

Service Provider Class 5 VoIP – An Integrated Approach

PLNOG March 5th 2010,
Warsaw

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OR MAYBE:

Does the life of an ISP getting into VoIP telephony really have to be so complicated?

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Access

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Agenda

- ISPs getting into VoIP – Motivation, Considerations
- VoIP Network Elements
- Class 5 VoIP Platforms
- The Integrated VoIP System
- Summary



As an ISP why would you get into VoIP?

- Leverage existing infrastructure & customer base
- Use voice as a “bait” to gain more Internet customers
- Create richer service products: packages, promotions
- Strengthen your image & positioning as a provider
- Offer customers a one-stop-shop: single bill, single PoC
- Captive customers



INCREASE MARKET SHARE & REVENUES

Isn't it easier to just resell voice services?

Benefits from becoming an operator:

- **Gain full control** over the service:
 - **Cost/Profit** (get lowest minute rate from different carriers, stop paying for the Class 5 services)
 - **Diversity** (create new services not just phone line)
 - **Service Quality** (no more mediation between customer and provider)
- **Secure existing customers**
- **Sell more services**



ISPs Adopting VoIP

Selecting the right solution

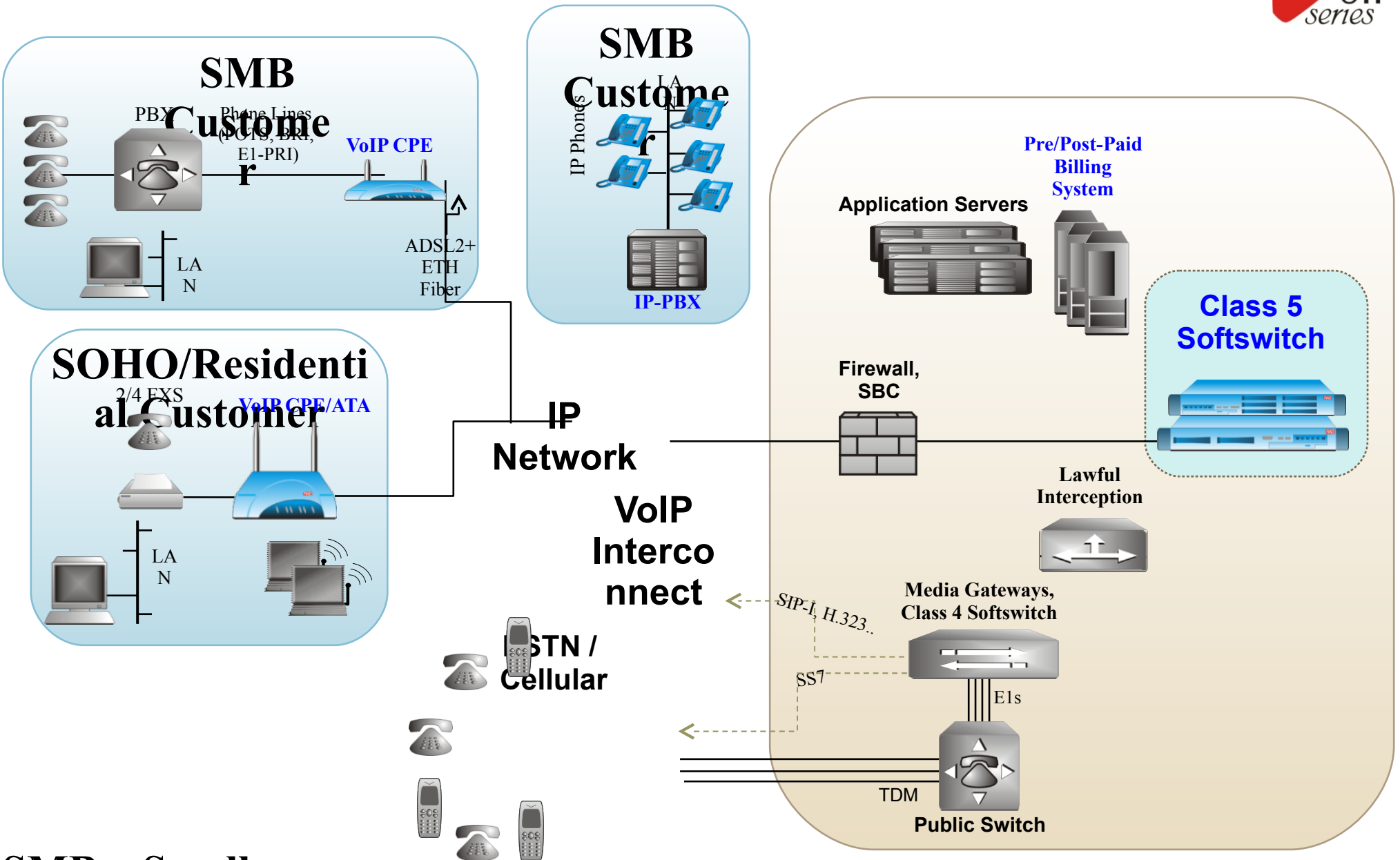
Some important considerations:

- Low entry cost, minimal risk
- Complete solution from a single source
- Simple to manage, easy service provisioning
- Short time to service, fast ROI
- Carrier class, scalable
- Established vendor

Low OPEX



VoIP Service Provider Network



SMB – Small-Medium Business

Market Segments

End-customer Types

Customer Type	No. of phone lines	Customer Needs	Remarks
Residential (household)	1-2	- Basic services	- Price sensitive
SOHO Small Office-Home Office (1 or 2 persons)	1-2	- Multiple class 5 services (e.g. Voicemail, Fax, CLIR)	- Will pay more than residential(?)
SMB Small-Medium Business (2-20 employees)	4-8	<ul style="list-style-type: none"> · SOHO services + PBX functionalities · Additional services (e.g. IVR, Firewall, VPN) · Small IP-PBX 	<ul style="list-style-type: none"> · Higher prices · Installation/setup fee · Support contract
Enterprise (>20 employees)	>10 (E1)	<ul style="list-style-type: none"> · VPNs for satellite office · Voice VPNs · IP-PBX · Advanced telephony services (IVR, conference rooms etc.) 	

