefix, e.g. set 99,88 then if callee is 99123, will be charged as 123 in CDR
SERVER_BILLING_HOLD _TIME_PRECISION	1000	Unit: million second. Time precision, e.g. set 50, if duration is 21.049s, then uses 21s, else if duration is 21.050, then uses 22s.
SERVER_BILLING_NO_C DR_E164S		See SERVER_BILLING_FREE _E164S, but these numbers won't create CDR
SERVER_BILLING_RECO DR_SERVER_HANG_UP	On	Valid when SERVER_BILLING_RECO DR_ZERO_HOLD_TIME is on. If SERVER_BILLING_RECO DR_SERVER_HANG_UP is off, hold time is 0 and hang up by server, the CDR won't be saved.

Parameter Name	Default Value	Parameter Description
SERVER_BILLING_RECO DR_ZERO_HOLD_TIME	On	If system is under attack, turn off this to reduce process load
SERVER_BILLING_RECO RD_ILLEGAL_CALL	On	Illegal call: caller's IP cannot find in mapping gateways and caller's number cannot find in phones.
SERVER_BILLING_USE_ ROUTING_GATEWAY_P REFIX		
SERVER_CALL_HELPER_ E164		Call helper number, can be used with SERVER_BILLING_FREE _E164S
SERVER_DATABASE_VE RSION		Version of data
SERVER_DISPLAY_CHA RT_GATEWAY_SIZE	10	Gateway number in "Gateway Performance" and "Period Connect analysis"
SERVER_DISPLAY_CUST OMER_ALARM_MONEY	20	In "account management", if current balance below the value, color of the row will be changed
SERVER_DISPLAY_MON EY_PRECISION	3	Money Precision, e.g. set value 3, then 1 will be shown as 1.000.
SERVER_DNS_UPDATE_I NTERVAL	600	Unit: second. Used for "Domain management"
SERVER_E164_NON_STA NDARD_PREFIX		If caller is phone and SERVER_E164_INTERNA TIONAL_CALLEE_REBUI LD is on, before routing, callee number will omit this prefix. This parameter won't change callee number.
SERVER_MAIL_CUSTOM ERE_BILL	Off	SMTP Send Account Consumption Email Automatically. "Account management > Customer Information >
		Email"

Parameter Name	Default Value	Parameter Description
SERVER_MAIL_REPORT_ DAY_OF_WEEK	Monday	"Account management > Customer Information > Email > Report Sending Mode > Weekly"
SERVER_MAIL_SMTP_FR OM	127.0.0.1	Email sender's IP
SERVER_MAIL_SMTP_SE RVER	127.0.0.1	SMTP Server IP
SERVER_MAX_INFO_ON E_MESSAGE	10000	Max Send Number per time when Data Changed
SERVER_PASSWORD_LE NGTH	8	Default Length of Password
SERVER_PAY_DELAY_C USTOMER_EXPIRE_DAY	365	Unit: day. Extend the validity after recharge
SERVER_PAY_NORMAL_ EXPIRE_ACTIVE_DISCO UNT	0	Deduct Original Amount Percent, when Normal Recharge to Expired Account(%)
SERVER_PAY_NORMAL_ EXPIRE_ACTIVE_FEE	0.0	Deduct Fee per Day, when Normal Recharge to Expired Account(Dollar)
SERVER_PAY_PHONE_C ARD_EXPIRE_ACTIVE_D ISCOUNT	0	Deduct Original Amount Percent, when use phone card to Recharge Expired Account(%)
SERVER_PAY_PHONE_C ARD_EXPIRE_ACTIVE_F EE	0.0	Deduct Fee per Day, when use phone card to Recharge Expired Account(Dollar)
SERVER_PAY_PHONE_C ARD_PAY_RELATE_TO_ AGENT	Off	Charge Agent Accounts, which Use Lower Rate, at the same time, when customers use Phone Card to do charge.
SERVER_PHONE_DEFAU LT_LANGUAGE	1	Call Helper Default Language Code
SERVER_PSTN_PREFIX	0	PSTN Call Prefix
SERVER_QUERY_CDR_D ENY_TIME		No CDR Query Time(24 hour) e.g. 18,19,20,21,22,23
SERVER_QUERY_CDR_M AX_DAY_INTERVAL	31	Maximum Interval for CDR Inquiry(Day)

