

RVS
IPVgate-30
IP-PBX System for SMB

IP-PBX Integrating telephony, fax and data over broadband Internet, with standard SIP support



- Up to 20 IP extensions and two local FXS ports
- VoIP access gateway to PSTN over broadband Internet connection, using standard SIP
- Multilayered Quality-of-Service (QoS) for business quality telephone calls
- Built-in router with Stateful Firewall and VPN (IPsec)
- Fully interoperable with leading vendors' SIP-based equipment
- Integrated WiFi (802.11g, 802.11b)



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IPVgate-30 is a cost-effective, cutting edge, IP-PBX system, providing advanced PBX functionalities, along with enhanced VoIP and router capabilities over a single platform. Supporting up to 20 IP extensions, it is a perfect solution for Small and Medium Business (SMB) environments.

IPVgate-30 is part of RAD VoIP System (RVS) that includes a class-5 softswitch, CPEs and media gateways (IPVgate family), a sophisticated management system (IPVsuite-200) and prepaid/postpaid billing solutions (IPVsuite-Billing).

IPVgate-30 employs standard SIP protocols, and is fully interoperable with standard softswitches, SIP servers and IP phones.

In addition to its wide range of IP-PBX features, IPVgate-30 employs superior voice technology for connecting legacy telephones, fax machines and PBX systems to IP-based telephony networks, as well as for integrating into new IP-based PBX architecture.

IPVgate-30 is an intelligent IP-based PBX and communications center designed to handle all office connectivity and telephony needs. With its rich feature set, IPVgate-30 can fully replace the traditional legacy office PBX system, while presenting a business class integrated communications solution for today's emerging broadband access services.

IPVgate-30 handles telephony, Internet, secure networking (internal network LAN and WAN), communications, and access to both local/centralized telephony and data services using an integrated ADSL2+ modem, Ethernet WAN port or fiber optic interface (SFP plug).

IPVgate-30 provides telephone line replacement for fast and reliable transition of the customer's Telecom lines into the next generation VoIP-based solutions.