High-End Softswitch

- Tier1 Softswitches are designed for millions of subscribers
- High cost solution
- Focus on residential market
- Complex integration
- Complex operation
 - Long adaptation to operator's needs
 - No modification flexibilities
 - Long time to market
 - Costly maintenance fees



Low-End Open Source Solution

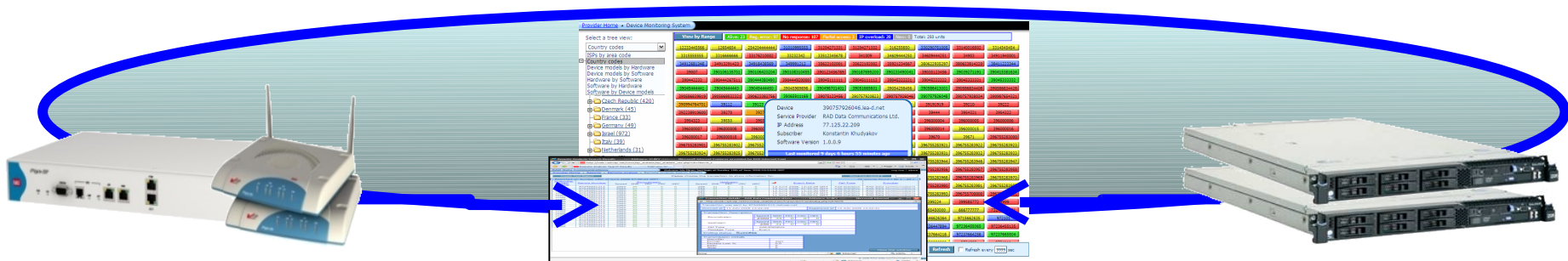
(open source = free?)

	Self Developed / Low Cost Solution (Asterisk..)
Typical Capacity	Limited (several hundred customers?)
Originally designed for	Enterprise customer (IP-PBX)
CPE Integration	Typically requires extensive effort
Management	CPEs managed separately if at all
System Robustness	May vary according to the integrator
Service Provisioning	Usually complex (scripting etc.)
Integration with BSS/OSS	Depends on integrator
TCO (Total Cost of Ownership)	High (self developed ü long learning curve, requires extensive in-house support & maintenance)

The Integrated Class 5 Platform

What makes it integrated?

- **Single and unified management GUI for:**
 - Controlling Softswitch services delivered to the subscribers
 - CPE management: on-the-fly device configuration
 - Real time monitoring: CPE status, call quality, ADSL line, device history, troubleshooting
- **CPE HW/SW version control, FW upgrade tools**
- **Smart call routing** (e.g. based on originating CPE port type)
- **CDR capabilities:** auto-export, integrated services
- **Standard API** allowing further integration with external systems



DEMO

(or: Enough talking, let me show exactly what I mean..)



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Example #1:

Create an additional phone number for an existing customer, assign it to a dedicated port on his CPE

Note: This port will be connected to a POS terminal



The screenshot shows the RAD Data Communications web interface. The main content area displays a table of phone numbers for a customer. The table has columns for #, Remove, Country code, Area code, Local number, and Profile. The first row shows a number with country code 48, area code 12, and local number 2525000, with a profile of Premium. The second row shows a number with country code 48, area code 12, and local number 2525001, with a profile of Basic.

The 'Create new phone number' dialog box is open, showing fields for Country code (48), Area code (12), Local number (2525999), and Telco profile (Basic). The Amount field is set to 1. A message at the bottom of the dialog says: "Enter an amount greater than 1 (one) to create a batch of consecutive numbers."

The interface also shows a 'VoIP trunks' table with columns for #, Status, Numbering, Gans, CID Display, Preferred codec, Fax mode, and Modem Mode. The table contains four rows of trunk configurations.

Example #2:

Your end customer wants to forward calls during lunch time to his mobile phone, and afterhours to an external call center service



The screenshot shows the configuration page for IPVgate 20A. The 'Scheduled Call Forwarding' section is active, displaying a table of forwarding rules for the number (972) 037664299. The table includes columns for Day of the week, Time segment, and Forward to number.

Day of the week	Time segment	Forward to number
<input checked="" type="checkbox"/> Monday	From 12:15 To 13:00	Voice Mail
<input checked="" type="checkbox"/> Monday	From 17:00 To 19:00	0544280529
<input checked="" type="checkbox"/> Tuesday	From 12:00 To 13:00	Voice Mail
<input checked="" type="checkbox"/> Tuesday	From 17:00 To 19:00	0544280529
<input checked="" type="checkbox"/> Wednesday	From 12:00 To 13:00	Voice Mail
<input checked="" type="checkbox"/> Wednesday	From 17:00 To 19:00	0544280529
<input checked="" type="checkbox"/> Thursday	From 12:00 To 13:00	Voice Mail
<input checked="" type="checkbox"/> Thursday	From 17:00 To 19:00	0544280529
<input checked="" type="checkbox"/> Friday	From 12:00 To 13:00	Voice Mail
<input checked="" type="checkbox"/> Friday	From 17:00 To 19:00	0544280529
<input checked="" type="checkbox"/> Saturday	From 00:00 To 23:59	Voice Mail
<input checked="" type="checkbox"/> Sunday	From 00:00 To 23:59	Voice Mail

Example #3:

Route all Fax calls to a specific termination gateway (e.g. for ensuring T.38 support)



Outgoing Call routing rules

Description	Phone	From	To	Target
Calling New York	Phone	Any Number	1212	New York Gateway (17...
LA from Hong Kong	Phone	852	1213	Los Angeles Gateway (1...
Israel from Germany	Phone	49	972	Tel Aviv Gateway (143...
Calling France from Israel	Phone	972	33	Paris Gateway (177.74...
Calling U.K from Paris	Phone	331	44	London Gateway (88.13...
Weekends 972 Int'l	Phone	972	Not To	London Gateway (88.13...
Demo in Argentina	Phone	54	Any Number	Tel Aviv Gateway (143...
From India	Phone	91	972	RAD_Gail_ISDN_Gatewa...
Hungary to Israel	Phone	361	972	RAD_Gail_ISDN_Gatewa...
Fax calls	Fax	Any Number	Any Number	Tel Aviv Gateway (143...