Parameter Name	Default Value	Parameter Description
SERVER_QUERY_MAX_ ONE_PAGE_SIZE	200000	Maximum Number of Data per Page
SERVER_QUERY_MAX_S IZE	30000000	Data Query Limit(Item)
SERVER_QUERY_ONE_P AGE_SIZE	10000	Number of Data per Page(Item)
SERVER_REPORT_CLEA RING_CUSTOMER_FEE	Off	Auto Generate Clearing Account Details Report
SERVER_REPORT_CLEA RING_CUSTOMER_IO	Off	Auto Generate Account Clearing Balance Report
SERVER_REPORT_CLEA RING_CUSTOMER_LOCA TION_FEE	Off	Auto Generate Clearing-Account Area Details Report
SERVER_REPORT_CLEA RING_GATEWAY_FEE	Off	Auto Generate Clearing Gateway Details Report
SERVER_REPORT_CUST OMER_FEE	On	Auto Generate Revenue Details Report
SERVER_REPORT_CUST OMER_IO	Off	Auto Generate Account Balance Report
SERVER_REPORT_CUST OMER_LOCATION_FEE	On	Auto Generate Account Area Detail Report
SERVER_REPORT_GATE WAY_FEE	On	Auto Generate Gateway Bill Report
SERVER_REPORT_GATE WAY_MAPPING_ASR_AC D	Off	Auto Generate Mapping Gateway Connect Analysis Report
SERVER_REPORT_GATE WAY_ROUTING_ASR_AC D	Off	Auto Generate Routing Gateway Connect Analysis Report
SERVER_REPORT_PHON E_FEE	On	Auto Generate Phone Bill Report
SERVER_SIP_LOAD_BAL ANCE_SERVER		Load Balancing Server IP
SERVER_SMAP_RESERV E_TIME	None	SMAP Reserve Duration (seconds) 60-86400 None: disable.
SERVER_SOFTSWITCH_ CLUSTER		IP List of Softswitch Cluster

Parameter Name	Default Value	Parameter Description
SERVER_SOFTSWITCH_E NDPOINT_EXPIRE	3600	Unit: second. Terminal Registration Expiry Time
SERVER_SOFTSWITCH_E NDPOINT_NAT_EXPIRE	120	Unit: second. Terminal Registration Expiry Time
SERVER_SUPPORT_EXPI RE_NOTIFY	On	Technical Support Expire Reminder
SERVER_TRACE_FILE_L ENGTH	40960	Size of Debug file
SERVER_TRACE_MASK	ERROR	Set Display of Debug Information
SERVER_TRACE_TO_FIL E	On	Output Debug Information into File
SERVER_VERIFY_CLEAR ING_CUSTOMER	Off	Check Callee's Phone Account On: clearing account's balance must over SERVER_VERIFY_CLEAR ING_CUSTOMER_REMAI N_MONEY_LIMIT.
SERVER_VERIFY_CLEAR ING_CUSTOMER_REMAI N_MONEY_LIMIT	0.0	Clearing Account Remain Money Limit 0-10000000
SERVER_VERIFY_CLEAR ING_CUSTOMER_TIME	Off	If SERVER_VERIFY_CLEAR ING_CUSTOMER is on, Check Clearing Account Available Time
WEB_PHONEBOOKCALL BACKACCESSNUMBER_ CARD		Access Number for Web Directory billing by Phone Card
WEB_PHONEBOOKCALL BACKACCESSNUMBER_ PHONE		Access Number for Web Directory billing by Phone Number

3.8.5.2 Softswitch Parameter

Table 3-2 H323 Parameter

Parameter Name	Default Value	Parameter Description
SS_H245PORT	10000,39999	H245 port range

