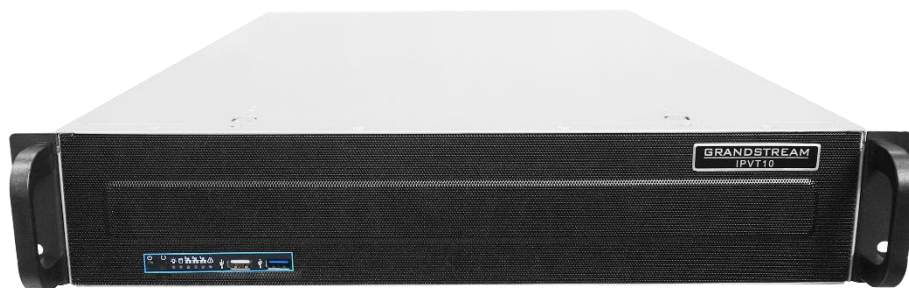


Grandstream Networks, Inc.

IPVT10

Video Conferencing Server

Administration Guide



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The latest electronic version of this guide is available for download here:

<http://www.grandstream.com/support>

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CAUTIONS

In order to use the equipment correctly and safely, please read the safety cautions carefully before using it and strictly follow it when using it. "Equipment" refers to the equipment itself and its accessories by default in this document.

Basic Requirements




- Please keep the equipment dry and avoid violent collisions between the equipment and other objects during storage, transportation, and usage.
- Please do not disassemble the equipment. Please contact with Grandstream support or designated distributor when users encounter problems.
- Any individual or enterprise may not change the structure, safety or performance design of the equipment without Grandstream authorization.
- When using this equipment, users should follow the relevant laws and regulations, and respect the legal rights of others.

Environmental Requirements

- Before plugging or unplugging the cables of the equipment, users should stop using the equipment and disconnect the power supply.
- Please keep the equipment away from the heat source or fire such as electric heater, candle and etc.
- Please keep the equipment away from the strong magnetic or strong electric appliances, such as microwave oven, refrigerator, mobile phone and etc.
- Please place the equipment on the stable worktable.
- Please place the equipment in a ventilated, direct light-free environment. The recommended operating environment temperature of this equipment is 0°C to 45°C
- Do not block the openings of the device with any object and leave more than 10cm of heat dissipation space around the equipment.
- Do not place any objects (such as candles or water containers) on the equipment. If foreign objects or liquids are in the equipment, stop using the equipment and disconnect the power supply immediately, unplug all the cables connected to the equipment, and contact with Grandstream designated service center.
- Do not place the equipment near water or a humid area.
- Please keep the equipment clean and away from the dust.
- Do not place the equipment near the objects which are easily combustible, such as foam materials and etc.



 **Note:** If the device keeps running for a long time, the shell of the device will be heat with a certain degree. Please do not worry about it, and the equipment can still be working normally.

Terms and Conditions

- Please keep the equipment away from children, in order to avoid dangers such as swallowing.
- Please use the accessories which are coming with the equipment or recommended by the manufacturer.
- Do not place the equipment near water or a humid area. If the liquid flows into the equipment accidentally, please disconnect the power supply immediately, and unplug all cables connected to the equipment, such as power cable. Then, please contact with Grandstream designated service center.
- The supplied voltage of the equipment has to meet the input voltage requirement of the equipment. Please use the lightning protection socket which matches the requirements.
- Before plugging or unplugging the cables from the equipment, please stop using the equipment and disconnect the power supply from the equipment.
- Please keep the hands dry when plugging and unplugging the cables from the equipment.
- Do not step on, pull, or bend the cables excessively of the equipment to avoid equipment failure.
- Do not use the damaged or aged cables with the equipment.
- Please keep the power plug clean and dry to avoid electric shock or other hazards.
- Please disconnect the power supply from the equipment in a thunderstorm, and remove all the cables connect to the equipment, such as power supply cable, in order to avoid lightning damage to the equipment.
- If users do not plan to use the equipment for a long time, please disconnect the power supply and remove all cables connect to the equipment.
- Do not look at the fiber interface on the equipment to avoid to impaired vision.
- If any abnormal issue occurs, such as equipment smoking, abnormal sound, abnormal odor, please stop using the equipment and disconnect the power supply from the equipment immediately. Please unplug all the cables connected to the equipment and contact with Grandstream designated support center.