Description: Source Direction: Source Prefix: Enabled Disabled
Target Direction: Target Prefix:
Protocol: Equipment:
Click on the "Add schedule" button to add a scheduler line

Example #4:

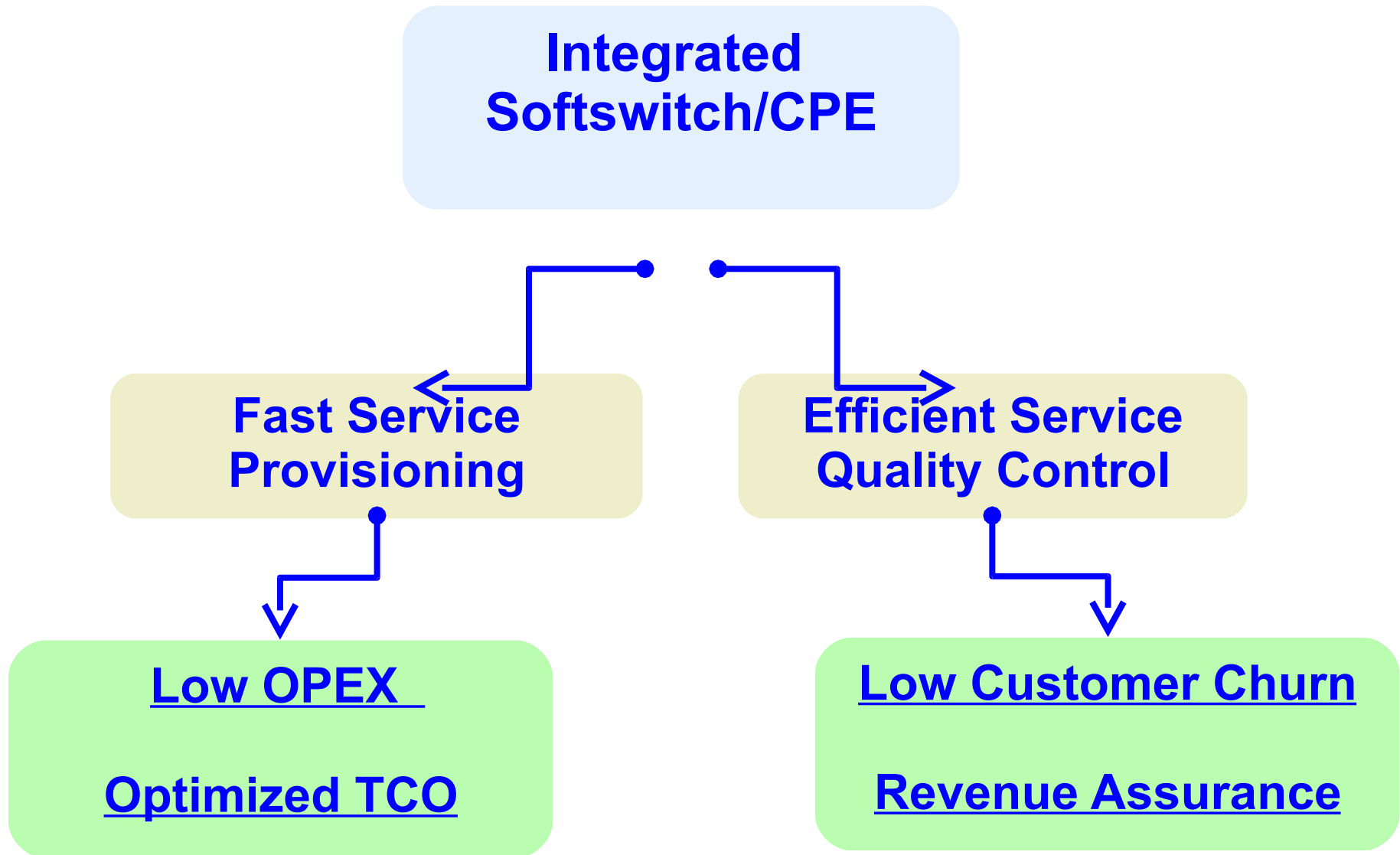
A subscriber is complaining about voice quality issues. You must quickly troubleshoot and locate the problem..



The screenshot displays the RAD VoIP Management System interface. The left sidebar contains search filters for various categories: Subscriber Information, Transaction Addresses, Transaction Identifier, Transaction Date Range, Event Date Range, Transmission Details, Quality of Service, Transaction Direction, and Provider. The main area shows search results for a specific transaction, including a table with columns for Subscriber, Device Number, Speed, SNR, FEC, CRC, HEC, and Event Date. The table lists multiple records for a subscriber with device number 97236455065, showing consistent performance metrics across different dates in December 2008.

Subscriber	Device Number	Speed	SNR	FEC	CRC	HEC	Event Date	Call Type
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 13:53:21 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 11:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 10:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 09:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 08:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 07:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 06:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 05:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 04:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 03:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 02:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	16 December 2008, 01:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	15 December 2008, 23:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	15 December 2008, 22:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	15 December 2008, 21:46:30 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	15 December 2008, 20:46:31 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	15 December 2008, 19:46:31 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	15 December 2008, 18:46:31 GMT	Asia-Statistics
daniel_o	97236455065	1856	37	0	0	0	15 December 2008, 17:46:31 GMT	Asia-Statistics