Parameter Name	Default Value	Parameter Description
SS_H323DEFAULTNUMB ERINGPLAN	UnknownPlan(0)	Default value in "Routing Gateway > Additional settings > Protocol > H323"
SS_H323DEFAULTNUMB ERTYPE	UnknownType(0)	Default value in "Routing Gateway > Additional settings > Protocol > H323"
SS_H323DEFAULTPROGR ESSINDICATOR	ProgressInbandInformationA vailable(8)	Default value in "Mapping Gateway > Additional settings > Protocol > H323"
SS_H323DTMFMETHOD	H.245 alphanumeric	Default DTMF send mode
SS_H323PRESENTATIONI NDICATOR	None	Default value in "Routing Gateway > Additional settings > Protocol > H323"
SS_H323SCREENINGINDI CATOR	None	Default value in "Routing Gateway > Additional settings > Protocol > H323"
SS_H323STOPSWITCHAF TEROLC	Off	Default value in "Routing Gateway > Additional settings > Protocol > H323"
SS_H323TIMEOUTALERT ING	120	Unit: second. Default value in "Routing Gateway > Additional settings > Protocol > H323"
SS_H323TIMEOUTCALLP ROCEEDING	20	Unit: second. Default value in "Routing Gateway > Additional settings > Protocol > H323"
SS_H323TIMEOUTCALLP ROCEEDINGOLC	20	Unit: second. Default value in "Routing Gateway > Additional settings > Protocol > H323"
SS_H323TIMEOUTSETUP	5	Unit: second. Default value in "Routing Gateway > Additional settings > Protocol > H323"

 Table 3-3 SIP Parameter

Parameter Name	Default Value	Parameter Description
SS_SIPAUTHENTICATIO NCODE	Unauthorized(401)	Return code for SIP authentication, when Register message or Invite message without Proxy-Authorization or Authorization.
SS_SIPAUTHENTICATIO NRETRY	6	SIP authentication retry time, when received 401 or 407
SS_SIPAUTHENTICATIO NTIMEOUT	10	Time for SIP Authentication If caller failed to get authentication within the time, Softswitch will reject the call.
SS_SIPNOTIMERMAXSES SIONTIME	7200	Maximum Conversation Time for Non-TIMER SIP Caller If SIP caller doesn't support "timer", softswitch will stop the call when the time is up.
SS_SIPREGISTEREXPIRE	Auto Negotiation	SIP Registration Expiration Time to Other Server(seconds) 20-7200
SS_SIPREGISTERRETRY DELAY	60	Resend Interval for SIP Registration when Failed(Second) 30600
SS_SIPRESENDINTERVA L	0.5,1,2,4,4,4,4,4,4	Resend SIP Message Interval (Second) If got no response or confirm within the time, Softswitch will resend SIP message. If exceeded the retry times, Softswitch will stop sending and regard as call failure, then try another gateway or hang up.
SS_SIPSENDUNREGISTE R	On	Send Cancel Register Message
SS_SIPSESSIONTIMEOUT EARLYHANGUP	0	SIP Timer no reinvite (update) Early Hang up(Second)

Parameter Name	Default Value	Parameter Description
SS_SIPSESSIONTTL	600	Detecting SIP Connected Status Interval(Second) If SIP caller supports "session-timer", within the time Softswitch will detect connect status according to the retry times. If got no confirm message, Softswitch will regard as call finish, then hang up.
SS_SIPSESSIONUPDATES EGMENT	2	SIP Timer reinvite (update) Interval 210
SS_SIPSTOPSWITCHAFT ERSDP	On	Stop Switch Gateway After Receive SDP
SS_SIPTIMEOUTINVITE	10	Unit: second. Default value in "Routing Gateway > Additional settings > Protocol > SIP"
SS_SIPTIMEOUTRINGIN G	120	Unit: second. Default value in "Routing Gateway > Additional settings > Protocol > SIP"
SS_SIPTIMEOUTSESSION PROGRESS	20	Unit: second. Default value in "Routing Gateway > Additional settings > Protocol > SIP"
SS_SIPTIMEOUTSESSION PROGRESSSDP	120	Unit: second. Default value in "Routing Gateway > Additional settings > Protocol > SIP"
SS_SIPTIMEOUTTRYING	20	Unit: second. Default value in "Routing Gateway > Additional settings > Protocol > SIP"
SS_SIPUSERAGENTPRIV ACY	Ignore	Privacy Setting for Register User Ignore: No Privacy field Id: contain Privacy: id None: contain Privacy: none
SS_SIPUSERSTOPSWITC HAFTERINVITETIMEOUT	Off	Stop Switch Gateway After INVITE Timeout