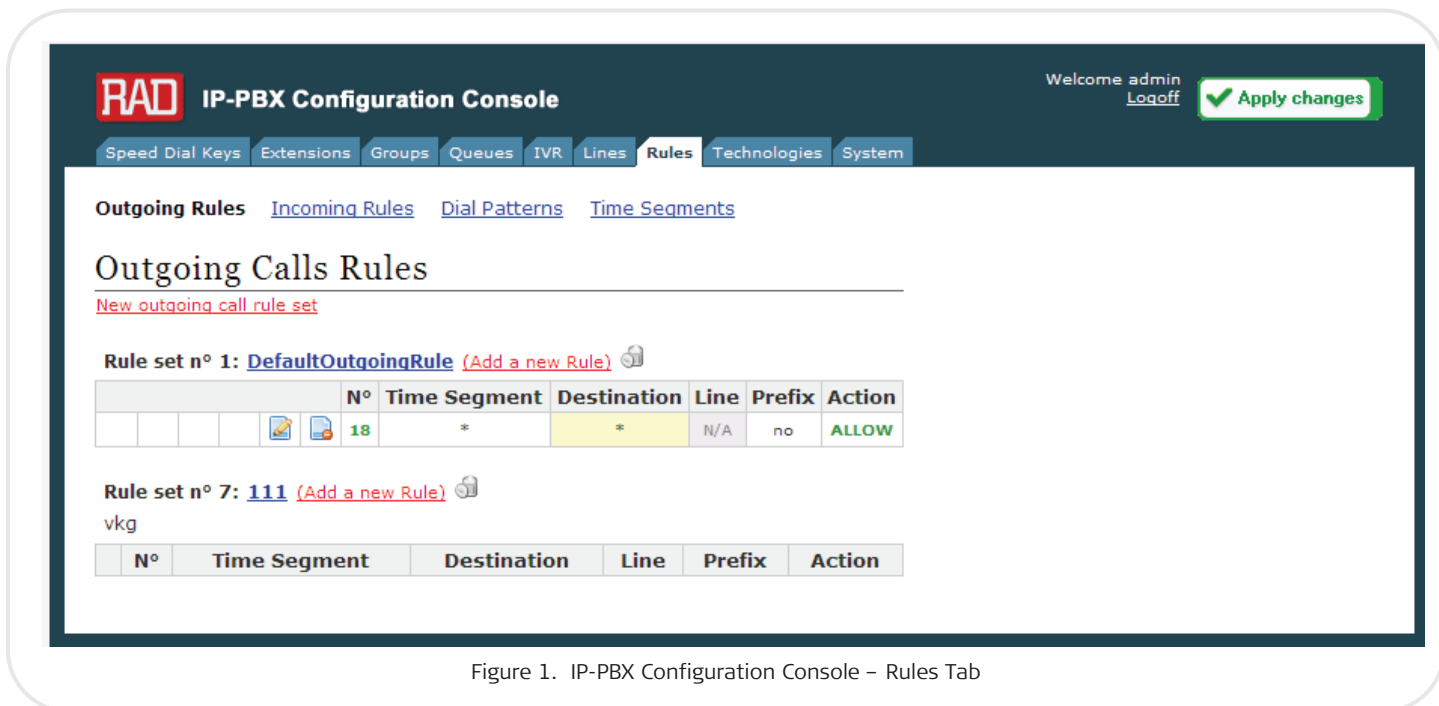


Figure 1. IP-PBX Configuration Console – Rules Tab

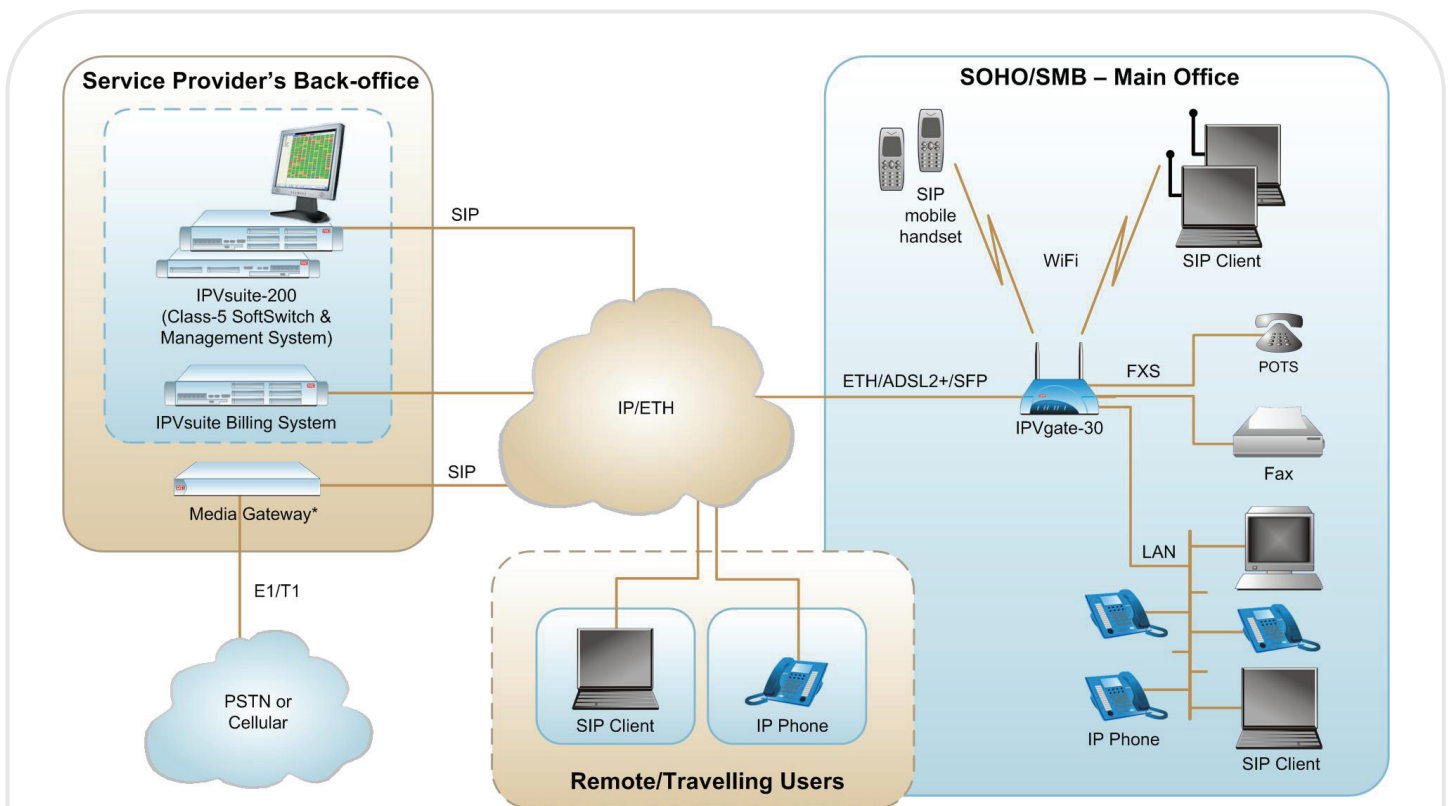


Figure 2. IP-PBX system and Integrated Internet/PSTN Access for SOHO/SMB Customers

**IPVgate-20P may be used as a Media Gateway supporting a single E1/T1 with PRI signaling.*

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IP-PBX FEATURES

IPVgate-30 provides advanced PBX functionalities to IP phones, supporting up to 20 such extensions, with up to 4 VoIP trunks, or concurrent external calls.