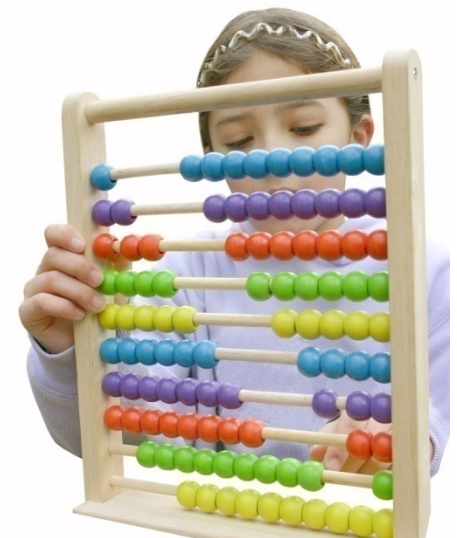
The Integrated Class 5 Platform



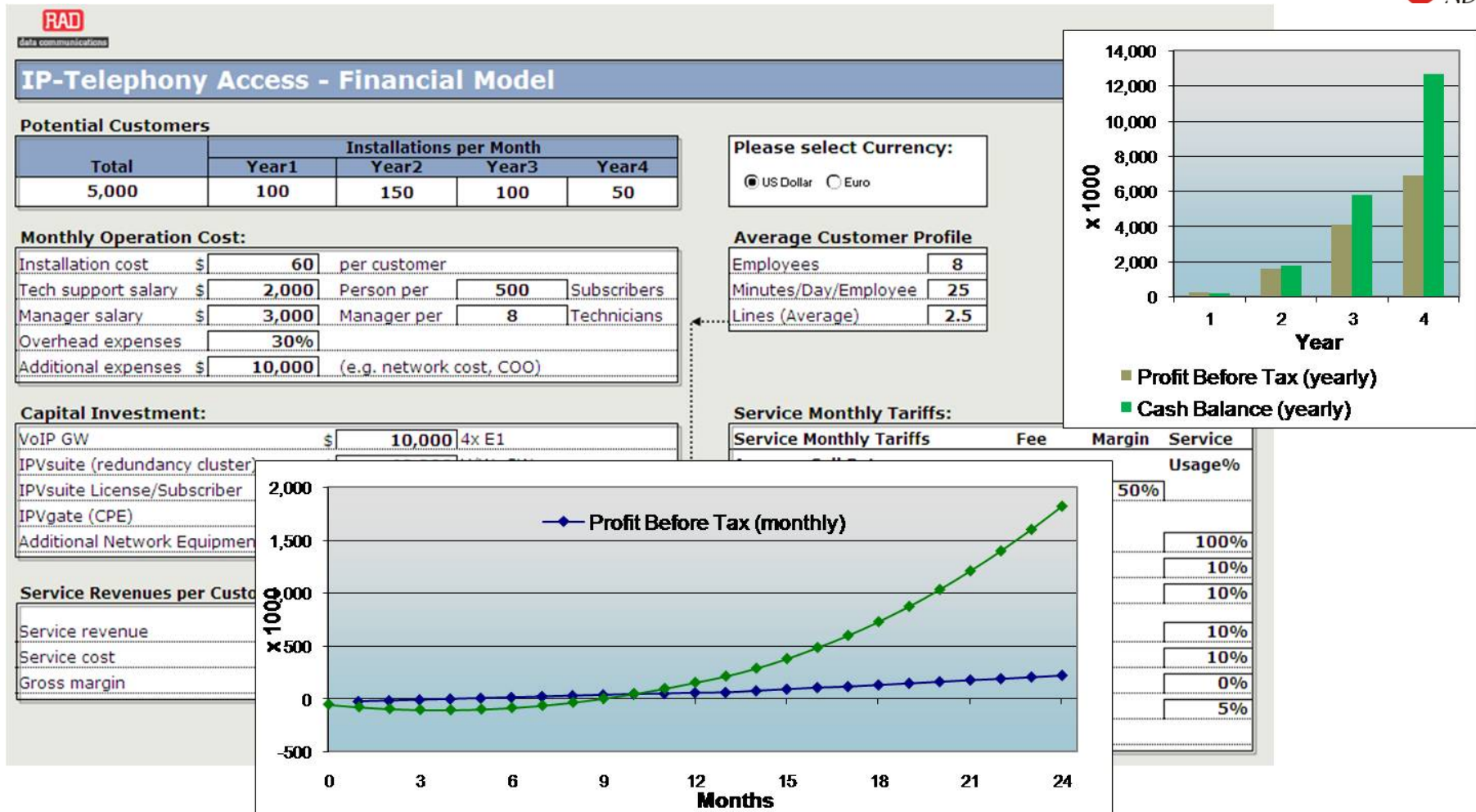
Operational Costs (ouch!)

Things to consider for your business plan:

- Number & level of IT engineers needed per subscriber
- Call center support resources per subscriber
- Installation time & cost
- Maintenance cost of components
- Availability-of-Service cost (MTBF, customer churn, revenue loss)