Parameter Name	Default Value	Parameter Description
SS_SIP_INVITE_E164_US E_REQUEST_LINE	Off	Use Number in Request-Line as Callee and Keep Number in To
SS_SIP_NAT_KEEP_ALIV E_MESSAGE	HELLO	Content of NAT Keep Message
SS_SIP_NAT_KEEP_ALIV E_PERIOD	30	NAT Keep Message's Period(seconds) 10-86400
SS_SIP_NAT_KEEP_ALIV E_SEND_INTERVAL	500	NAT Keep Message's Send Interval(million seconds)
SS_SIP_NAT_KEEP_ALIV E_SEND_ONE_TIME	3000	NAT Keep Message's Quantity per Time
SS_SIP_PASSTHROUGH_ 302	Off	Transmit 302 Signal

 Table 3-4 System Parameter

Parameter Name	Default Value	Parameter Description
SS_ACCOUNTINDICATIO NMETHOD	Off	Insufficient balance alarm mode
SS_ACCOUNTINDICATIO NMONEY	10	Insufficient balance alarm threshold
SS_ACCOUNTINDICATIO NTIME	100	Insufficient remaining duration alarm threshold(minutes)
SS_BLACK_LIST_MALICI OUS_CALL_CHECK_INT ERVAL	600	Malicious call dynamic callee black list monitor cycle(seconds)
SS_BLACK_LIST_MALICI OUS_CALL_EXPIRE	3600	Malicious call dynamic callee black list expired duration(seconds)
SS_BLACK_LIST_MALICI OUS_CALL_LIMIT	None	Malicious call dynamic callee black list max call times
SS_BLACK_LIST_NO_AN SWER_EXPIRE	2	No answer call dynamic black list expired duration(days)
SS_BLACK_LIST_NO_AN SWER_LIMIT	None	No answer call dynamic black list continuous call times
SS_BLACK_LIST_NO_AN SWER_PERIODS		No answer call dynamic black list monitor period

Parameter Name	Default Value	Parameter Description
SS_CALLCAPTURERTPP ORT	40000	Local Port for Call Monitor(Even Number)
SS_CALLFAILEDINDICA TIONENABLE	None	Prompt phone call failed
SS_CALLFORWARDUSIN GORIGINALCALLER	On	Use the Original Caller as Forward Display Number
SS_CALLREMAINTIMEIN DICATIONBOUNDARY	1	Time of prompt phone remaining duration (minutes). During the call, if remain time less than the value, system will give prompt to both side.
SS_CALLREMAINTIMEIN DICATIONENABLE	Off	Prompt phone remaining duration
SS_CALLTRANSFERDIAL KEY	#	Confirm Button for Call Transfer
SS_CALLTRANSFERENT RYKEY	*	Start Button for Call Transfer
SS_CALLTRANSFERRIN GFILE		Transfer Waiting Audio
SS_CALLTRANSFERTRA NSMITRINGTONE	On	Send Color Ring back Tone when Call Transfer
SS_CDRRECORDNONCO NNECT	Off	When saving CDR as TXT, contains CDR, which hold time is 0s
SS_CDRRECORDTOFILE	Off	Save CDR as TXT
SS_DEFAULT_LOCALIP		Default Local Address
SS_DTMFTIMEOUT	5	Waiting time for Automatic Call Transfer
SS_ENDPOINTREGISTER REPLACE	On	Allow replace the current registered users when terminal registration.
SS_ENDPOINTREGISTER RETRY	6	Max retry times when terminal registration
SS_ENDPOINTREGISTER SUSPEND	180	Disable duration after exceed retry times for when terminal registration
SS_ENDPOINTTIMETOLI VE	60	Interval for Lightweight Registration of Terminal(seconds)