An advanced and highly user friendly web interface allows the PBX administrator to control all the PBX services, such as user profiles/permissions, incoming/outgoing call rules, extensions and group management, with great simplicity.

SIP Registration

Up to 8 or 20 (according to ordering) SIP clients can be registered to one IP-PBX, in addition to the two analog FXS ports. Clients can be IP (SIP) phones or soft phones located either on the site's LAN, or registered from a remote location via the WAN port.

Extension Management

IPVgate-30 provides extensive management options for all the extensions. The user can enable certain privileges, services, grouping etc. for each extension.

IP-PBX provides extension-to-extension and extension-to-VoIP (or to PSTN via VoIP network) calls. Extension-to-VoIP calls enable up to 2 or 4 concurrent external calls (according to ordering).

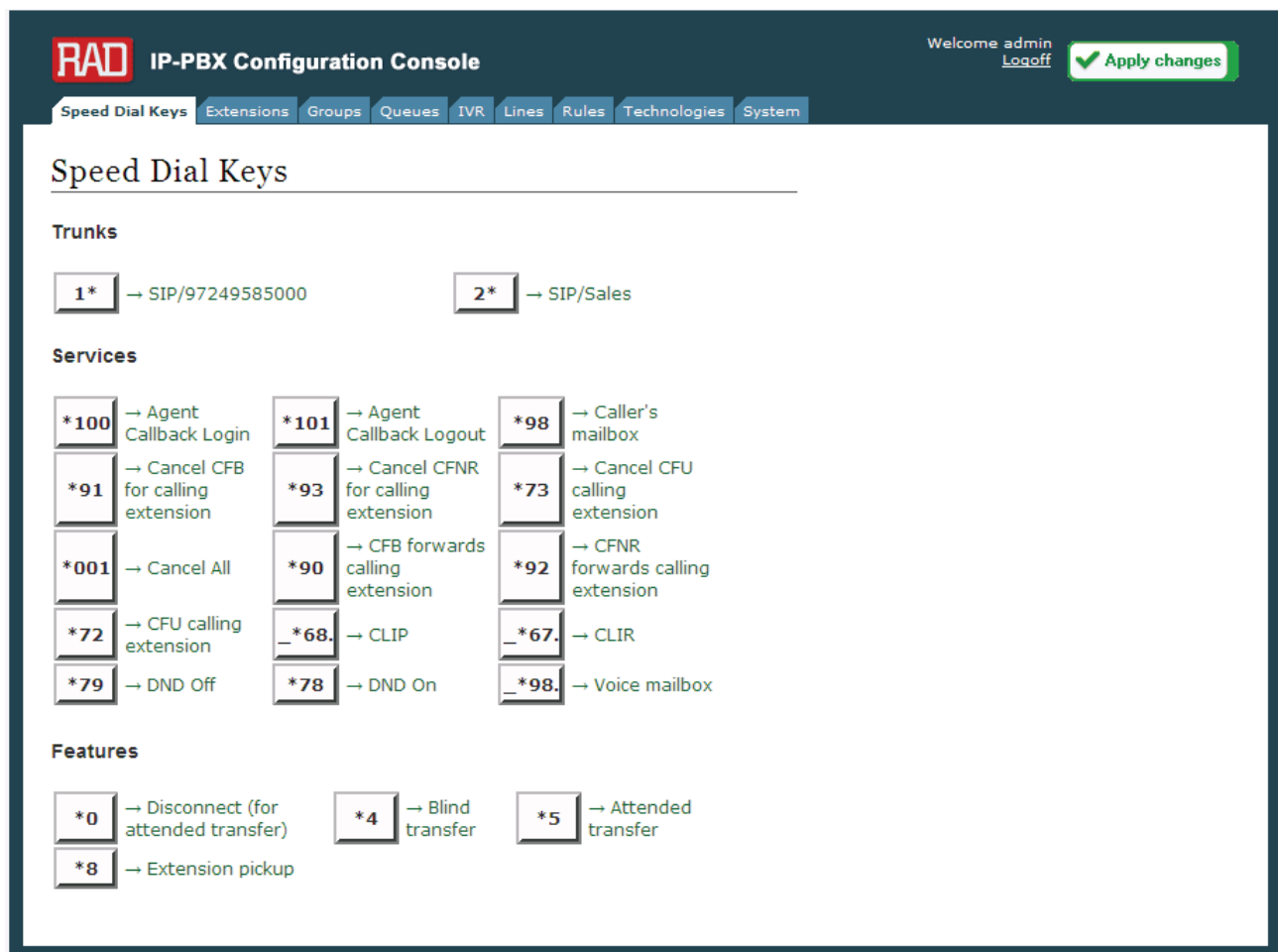


Figure 3. IP-PBX Configuration Console Main Page

Incoming/Outgoing Calls Rules

IPVgate-30 enables defining sets of rules for incoming and outgoing calls that can be assigned to specific extensions or groups. The rules can be defined using an intuitive firewall-style configuration interface.

Auto Attendant IVR

IPVgate-30 features an Interactive Voice Response system, enabling the user to segment the organization by building an IVR tree and record separate messages for each department. Incoming calls are routed to the IVR and callers can navigate through the different options in the tree. The unit can store several hours of audio messages.

VoIP SIP SUPPORT

IPVgate-30 connects to any other SIP device by just dialing its number.

Fax machines connected to IPVgate-30's built-in FXS port benefit from high quality T.38 support, assuring effective and reliable fax transmissions.

IPVgate-30 generates call quality information for the IPVsuite integrated management system to track and analyze the QoS.

VPN

Branch offices can be easily and securely connected to the HQ, using the built-in VPN IPsec server/client. Utilizing a 3DES encryption algorithm, IPVgate-30 creates transparent connectivity of enterprise LANs into a single virtual LAN.

WIFI INTERFACE

The optional wireless LAN interface uses an internal WiFi adapter with dual antennas. The WiFi adapter is compatible with IEEE 802.11g, which provides wireless Ethernet access at rates of up to 54 Mbps and with IEEE 802.11b, which provides rates of up to 11 Mbps.