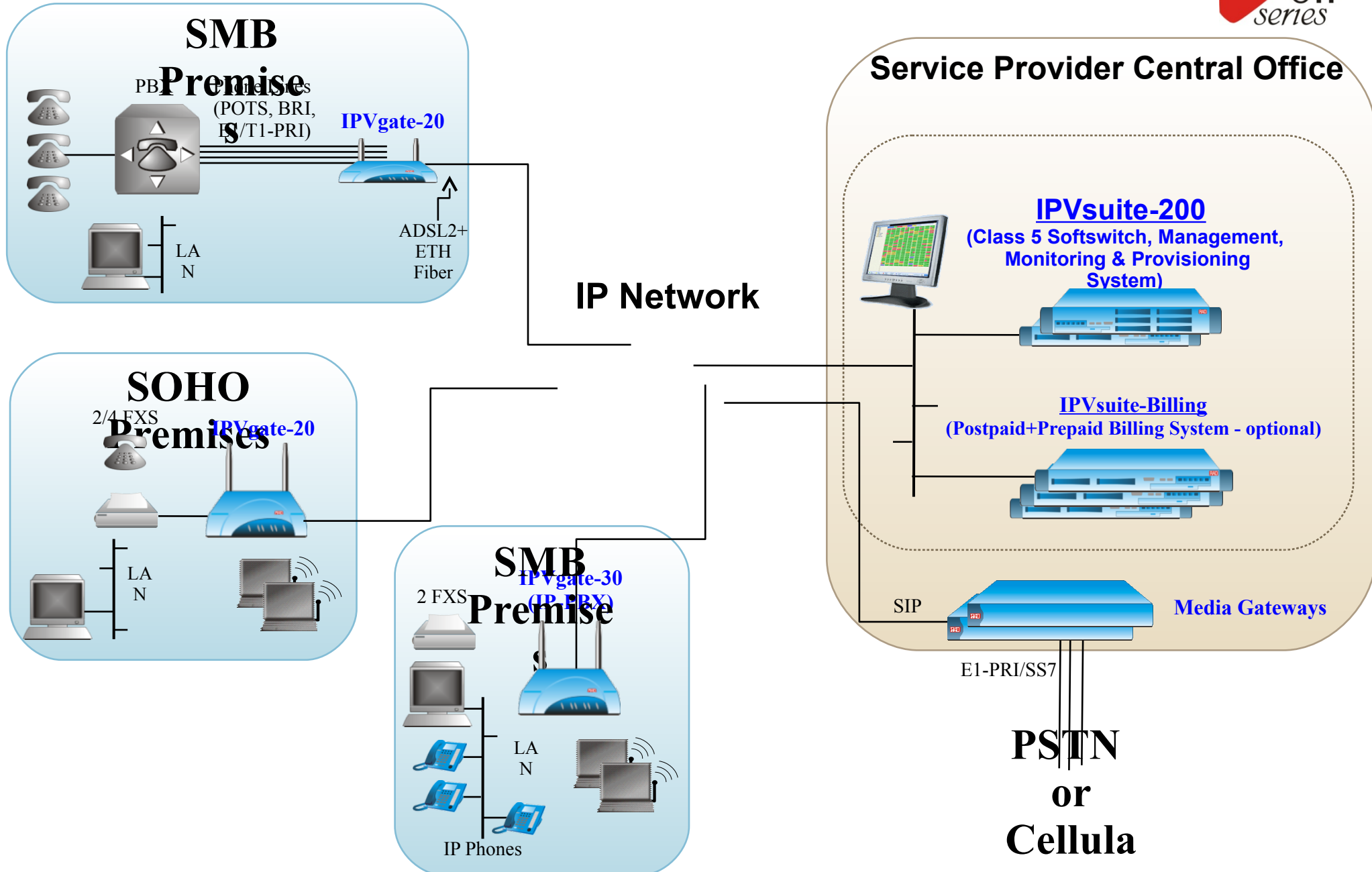
Business Plan Simulation



- To what extent is your business plan sensitive to CAPEX & OPEX?
- When can you expect to balance your expenses?
- Different scenarios must be simulated to make sure your numbers are right!

RVS – RAD VoIP System

Integrated VoIP Telephony for Service Providers



The Package – “Telco in a Box”

We provide a fully integrated, carrier grade telephony & data access system.

The package comprises of:

- **Central Class 5 SoftSwitch - IPVsuite**

All necessary Telephony services integrated on top of a SoftSwitch



- **Integrated Management & Provisioning System - IPVsuite**

Controls & monitors end-units using extremely user friendly web interface



- **End Customer Units (CPE) - IPVgate**

Business grade VoIP gateway routers, fully integrated with IPVsuite



- **Professional Project Assistance**

Team of experienced experts in VoIP, Internet Networking & Telephony



- **Complementary 3rd Party Elements**

RAD can provide integrated complementary equipment (e.g. Media Gateways, Billing System)



Summary

RAD Integrated Class 5 VoIP System

RAD

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VoIP
series

- Integrated Class 5 Softswitch + CPEs from same vendor
Record time to service, single vendor responsibility ✓
- Built-in NMS for service provisioning + CPE management/monitoring ✓
Minimal OPEX, optimized TCO
- Low cost to entry, ✓ license-based “invest-as-you-grow” economics
Fast ROI
- Smart end-devices, robust QoS, business-class voice quality ✓
Customer satisfaction, revenue assurance

Where can I find more info?

Our website:

www.radvoip.com | www.rad.com

The screenshot shows the RAD VoIP website homepage. At the top, there is a navigation bar with links for Products, Solutions, Resources, About RAD, Where to Buy, and RAD VoIP. The main content area features a large banner for RAD VoIP with a background image of call center agents. Below the banner, there are several sections: 'Top Application' describing the SIP VoIP Solution, 'Highlights' featuring a case study about Teleunit SpA, 'Hot Products' listing the IPVgate-30 and RAD VoIP System - RVS, and 'RAD VOIP NEWS' with a recent update from August 06, 2009. A 'QUICK LINKS' section is also present at the bottom right, providing direct access to products, solutions, white papers, case studies, bandwidth information, and a calculator.

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Thank you
for your attention

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BACKUP SCREENSHOT SLIDES (Demo)

Access

Click to edit Master subtitle style



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Select a tree view:
Country codes

- World
 - Argentina (54)
 - Australia (61)
 - Cote d'Ivoire (225)
 - France (33)
 - Germany (49)
 - Hungary (36)
 - India (91)
 - Israel (972)
 - Latvia (371)
 - Macedonia (389)
 - Netherlands (31)
 - Nicaragua (505)
 - Niger (227)
 - Poland (48)
 - Singapore (65)
 - Spain (34)
 - USA (1)
 - Vietnam (84)

View by Range **Alive: 19** Reg. error: 98 **No response: 63** Partial access: 1 **IP overload: 34** New: 1 Total: 216 units

12136241111	123	124	13054445555	13054448989	19527501111	19527551234	22522402536	22522404050	22522416017
254203290000	33141170000	33145451111	33160130000	3319999999	34919724684	34955112233	34955555555	3617777777	3617777778
3617777779	3619991000	37126115575	37167633090	38925511201	38925511999	38947550001	390230415070	39039123456	39039271191
48122525000	48226961122	49219991212	49219991213	493408889900	493408889988	5052666666	50527777777	50527777778	541147791117
541147791118	541147791119	541147791120	541147791121	541147791122	541147791123	541147791124	541147791125	541147791126	541147791127
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541147791668	541147791669	541147791670	541147791671	541147791672	541147791673	541147791674	541147791675	541147791676	541147791677
541147791678	541147791679	541147791680	541147791681	541147791682	541147791683	541147791684	541147791685	541147791686	541147791687
541147791688	541147791689	541147791690	541147791691	541147791692	541147791693	541147791694	541147791695	541147791696	541147791697
541147791698	541147791699	541147791700	541147791701	541147791702	541147791703	541147791704	541147791705	541147791706	541147791707
541147791708	541147791709	541147791710	541147791711	541147791712	541147791713	541147791714	541147791715	541147791716	541147791717
541147791718	541147791719	541147791720	541147791721	541147791722	541147791723	541147791724	541147791725	541147791726	541147791727
541147791728	541147791729	541147791730	541147791731	541147791732	541147791733	541147791734	541147791735	541147791736	541147791737
541147791738	541147791739								