Parameter Name	Default Value	Parameter Description
SS_GATEWAY_AUTOSW ITCH_LIMIT	None	Times limit for Routing Gateway Auto-Switch
SS_GATEWAY_SWITCHS TOPAFTERRTPSTART	On	Stop Switch Gateway when RTP Start
SS_GATEWAY_SWITCHU NTILCONNECT	Off	Switch Gateway Until Connect
SS_GCINTERVAL	3600	Interval for Clean Useless Data of Softswitch(seconds)
SS_LOCALRINGDEFAUL T	localring	Default local ring
SS_MAPPINGGATEWAY TIMEOUT	None	Mapping Gateway Default Timeout
SS_MAXCALLDURATIO	None	Max Conversation Limitation(seconds)
SS_MEDIACHECKTIMEO UT	2	No Media Data Hang Up Duration(minutes)
SS_MEDIAPROXYBEHIN DNAT	On	Forward RTP for Registered Terminals behind NAT
SS_MEDIAPROXYBETWE ENNET	Off	Forward RTP for Calls between Different Networks
SS_MEDIAPROXYMODE	Auto	Media Proxy
SS_MEDIAPROXYRTPPO RT	10000,39999	RTP Port for Forwarding Voice, use Comma to Separate the Start and End port
SS_MEDIAPROXYSAME NAT	On	Forward RTP for Registered Terminals in the same NAT
SS_MOBILEE164LENGTH	11	Length limit for Mobile Number separated by commas (Maximum 31), uses 0 for allow all the length
SS_REGISTERTRACEMA XSIZE	5	Registration Track Maximum Data Size(MB)
SS_REPLYUNAUTHORIZ ED	On	Respond to Unauthorized Registration or Call
SS_TCPCLOSERESET	Off	Close TCP connection in Direct Reset mode.
SS_TIMEOUTCALLFORW ARDNR	20	Time for Call Forwarding, When No Reply(seconds)

Parameter Name	Default Value	Parameter Description
SS_TIMEOUTPHONEHAN GUP	120	Time for Hang Up, When No Reply(seconds)
SS_TRACEFILELENGTH	40960	Size of Softswitch's Debug File(KB)
SS_TRACEMASK	ERROR	Set Display of Debug Information
SS_TRACETOFILE	On	Output Debug Information into File
SS_UNBOUNDINDICATI ONENABLE	Off	Prompt whether the Phone Card is Binded
SS_VALUEADDEDSERVI CEIP		Value Added Server IP
SS_VALUEADDEDSERVI CEPORT	5055	Value Added Server Port
SS_VIRTUAL_IPS		DMZ Settings

3.8.5.3 Audio Service Parameter

Parameter Name	Default Value	Parameter Description
IVR_CALLBACK_KEEP_L INE_TIME	30	Used for callback line keep. See IVR_CALLBACK_KEEP_L INE_RING_TIME
IVR_CALLREPORTIP		Send IVR second line's call state. UDP request format: Call ID, Serial Number, Call State, Caller Number, Callee Number, Forward Number, Menu ID, Menu Name.
		Response format: Call ID, Serial Number.
		Call State: Ringing(180/183)/OK/Bye
IVR_CALLREPORTPORT	8000	Report UDP Port
IVR_CALLREPORTRETR Y	6	Call State Notify Retry Times
IVR_CALLREPORTRETR YINTERVAL	3	Call State Notify Retry Interval
IVR_CODECPREFORDER	g729a,g729,g723,g711a,g71 1u	Voice Codecs Priority (g729a,g729,g723,g711a,g71 1u)