To achieve maximum reliability, throughput, and connectivity, the IEEE 802.11g data rate is automatically and dynamically scalable to 48, 36, 24, 18, 12, 9 and 6 Mbps.

The encryption mode is user-selectable: in addition to no encryption, which can be used to build a public access point, IPVgate-30 also provides various wireless data encryption options.

MANAGEMENT

IPVgate-30 can be configured and monitored locally or remotely, from any Web browser. Initial setup is done using the Quick Install Web page, which also serves for ADSL line quality monitoring (for ADSL models).

IP-PBX telephony functionalities are configured via the dedicated IP-PBX Configuration Console Web Interface.

All IPVgate-30 operating parameters may also be configured by CLI commands using an SSH session, or remotely via IPVsuite-200 management and provisioning system the unit operates in integrated management mode.

Software can be upgraded via the CLI, the IP-PBX Web interface or the IPVsuite-200 if in integrated mode.

Specifications

NETWORK INTERFACE

WAN

Ethernet 10/100BaseTX
ADSL2+ Annex A (ADSL over analog)
ADSL2+ Annex B (ADSL over ISDN)
SFP slot for fiber interfaces (up to
100 Mbps)

*Note: For detailed information on SFP interface
modules, refer to the SFP Transceivers datasheet.*

LAN

4 Ethernet ports 10/100BaseTX
autosensing auto-crossover switch

Connectors

Ethernet: RJ-45
ADSL: RJ-45/RJ-11

ADSL Modem

Supports Multimode Standard
ADSL2 ITU G.992.3 Annex A/B (G.dmt.bis),
ITU G.992.4 Annex A/B (G.lite.bis)
ADSL2+ ITU G.992.5 Annex A/B
Up to 8 PVC's
F4/F5 OAM
Supports VC-based and LLC-based
multiplexing

DATA TRANSFER PROTOCOLS

IPv4
Router with NAT/NAPT
Static Route
RIP II
DHCP client/server
RDATE (SNTP via IPVsuite-200)
PPPoE, PPPoA, IPoATM (ADSL version)
VLAN (IEEE Q.802.1Q)

SECURITY

VPN

IPSec server/client with tunnel IP-filtering

Firewall

Stateful Packet Inspection

IP-PBX FEATURES

SIP Registration

Up to 8/20 SIP clients for 2/4 concurrent
external calls (according to ordering)
2 built-in FXS ports for analog
phone/fax/modem

Extensions

Extensions Management
Extension-to-Extension Calls
Extension-to-VoIP Calls (or to PSTN via
VoIP Network): Up to 2/4 concurrent
external calls
User Groups