Subscriber / Device Maintenance	Audit and Control
Find Subscriber Standard Mode Suggest Mode Find Device Standard Mode Suggest Mode Add New Subscriber	Device Monitoring System Reports Remote Analysis CDR Information Search for Errored Transactions Device Search by Status CDR Extraction Error Management System Billing Transactions Find Failed to Transmit CDR Files Administrative Tools Manage Operators Provider / Device Defaults Change Provider Password CDR Process Configuration Massive Upgrade Manager Licences Information Metering Configuration Monitoring System Map Telco Profiles Configuration Outgoing Call Routing Management IPVgate™ Master Password generator Add New Provider

Log Out

DEMO

(or: enough talking, let me show exactly what I mean..)

Example #1:

Create an additional phone number for an existing customer, assign it to a dedicated port on his CPE

Note: This port will be connected to a POS terminal



- Main
- Router & Servers
- Firewall
- VPN Settings
- System
- Telephony
- Numbering**
- Telco Services
- Firmware
- Examine Services
- Save Only

IPVgate 20A [Analog VoIP CPE] # 48122525000 Owner: Maciej Stawiariski (veracomp) Fields marked * cannot be empty!

Display by 10 numbers Profile Any Prefix <prev Page 1 next>

#	Remove	Country code	Area code	Local number	Profile
1	<input type="checkbox"/>	48	12	2525000	Premium
2	<input type="checkbox"/>	48	12	2525001	Basic

Add number Remove number

Create new phone number

Country code 48
 Area code 12
 Local number 2525999
 Telco profile Basic
 Amount 1

Add Cancel

Enter an amount greater than 1 (one) to create a batch of consecutive numbers.

<< Previous - Telephony

Fields marked * cannot be empty!

Next - Telco Services >>

This account belongs to "veracomp" provider.

Last changes were made to this device at Tuesday 02nd of March 2010 21:48:01 GMT by Administrator (veracomp)

- Provider Home
- Device Monitoring System
- Device Configuration
- Main
- Router & Servers
- Firewall
- VPN Settings
- System
- Telephony
- Numbering
- Telco Services
- Firmware
- Examine Services
- Save Only

IPVgate 20A [Analog VoIP CPE] # 48122525000 Owner: Maciej Stawiarski (veracomp)

VoIP trunks

#	Status	Numbering	Gains	CID Display	Preferred codec	Fax mode	Modem Mode
1	Enabled	Set	Set	Enabled	G.729A	T38	Disabled
2	Enabled	Set	Set	Enabled	G.729A	T38	Bypass (G.711 alaw)
3	Disabled	Not available	Not available	Enabled	Not available	Not available	Not available
4	Disabled	Not available	Not available	Enabled	Not available	Not available	Not available

International prefixes: 00

Long distance prefix: 0

Phone numbers translation

Outgoing calls from device

Phone numbers format: National

Calling options

End of dial timeout (seconds): *

Progress tone: Ringing

Telephony - Fixed numbering for phone trunk: IPVsuite-200 Management System ...

http://web.radvoip.net/www/ipc_conf/ext.pnums.dialog.php?trunk_idx=1

VoIP trunk number 2

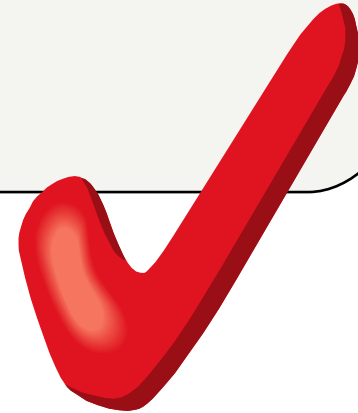
Configured trunk numbers	Available numbers
48122525999	48122525000 (Pri) 48122525001 48122525999

Allow any other number to pass through this trunk

OK Cancel

Example #2:

Your end customer wants to forward calls during lunch time to his mobile phone, and afterhours to an external call center service



- ↳ Main
- ↳ Router & Servers
- ↳ Firewall
- ↳ VPN Settings
- ↳ System
- ↳ Telephony
- ↳ Numbering
- ↳ Telco Services**
- ↳ Firmware
- ↳ Examine Services
- ↳ Save Only

IPVgate 20A [Analog VoIP CPE] # 48122525000 Owner: [Maciej Stawiarski \(veracomp\)](#) Fields marked * cannot be empty!

Display by numbers Profile Prefix [<prev](#) Page [next>](#)

Number	48122525000	48122525001
Profile	Premium	Basic
Voicemail	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Call Forwarding	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
CLI Restriction	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Outgoing Call barring	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Incoming Call barring	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Do Not Disturb	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Outgoing Call Filtering	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Anonymous Call Rejection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Call Return	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Scheduled Call Forwarding	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Outgoing Line Lock	<input type="checkbox"/>	<input type="checkbox"/>
General Deactivation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Routing Based on CLI	Phone	Phone
Group Name	Ungrouped	Ungrouped
Incoming Line Lock	<input type="checkbox"/>	<input type="checkbox"/>
Leading Numbers	1	1

[<< Previous - Numbering](#)

Fields marked * cannot be empty!

[Next - Firmware >>](#)

This account belongs to "veracomp" provider.

Last changes were made to this device at [Tuesday 02nd of March 2010 21:48:01 GMT](#) by [Administrator \(veracomp\)](#)

- Provider Home
- Device Monitoring System
- Device Configuration
- Main
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- Firmware
- Examine Services
- Save Only

IPVgate 20A [Analog VoIP CPE] # 48122525000 Owner: [Maciej Stawiarski \(veracomp\)](#) Fields marked * cannot be empty!