- Please avoid the foreign objects (such as metal) enter the equipment from the heat dissipation hold.
- Before connecting other cables to the equipment, connect the ground cable to the host first; When users try to disconnect the cables from the equipment, please remove the ground cable at the end.
- Please ensure the protection ground cable of the three-phase socket is grounded effectively. The neutral wire and the live wire are not connected reversely.
- Do not scratch the shell of the equipment. Otherwise, the peeled paint may cause allergy, or equipment failure (falling into the equipment and causing failure).
- To ensure the safety, when the fuse in the equipment is blown, please replace the fuse with the same model and size.

Cleaning Instructions

- Before cleaning, please stop using the equipment and disconnect the power supply, and unplug all cables connected to the equipment.
- Do not clean the equipment shell with cleaning liquids or spray cleaner. Users could use a soft cloth to wipe the equipment shell.



Table of Content

DOCUMENT PURPOSE	9
CHANGELOG	10
Version 1.0.0.9	10
WELCOME	11
PRODUCT OVERVIEW	12
Feature Highlights	12
IPVT10 Technical Specifications	13
INSTALLING IPVT10	15
Equipment Package Content	15
Installation Process	15
Equipment Inspection	15
<i>Equipment Appearance</i>	<i>16</i>
<i>Equipment Specifications</i>	<i>18</i>
Mounting IPVT10 Equipment to Cabinet	18
Connecting IPVT10 Server	19
<i>Connecting Network Cables</i>	<i>19</i>
<i>Connecting Power Supply cables</i>	<i>20</i>
Powering on IPVT10	21
CONFIGURING IPVT10	23
Configuration Instructions	24
<i>First-time Configuration</i>	<i>24</i>
<i>Configuration Parameters Modification</i>	<i>24</i>
<i>Upgrading Service</i>	<i>25</i>
<i>Factory Reset</i>	<i>25</i>



Accessing the Configuration Page.....	25
<i>Accessing the Configuration Page directly via a Browser</i>	<i>25</i>
<i>Accessing the Configuration Page via IPVideoTalk Portal</i>	<i>27</i>
Update Login Password.....	28
Configure the Service IP Address.....	29
Options Descriptions.....	29
Configure Service Interfaces	32
Configure SIP Trunk Service Address	34
<i>Connect to the IPVideoTalk Conference System with 3rd Party Platform (PBX or PSTN)</i>	<i>34</i>
<i>Dial out to the Accounts on the 3rd Party Platform.....</i>	<i>36</i>
Configure SMTP Mailbox.....	38
Configuring Conference Management Platform Information	39
Time/Time Zone Configuration.....	41
Factory Reset.....	41
Upgrade	42
TYPICAL NETWORK SOLUTIONS.....	44
CONFIGURE GVC32XX CONFERENCE CLIENTS	49
Configure Service IP Address.....	49
START CONFERENCES	50
EXPERIENCING IPVT10 VIDEO CONFERENCING SERVER.....	51



Table of Tables

Table 1: IPVT10 Features in a Glance	12
Table 2: IPVT10 Technical Specifications	13
Table 3: IPVT10 Installation Process	15
Table 4: IPVT10 Front Panel Description	16
Table 5: IPVT10 Back Panel Description	17
Table 6: IPVT10 Equipment Specifications	18
Table 7: Checking the indicators after powering up IPVT10	21
Table 8: IPVT10 Server Meetings Performance	23
Table 9: Steps for First-time Configuration.....	24
Table 10: Modify Configuration Options	24
Table 11: The default login user name and password.....	25
Table 12: Parameters Descriptions	29
Table 13: Configure Network Routing Rules	32
Table 14: Service Port Configuration	32
Table 15: Configure SMTP Mailbox.....	38
Table 16: Configure Conference Management Platform.....	40



Table of Figures

Figure 1: IPVT10 Package Content	15
Figure 2: IPVT10 Front Panel	16
Figure 3: IPVT10 Back Panel.....	17
Figure 4: Connecting Ethernet Cables to Ethernet Interfaces	20
Figure 5: IPVT10 powered on	21
Figure 6: IPVT10 Web GUI - Login	26
Figure 7: Connect IPVT 10 with a PC Directly	27
Figure 8: Accessing the IPVT10 Configuration Page via IPVideoTalk Portal	28
Figure 9: Modify Password.....	28
Figure 10: Service IP Address Config – Internal Network Adapter	30
Figure 11: Service IP Address Config – Internal Network Adapter	31
Figure 12: Configure Network Routing Rules	31
Figure 13: Service Port Configuration	33
Figure 14: SIP Trunk Service Configuration - Access	34
Figure 15: SIP Trunk Service Configuration - Call	37
Figure 16: Configure SMTP Mailbox	38
Figure 17: Configure Conference Management Platform	40
Figure 18: Time/Time Zone Settings	41
Figure 19: Upgrade Service	42
Figure 20: Network Deployment Diagram – Internal.....	44
Figure 21: Configure Internal Network Adapter.....	44
Figure 22: Network Deployment Diagram – External	45
Figure 23: Configure External Network Adapter	45
Figure 24: Network Deployment Diagram – External Users to Internal Server	46
Figure 25: Configure External Network Adapter and NAT	46
Figure 26: Network Deployment Diagram – Internal Network and External Network.....	47
Figure 27: Configure External Network Adapter and Internal Network Adapter	47
Figure 28: Network Deployment Diagram – Internal Network and Some External Users	48
Figure 29: Configure External Network Adapter and Internal Network Adapter - II	48
Figure 30: Configure Service IP Address	49