IVR_DEFAULTERRORAU DIO	defaulterror	Default Error Message Voice
IVR_DEFAULTLANGUAG E	chinese	Use Default Language when IVR don't know Client's Language
IVR_ENABLECARDLINE RESTRICT	On	Each Phone Card cannot use IVR service at the same time.
IVR_ENABLEPARSEINBA ND	Off	Inband DTMF Analysis
IVR_ENABLEPARSESEC ONDINBAND	Off	Second Line Inband DTMF Analysis
IVR_PARSEDTMFMODE	Auto	DTMF Analysis Mode
IVR_RINGINGTIMEOUT	120	Time for IVR Hang Up, When No Reply(seconds)
IVR_RTPPORT	40000,47999	Media Port Range
IVR_SETUPTIMEOUT	20	Invite Timeout Duration
IVR_SHORTE164AUTORE CORDENABLE	Off	Auto Save Number Function
IVR_SHORTE164AUTORE CORDLENGTH	4	Auto Save Number Suffix
IVR_SHORTE164AUTORE CORDMAXNUMBER	5	Auto Save Number Amount
IVR_SIPNOTIMERMAXSE SSIONTIME	7200	Maximum Conversation Time for Non-Timer SIP Caller
IVR_SIPRESENDINTERV AL	3	Interval for Resend SIP Message(seconds)
IVR_SIPSENDRETRY	6	Times of Resend SIP Message
IVR_SIPSESSIONRETRY	6	Retry Times for Detecting SIP Connected Status
IVR_SIPSESSIONTTL	600	Interval for Detecting SIP Connected Status(seconds)
IVR_SOFTSWITCHIPADD RESS		IP of Softswitch
IVR_SOFTSWITCHSIPPO RT	5060	Port of SIP Softswitch
IVR_SSAVAILABLEIP		Access IP List, separated by commas

IVR_TRACEFILESIZE	40960	Size of Softswitch's Debug File(KB) 4096-4096000
IVR_TRACEMASK	ERROR	Set Display of Debug Information
IVR_TRACETOFILE	On	Output Debug Information into File
IVR_WEB_CALLBACK_S AME_TIME_CODEC	g729a	Codec for Call Both Side
IVR_ALARMCALLERE16 4		Voice Alarm Caller Number
IVR_ALARMCONFIRMKE Y		Voice Alarm Confirm Key
IVR_ALARMPERIOD	5	Voice Alarm Period(minutes)
IVR_ALARMPREAUDIO	alarmpreaudio	Voice Alarm Pre-Prompt Audio
IVR_ALARMRETRY	6	Voice Alarm Retry Times
IVR_ALARMRETRYINTE RVAL	20	Voice Alarm Retry Interval
IVR_VOICEMAILEXPIRE DAY	7	Voice Mail Preservation Days
IVR_VOICEMAILMAXNU MBER	10	Voice Mail Max Items
IVR_VOICEMAILMAXTI ME	60	Voice Mail Recording Length(seconds)
IVR_VOICEMAILWELCO ME	voicemailwelcome	Default Audio for Voice Mail Access

3.9 Call End Reason

3.9.1 Server Side

Terminations caused by the server are all defined by VOS3000. For any questions related to this kind of causes, please consult your system supplier.

Following are the causes of this kind:

- Response timeout: the called did not answer the phone before the timeout limit was reached. The timeout limit can be set either by the "Alerting" signal of Routing Gateway (when the call is processed through Routing Gateway) or by the "SS_TIMEOUTPHONEHANGUP" parameter in the Softswitch system (when the call is directed to a phone)
- Protocol limit: the server cannot process this type of protocol

- Connection timeout: No response to the SIP message was received after specified number of trials. The maximal number of trials can be specified by the "SS_SIPRESENDINTERVAL" and "SS_SIPSENDRETRY" parameters in the Softswitch system.
- Busy: the number being called is busy.
- Account locked: the account is disabled. It may also due to the lockdown of its agent account
- Session timeout: the caller or the called supports the SIP Timer protocol, yet it has not received the updating signal within a time limit; or, neither does the caller nor the called support the SIP Timer protocol, yet the session time exceeded the value specified by the system parameter
- SS_SIPNOTIMERMAXSESSIONTIME".
- Caller's number restricted: the length of the caller's number exceeds the length specified by the system parameter "SS CALLERALLOWLENGTH".
- Called number restricted: the length of the called number exceeds the length specified by the system parameter "SS_CALLERALLOWLENGTH".
- Proceeding timeout: No response is received from the server within the time limit. The
 time limit can be specified by the "Setup" and "Callproceeding" parameters in the
 routing gateway.
- Caller's number prefix restricted: the mapping gateway does not accept the caller's number prefix.
- Unregistered: the terminal is not register, and is not allowed to make the call.
- Called number locked: the called is currently locked.
- Called number prefix restricted: the gateway for the caller or the called gateway does not accept the called number prefix.
- Caller locked: the caller is currently locked.
- Connection establishment timeout: the connection is not established within the timeout limit set by the mapping gateway. The time limit can be changed by setting the proceeding timeout parameter in the mapping gateway.
- Account expired: the account is expired.
- Connection limit exceeded: the maximum number of outgoing calls is reached. The maximum number can be specified in the system.
- Forcible hang-up: the server disconnected the session, usually because the client chose to end the session in their user interface.
- Account disabled: the account is currently disabled. Please check the status of the account it belongs to.
- The called not online: There is no appropriate device to accept this call. For example, there is no matching routing gateway.
- No-answer forwarding by the caller: the caller has set the no-answer forwarding
- Timed forwarding: the call matches the timed forwarding criteria specified in the phone management settings.
- On-busy forwarding: the call matches the on-busy forwarding criteria specified in the phone management settings.
- No-answer forwarding by the called: the call matches the no-answer forwarding criteria specified in the phone management settings.
- Forwarding loop: Due to the wrong configuration of users, the forwarding route has loops.