Enabled

[Outgoing Call Filtering](#)

No Outgoing Call Filtering Programs found

[Anonymous Call Rejection](#)

Enabled

[Call Return](#)

No Incoming Calls found

[Scheduled Call Forwarding](#)

	Day of the week	Time segment	Forward to number	
<input checked="" type="checkbox"/>	Every Monday	From 12 : 30 To 13 : 30	<input type="checkbox"/> All day 48601454545	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Every Monday	From 18 : 00 To 22 : 00	<input type="checkbox"/> All day 48225005000	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Every Monday	From 22 : 30 To 23 : 59	<input type="checkbox"/> All day Voice mail	<input type="button" value="Delete"/>
<input checked="" type="checkbox"/>	Every Tuesday	From 00 : 00 To 08 : 00	<input type="checkbox"/> All day Voice mail	<input type="button" value="Delete"/>

[General Deactivation](#)

[Routing Based on CLI](#)

This account belongs to "veracomp" provider.

Last changes were made to this device at Tuesday 02nd of March 2010 21:48:01 GMT by Administrator (veracomp)



data communications

Subscriber login name

Subscriber login password

[Login ...](#)

Welcome Maciej Stawiariski

- Home
- Account
- Voice Mail
- Call forwarding
- Outgoing call barring
- Incoming call services
- Emergency numbers
- Forward scheduler
- Calls log
- Log Out

Use one of the following sections to navigate



Account Information
 Click here for your account information, CPE unit details, and phone numbers



Voice Mail service
 Set your Voice Mail service preferences. Save important voice messages in an email folder of your choice



Call Forwarding ('Follow Me')
 Set the Call Forwarding definition for each of your phone numbers to Busy, No Answer, or Unconditionally



Outgoing call barring Service
 Control your outgoing calls. Block outgoing international calls, calls to specific destinations, and so on



Incoming call services
 Keep your privacy and save your time. Block incoming calls, set your line on 'Do Not Disturb' mode, or inform anonymous callers that you will not answer them



Emergency numbers
 Define an automatic destination number. When you lift the receiver, you are automatically connected



Call Forward scheduler ('Night Mode')
 Plan your daily auto-switch to "follow me" on weekends, when out of the office and on lunch breaks



Calls log report
 View your Call Log report for the previous month(s). See where most traffic goes to, average phone call duration, fax report, and so on

Welcome Maciej Stawiariski

- Home
- Account
- Voice Mail
- Call forwarding
- Outgoing call barring
- Incoming call services
- Emergency numbers
- Forward scheduler
- Calls log
- Log Out

Call Forward scheduler ('Night Mode')

Day of the week	Time segment	Forward to number																									
(48) 0226961122		<input type="button" value="Add line"/>																									
(48) 0122525000	<input checked="" type="checkbox"/> Monday <input checked="" type="checkbox"/> Monday <input checked="" type="checkbox"/> Monday <input checked="" type="checkbox"/> Tuesday	<table border="1"> <tr> <td>From 12:30</td> <td>To 13:30</td> <td><input type="checkbox"/> All Day</td> <td>48601464545</td> <td><input type="button" value="Delete"/></td> </tr> <tr> <td>From 18:00</td> <td>To 22:00</td> <td><input type="checkbox"/> All Day</td> <td>48225005000</td> <td><input type="button" value="Delete"/></td> </tr> <tr> <td>From 22:30</td> <td>To 23:59</td> <td><input type="checkbox"/> All Day</td> <td>Voice Mail</td> <td><input type="button" value="Delete"/></td> </tr> <tr> <td>From 00:00</td> <td>To 08:00</td> <td><input type="checkbox"/> All Day</td> <td>Voice Mail</td> <td><input type="button" value="Delete"/></td> </tr> <tr> <td colspan="5" style="text-align: right;"><input type="button" value="Add line"/></td> </tr> </table>	From 12:30	To 13:30	<input type="checkbox"/> All Day	48601464545	<input type="button" value="Delete"/>	From 18:00	To 22:00	<input type="checkbox"/> All Day	48225005000	<input type="button" value="Delete"/>	From 22:30	To 23:59	<input type="checkbox"/> All Day	Voice Mail	<input type="button" value="Delete"/>	From 00:00	To 08:00	<input type="checkbox"/> All Day	Voice Mail	<input type="button" value="Delete"/>	<input type="button" value="Add line"/>				
From 12:30	To 13:30	<input type="checkbox"/> All Day	48601464545	<input type="button" value="Delete"/>																							
From 18:00	To 22:00	<input type="checkbox"/> All Day	48225005000	<input type="button" value="Delete"/>																							
From 22:30	To 23:59	<input type="checkbox"/> All Day	Voice Mail	<input type="button" value="Delete"/>																							
From 00:00	To 08:00	<input type="checkbox"/> All Day	Voice Mail	<input type="button" value="Delete"/>																							
<input type="button" value="Add line"/>																											

(48) 0122525001

Service is not available

Example #3:

Route all national Fax calls to a specific termination gateway
(e.g. for ensuring T.38 support)



- Equipment
- Rules**
- Rules debugger
- Backup Settings
- Save changes
- Undo changes

Outgoing Call routing rules

...	Calling New York	Phone	From	Any Number	To	1212	New York Gateway (17...
...	LA from Hong Kong	Phone	From	852	To	1213	Los Angeles Gateway (1...
...	Israel from Germany	Phone	From	49	To	972	Tel Aviv Gateway (143....
...	Calling France from Israel	Phone	From	972	To	33	Paris Gateway (177.74....
...	Calling U.K from Paris	Phone	From	331	To	44	London Gateway (88.13...
...	Weekends 972 Int'l	Phone	From	972	Not To	972	London Gateway (88.13...
...	Demo in Argentina	Phone	From	54	To	Any Number	Tel Aviv Gateway (143....
...	From India	Phone	From	91	To	972	RAD_Galil_ISDN_Gatwa...
...	Hungary to Israel	Phone	From	361	To	972	RAD_Galil_ISDN_Gatwa...
->	Fax calls	Fax	From	Any Number	To	Any Number	Tel Aviv Gateway (143....