DOCUMENT PURPOSE

This document covers the topics of device installation, configuration and technical specifications, as well as IPVideoTalk Cloud service items, user's clients, service management and advanced features. To learn more information about IPVT10, please visit link www.ipvideotalk.com to get more information.

This guide covers following topics:

- [Product Overview](#)
- [Installing IPVT10](#)
- [Configuring IPVT10](#)
- [Typical Network Solutions](#)
- [Configure GVC32xx Conference Clients](#)
- [Start Conferences](#)
- [Experiencing IPVT10 Video Conferencing Server](#)



CHANGELOG

Users could log in to the product page to get more firmware update logs:

<http://www.ipvideotalk.com/version.html>

Version 1.0.0.9

- This is the initial version.




WELCOME

Thanks for purchasing Grandstream Network IPVT10 full-HD conferencing system.

This document introduces the IPVT10 installation process and usage instructions, including environment setup, start meetings and operations, scheduling meeting and etc.

For more information about IPVT10 and IPVideoTalk service, please visit the product page at: <http://www.ipvideotalk.com>

This manual is applicable to IPVT10 equipment administrators.

 **Note:** Any change that is not authorized by Grandstream Network Inc., or any operation that is not following this IPVT10 user guide will void the manufacturer's warranty of IPVT10.



PRODUCT OVERVIEW

IPVT10 is an on-premise video conferencing server designed for enterprises seeking a powerful and secure video conferencing solution. It offers one easy-to-use platform that combines all aspects of an enterprise video conferencing platform, including room and web-based options and conferencing management. IPVT10 provides a centralized solution to manage an entire businesses' conferencing needs through one single server and interface. This on-premise video conferencing server is ideal for internal conferencing between small and medium-sized enterprises, especially those with multiple locations, for example, communication between headquarters and multiple branch offices. It is also ideal for organizations who need to communicate with remote employees and those who perform remote training and/or education through video conferencing.

Feature Highlights

The following tables contain the major features of the IPVT10:

Table 1: IPVT10 Features in a Glance

 <p>IPVT10</p>	<ul style="list-style-type: none"> • Supports up to 200 participants and 10 simultaneous conference sessions • Audio and video recording capabilities with 500GB local storage • 1080P 30 fps H.264/VP8 for video stream, dual stream for presentation • Supports up to 120 video feeds and 200 participants per single conference session • Live broadcast using Facebook/YouTube Live features • Easy-to-use one-touch start meeting functionality • Smooth video display and clear voice under packet loss of up to 30% • Integrates with access devices including GVC/GXV series, PC/Mac with WebRTC, Android/iOS, and SIP phones • Uses encryption protocols like HTTPS, TLS/SRTP in SIP networking, and WebRTC WSS/DTLS-SRTP encryption
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IPVT10 Technical Specifications

The following table resumes all the technical specifications including the protocols/standards supported, server module, audio/video features, MCU functional features, meeting and device management for IPVT10.

Table 2: IPVT10 Technical Specifications

Server Modules	MCU Unit, Registrar Server, Traversal Server, IPVideoTalk Meeting Server, Device Server, Contacts Server, Storage Server, SIP Trunk Server, WebRTC Server.
MCU Performance	Up to 120 participants 1080p 30fps H.264 real-time audio and dual-stream video access Up to 200 participants' real-time dual audio access and 1080p 30fps H.264/VP8 video receiving Up to 10 meetings room at the same time.
Video Features	H.264, VP8, H.265(pending). 1080P 30fps, Dual Stream Supports all devices with different codec/bitrate/resolution/framerate to access meetings
Audio Features	G.722, G.711a/u, Opus, Up to 48KHZ wide-band audio mixing
Network Suitability	Smooth video display under packet loss of up to 30% Clear voice function under packet loss of up to 30% Bandwidth dynamic adaptive adjustment between 64Kbps and 6Mbps
Safety Features	HTTPS ensures security when WebRTC browser accesses MCU Supports TLS/SRTP encryption in SIP networking Supports WebRTC WSS/DTLS-SRTP encryption
Video Display Layout	Supports 4/9/16/25/36/49 Tile Layout mode, 1+N (N=3, 5, 7) Layout mode Support speaker mode with voice active speaker
Meeting Management	Meeting Now, Schedule Meeting/Webinar, Webinar provides customized registration page Meeting info synchronization to devices
Emails Notifications	Meeting invitation emails, reminders before meeting starts, statistics email after meeting
Live Function	Live feature on Facebook & YouTube platforms RTMP pushes to external live platform
Access Meeting Devices	Supports GVC series video conferencing system, and third-party SIP video conferencing system Supports GXV series video phones, and third-party SIP phones Supports PC/Mac using WebRTC browsers, mobile devices using IPVT Mobile