- Call forwarding by the called: the call matches the call forwarding criteria specified in the phone management settings.
- Do-not-disturb from the called: the called is in the do-not-disturb status
- Session closed by the called: the called did not send the hang-up signal, but disconnected the TCP connection
- Session closed by the caller: the caller did not send the hang-up signal, but disconnected the TCP connection
- Illegal call: the call comes from an unauthorized IP address and the caller's number is not registered in the system.
- No matching rate: There is no rate that matches this call.
- No matching account: There is no account to bill this call.
- Insufficient balance: the account has insufficient balance
- Call restriction: the call is prevented by restrictions (such as <International call>) set by the phone or the gateway.
- Hang-up by the called: the hang-up signal comes from the called.
- Hang-up by the caller: the hang-up signal comes from the caller.

3.9.2 Client Side

3.9.2.1 H323 Device

UnknownCauseIE

UnallocatedNumber

NoRouteToNetwork

NoRouteToDestination

SendSpecialTone

MisdialledTrunkPrefix

ChannelUnacceptable

CallAwarded

Preemption

PreemptionCircuitReserved

NormalCallClearing

UserBusy

NoResponse

NoAnswer

SubscriberAbsent

CallRejected

NumberChanged

Redirection

ExchangeRoutingError

NonSelectedUserClearing

DestinationOutOfOrder

InvalidNumberFormat

FacilityRejected

StatusEnquiryResponse

NormalUnspecified

NoCircuitChannelAvailable

CallQueued

NetworkOutOfOrder

FrameModeOOS

FrameModeOperational

TemporaryFailure

Congestion

AccessInformationDiscarded

Requested Circuit Not Available

PrecedenceCallBlocked

ResourceUnavailable

QoSNotAvailable

Requested Facility Not Subscribed

OutgoingCallsBarred

Outgoing Calls Barred In CUG

IncomingCallsBarred

Incoming Calls Barred In CUG

BearerCapNotAuthorised

Bearer Cap Not Presently Available

InconsistentOutgoingIE

ServiceOptionNotAvailable

Bearer Cap Not Implemented

ChannelTypeNotImplemented

Requested Facility Not Implemented

Only Restricted Digital Bearer Cap Available

ServiceOrOptionNotImplemented

InvalidCallReference

IdentifiedChannelNonExistent

CallIdentifyNotSuspendedCall

CallIdentifyInUse

NoCallSuspended

ClearedRequestedCallIdentity

UserNotInCUG

IncompatibleDestination

NonexistentCUG

InvalidTransitNetwork

InvalidMessageUnspecified

MandatoryIEMissing

MessageTypeNonexistent

MessageNotCompatible

IEN on Exist ant Or Not Implemented

InvalidIEContents

Message Not Compatible With Call State

TimerExpiry

ParameterNonexistent

Unrecognised Paramater Discarded

ProtocolErrorUnspecified

InterworkingUnspecified

ErrorInCauseIE

3.9.2.2 SIP Device

Multiple Choices

Moved Permanently

Moved Temporarily

Use Proxy

Alternative Service

Bad Request

Unauthorized

Payment Required

Forbidden

Not Found

Method not Allowed

Not Acceptable

Proxy authentication Required

Request Timeout

Gone

Request Entity Too Large