Call Features

Call Hold & Transfer
Music on Hold
Incoming/Outgoing Calls Rules
Call Forwarding
Call Waiting
Do Not Disturb
Direct Dial-In/Direct Inward Dialing
Call Pick Up

IVR

Interactive Voice Response (Auto
Attendant)

Queue Management

Incoming calls hunt groups,
announcements

Caller ID

Type II
CLIR
CLIP

ANALOG TELEPHONY

Number of Lines

2 analog FXS

Connectors

RJ-11

Tones

Call progress tones per country
DTMF detection

Ring Voltage

65-90 VAC

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VOICE OVER IP

SIPv2 based (RFC 3261)
SDP (RFC 3264)
UDP/RTP packets (RFC 1889)
Silence suppression
Echo cancellation G.168
Voice Activity Detection (VAD)
Comfort Noise Generation (CNG)
Dynamic jitter buffer

Fax/Modem

T.38 compliant Group-3 fax relay
Fax bypass
Modem pass-through

Compression

G.711
G.729A

QoS

ToS
Diffserv
Upstream priority
ATM QoS UBR/CBR/VBR
Multiple PVCs

TESTED PHONES

IP Phones

snom
Grandstream
LevelOne
Techroutes
IPLink

Soft Phone

Counterpath X-lite

WIFI INTERFACE

Compliance

IEEE 802.11g
IEEE 802.11b

Operating Band

2.4 GHz, channels 1 to 11

Antennas

Two 5 dBi antennas, polarity adjustable in
±90 degree range around vertical

Transmission Rate

Up to 54 Mbps, with automatic dynamic
scaling to 48, 36, 24, 18, 12, 9 or
6 Mbps (IEEE 802.11g)
Up to 11 Mbps (IEEE 802.11b)

Security Support

Wired Equivalent Privacy (WEP)
WiFi Protected Access (WPA)
WiFi Protected Access 2 (WPA2)
WPA + WPA2 modes

MANAGEMENT

Quick Install Web page
Remote IP-PBX Web configuration
Remote ADSL line quality monitoring
Fully managed by IPVsuite-200 integrated
management and provisioning system
SSH CLI Management
SFTP Server
SYSLOG
Remote update/upgrade

GENERAL

External Power

100-240 VAC, 50/60 Hz

Physical

Height: 4.85 cm (1.9 in)
Width: 21.8 cm (8.6 in)
Depth: 19.1 cm (7.5 in)
Weight: 0.875 kg (1.9 lb)

Environment

Operating Temperature: 5° to 40°C
(41° to 104°F)
Storage Temperature: -25° to 70°C
(-77° to 158°F)
Humidity: Up to 90%, non-condensing

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Ordering

IPVgate-30/%/2FXS/\$/#

Legend






- % Number of supported IP phones (or Soft Phones) in addition to the 2 built-in FXS ports:
- 8IP** Up to 8 IP Phones, with up to 2 VoIP trunks (simultaneous external calls)
- 20IP** Up to 20 IP Phones, with up to 4 VoIP trunks (simultaneous external calls)

- \$ Uplink:
 - ADSL** ADSL2+ Annex A
 - ADSLB** ADSL2+ Annex B (ADSL over ISDN)
 - ETH** Ethernet 10/100BaseT
 - SFP** SFP (empty slot, up to 100 Mbps)
- # Wireless LAN interface (Default=no WiFi):
 - WIFI**

SUPPLIED ACCESSORIES

External wall mounted +5 VDC power supply

Table 1. IPVgate Family Comparison Table

	 IPVgate-20L	 IPVgate-20A	 IPVgate-20B	 IPVgate-30	 IPVgate-20P
Uplink Ports	ADSL2+ or ETH	ADSL2+, ETH or SFP	ADSL2+ or ETH	ADSL2+, ETH or SFP	ADSL and ETH
User Ports	2 FXS	2/4 FXS	2/4 BRI, 1 FXS (Fax)	8/20 SIP Clients, 2 FXS	1 PRI E1/T1
LAN Ports	4 (ETH Switch)	4 (ETH Switch)	4 (ETH Switch)	4 (ETH Switch)	1
Simultaneous Calls	2	2/4	4/8	2/4 External calls	30/23
PSTN Backup Line	-	-	+	-	+
PBX Sync Ports	N/A	N/A	+	N/A	+
WiFi Option	+	+	+	+	-
PSTN Termination GW	-	-	-	-	+
VPN (IPsec/3DES)	-	+	+	+	+
VLAN Tagging	+	+	+	+	-
PBX Features	-	Basic (4-FXS model only)	-	Advanced (IP-PBX)	-

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