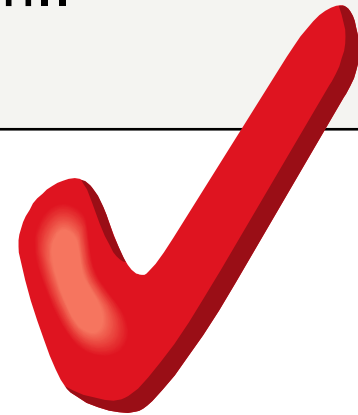
Move Up
Move Down

Description: * Source Direction: Source Prefix: Enabled
 Target Direction: Target Prefix: Disabled
 Protocol: * Equipment: *

Click on the "Add schedule" button to add a scheduler line

Example #4:


A subscriber is complaining about voice quality issues. You must quickly troubleshoot and locate the problem..



Group	Show	Sort	Item	Value
Subscriber Information	<input checked="" type="checkbox"/>	<input type="radio"/>	Login Name:	* <input type="text"/>
	<input checked="" type="checkbox"/>	<input type="radio"/>	Device Number:	* <input type="text"/>
Transaction Addresses	<input checked="" type="checkbox"/>	<input type="radio"/>	Source:	* <input type="text"/>
	<input checked="" type="checkbox"/>	<input type="radio"/>	Destination:	* <input type="text"/>
Transaction Identifier	<input checked="" type="checkbox"/>	<input type="radio"/>	* <input type="text"/>	
Transaction Date Range	<input type="checkbox"/>	<input type="radio"/>	From:	<input type="text" value="5 March, 2010"/>
			Until:	<input type="text" value="6 March, 2010"/>
Event Date Range	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>	From:	<input type="text" value="2 March, 2009"/>
			Until:	<input type="text" value="6 March, 2010"/>
Transmission Details	<input checked="" type="checkbox"/>	<input type="radio"/>	Message type:	Any <input type="text"/>
	<input checked="" type="checkbox"/>	<input type="radio"/>	Call type:	Any <input type="text"/>
	<input checked="" type="checkbox"/>	<input type="radio"/>	Ending status:	Any <input type="text"/>
	<input checked="" type="checkbox"/>	<input type="radio"/>	Duration time:	Any <input type="text"/> (seconds)
	<input checked="" type="checkbox"/>	<input type="radio"/>	Transaction size:	Any <input type="text"/> (kilobytes)
Quality of Service	<input checked="" type="checkbox"/>	<input type="radio"/>	Packets lost %:	Greater than <input type="text"/> 10 %
	<input checked="" type="checkbox"/>	<input type="radio"/>	Jitter:	Any <input type="text"/> (millisecs)
	<input checked="" type="checkbox"/>	<input type="radio"/>	Delay:	Any <input type="text"/> (millisecs)
Transaction Direction	<input checked="" type="checkbox"/>	<input type="radio"/>	Any <input type="text"/>	
Provider	<input checked="" type="checkbox"/>	<input type="radio"/>	Any <input type="text"/>	

[Create Text Report](#) Please choose the transaction to show information for. [Start from record #](#)

Reported on Friday 05th of March 2010 10:48:47 GMT 5 records found (list 1 - 5)

	Destination Address	 Event Date	Message Type	Call Type	Ending Status	Duration Time	Transaction Size	Packets Lost %	Jitter / VPN-Rx	Delay / VPN-Tx	Identifier
et	97237659983@80.74.100.139	04 February 2010, 11:46:14 GMT	Billing	Phone	Success	00:01:16	0	12.9	73	270	
et	97237659966@62.219.249.59	02 November 2009, 06:21:55 GMT	Billing	Phone	Success	00:07:26	0	16.5	50	228	
et	97237659966@62.219.249.59	05 October 2009, 08:18:07 GMT	Billing	Phone	Success	00:02:56	0	23.1	50	231	
et	972504009757@62.219.249.59	22 September 2009, 11:38:24 GMT	Billing	Phone	Success	00:00:54	0	11.3	50	376	

Record # 1-5

Group	Show	Sort	Item	Value
Subscriber Information	<input checked="" type="checkbox"/>	<input type="radio"/>	Login Name:	* <input type="text"/>
	<input checked="" type="checkbox"/>	<input type="radio"/>	Device Number:	* <input type="text"/>
Stream type	<input checked="" type="checkbox"/>	<input type="radio"/>	Upstream:	* <input type="text"/>
	<input checked="" type="checkbox"/>	<input type="radio"/>	Downstream:	* <input type="text"/>
Transaction Identifier	<input type="checkbox"/>	<input type="radio"/>	* <input type="text"/>	
Transaction Date Range	<input type="checkbox"/>	<input type="radio"/>	From:	<input type="text" value="5 March, 2010"/>
			Until:	<input type="text" value="6 March, 2010"/>
Event Date Range	<input checked="" type="checkbox"/>	<input checked="" type="radio"/>	From:	<input type="text" value="2 March, 2009"/>
			Until:	<input type="text" value="6 March, 2010"/>
Transmission Details	<input type="checkbox"/>	<input type="radio"/>	Message type:	Any <input type="text"/>
	<input checked="" type="checkbox"/>	<input type="radio"/>	Call type:	Adsl-Statistics <input type="text"/>
	<input type="checkbox"/>	<input type="radio"/>	Ending status:	Any <input type="text"/>
	<input type="checkbox"/>	<input type="radio"/>	Duration time:	Any <input type="text"/> (seconds)
	<input type="checkbox"/>	<input type="radio"/>	Transaction size:	Any <input type="text"/> (kilobytes)
Quality of Service	<input type="checkbox"/>	<input type="radio"/>	Packets lost %:	Any <input type="text"/> 10 %
	<input type="checkbox"/>	<input type="radio"/>	Jitter:	Any <input type="text"/> (millisecs)
	<input type="checkbox"/>	<input type="radio"/>	Delay:	Any <input type="text"/> (millisecs)
Transaction Direction	<input type="checkbox"/>	<input type="radio"/>	Any <input type="text"/>	
Provider	<input checked="" type="checkbox"/>	<input type="radio"/>	Any <input type="text"/>	