Request-URI Too Long

Unsupported Media Type

Unsupported URI Scheme

Bad Extension

Extension Required

Session Interval Too Small

Interval Too Brief

Temporarily Unavailable

Call/Transaction Does not Exist

Loop Detected

Too Many Hops

Address Incomplete

Ambiguous

Busy Here

Request Terminated

Not Acceptable Here

Request Pending

Server Internal Error

Not Implemented

Bad Gateway

Service Unavailable

Server Time-out

Version not Supported

Message Too Large

Busy Everywhere

Decline

Does not Exist Anywhere

Not Acceptable

3.10 First Usage

3.10.1 Whole Sales

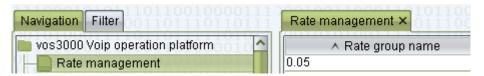
Operation

- Create Fee Rate Group
- Create Fee Rate
- Create Account
- Create Mapping Gateway
- Create Routing Gateway

Example

- Customer IP: 172.16.1.11
- Routing Gateway IP: 172.16.1.12

Double click "Navigation > Rate management", add rate group 0.5 and apply.



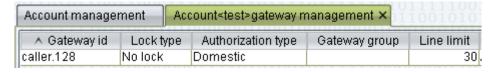
Double click "Number of rates > 0" to add fee rate.



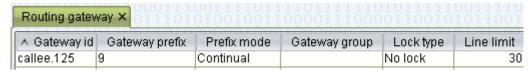
Double click "Navigation > Account management", add account test and apply.



Double click "Number of gateway > 0" to add mapping gateway.



Double click "Navigation > Routing gateway", add routing gateway caller.125 and apply.



After configuration, ask customer to send SIP call, then open "Navigation > Data query > Cdr" to see call result.

4 Maintenance

About This Chapter

This chapter describes the maintenance of VOS3000 solutions.



CAUTION

If one server deployed multiple services, should start and stop in the following order.

4.1 Service Start

Step 1 Extreme Media Proxy

/etc/init.d/empd start

Step 2 Softswitch

/etc/init.d/mbx3000d start

Step 3 VOS3000

Main Service

/etc/init.d/vos3000d start

Web Service

/etc/init.d/vos3000websv start

Web Client

/etc/init.d/vos3000webct start

Step 4 Dial

/etc/init.d/IVRdiald start

Step 5 Value Added

/etc/init.d/IVRvalueaddedd start

Step 6 IP PBX

/etc/init.d/IVRippbxd start

Step 7 Audio Player

/etc/init.d/IVRaudioplayerd start

4.2 Service Stop

Step 1 Softswitch

/etc/init.d/mbx3000d stop

Step 2 Dial

/etc/init.d/IVRdiald stop

Step 3 Value Added

/etc/init.d/IVRvalueaddedd stop

Step 4 IP PBX

/etc/init.d/IVRippbxd stop

Step 5 Audio Player

/etc/init.d/IVRaudioplayerd stop

Step 6 Extreme Media Proxy

/etc/init.d/empd stop

Step 7 VOS3000

Main Service

/etc/init.d/vos3000d stop

Web Service

/etc/init.d/vos3000websv stop

Web Client

/etc/init.d/vos3000webct stop

4.3 Service Restart

Step 1 Softswitch

/etc/init.d/mbx3000d restart

Step 2 Dial

/etc/init.d/IVRdiald restart

Step 3 Value Added

/etc/init.d/IVRvalueaddedd restart

Step 4 IP PBX

/etc/init.d/IVRippbxd restart

Step 5 Audio Player

/etc/init.d/IVRaudioplayerd restart

Step 6 Extreme Media Proxy

/etc/init.d/empd restart

Step 7 VOS3000

Main Service

/etc/init.d/vos3000d restart

Web Service

/etc/init.d/vos3000websv restart

Web Client

/etc/init.d/vos3000webct restart