	<p>app.</p> <p>Supports PSTN/PBX access Meeting via IVR service.</p>
Meeting Control	<p>Supports multiple hosts and designated speakers, open/close video, enable/disable audio</p> <p>Supports sharing desktop or applications, chat/participants list access permission control</p> <p>Q&A feature, poll voting system (pending) and video layout setting</p>
Meeting Records	<p>Store meeting audio/video recording files, meeting report files, meeting chat files, etc.</p> <p>500GB for local storage.</p>
Statistics Features	<p>Summary report of all history meetings.</p> <p>Single meeting statistics includes: attendees information, meeting duration, timeline of attendees joining meeting.</p>
NAT Traversal	ICE, Turn, Stun, various NAT firewall traversing technology
Server Scalability	Multiple units expansion, Load-balanced working mode for Multiple Server(Pending)
Multi-language	English, German, French, Spanish, Simplified Chinese, Japanese and etc.
Protocols / Standards	H.264, VP8, BFCP, IETF SIP, G.722, G.711a/u, Opus, IPv4, UDP, TCP/TLS, RTP, RTCP, SMTP, HTTP(s)/WSS, SSH, DNS, DTMF, NTP, SRTP, DTLS-SRTP, SSL, H.265 H.323 and H.239 (pending)
Power Supply	550W (Redundancy PSU)
Suitable Cabinet	2U rack design, support 19-inch cabinet and guide rail
Physical size	Dimension: 430mm (W) x 650mm (L) x 88mm (H)
USB Interfaces	3x USB 3.0 (2 rear, 1 via header); 3x USB 2.0 (2 rear, 1 via header)
Network Interfaces	2x RJ45 Gigabit Ethernet LAN ports; 1x RJ45 Dedicated IPMI LAN port
Display Ports	1 x VGA port
Temperature and Humidity	Operation 0°C to 45°C, Humidity: 10 % to 90% Non-condensing



INSTALLING IPVT10

Equipment Package Content

Users need to open the package, check the equipment and parts to ensure the integrity and availability of the equipment.

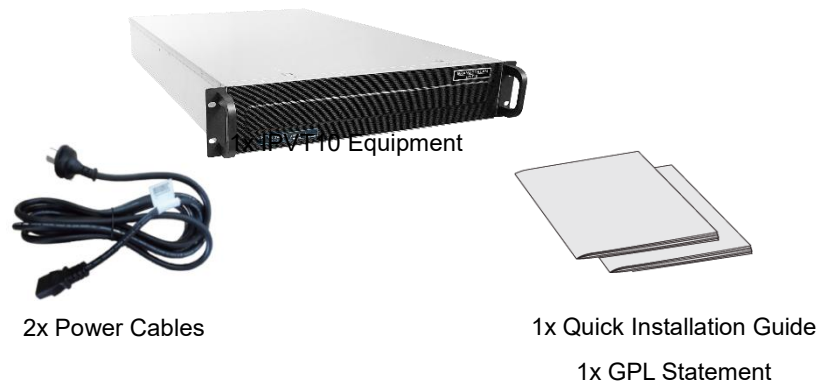


Figure 1: IPVT10 Package Content

Installation Process

Users need to follow the steps described in the table below in order to correctly complete the installation of the IPVT10:

Table 3: IPVT10 Installation Process

Index	Steps	Instructions
1	Equipment Inspection	Open the package, check the equipment and accessories, and inspect the hardware structure of the IPVT10.
2	Install to Cabinet (Optional)	Install IPVT10 to the cabinet
3	Connect to Network	Connect to the network with the Ethernet cable
4	Connect to power supply	Connect to the power supply with the power adapter
5	Power On	Inspect the running status of the equipment

Equipment Inspection

Users need to open the package, check the equipment and parts to ensure the integrity and availability of the equipment.



Equipment Appearance

- IPVT Front Panel**

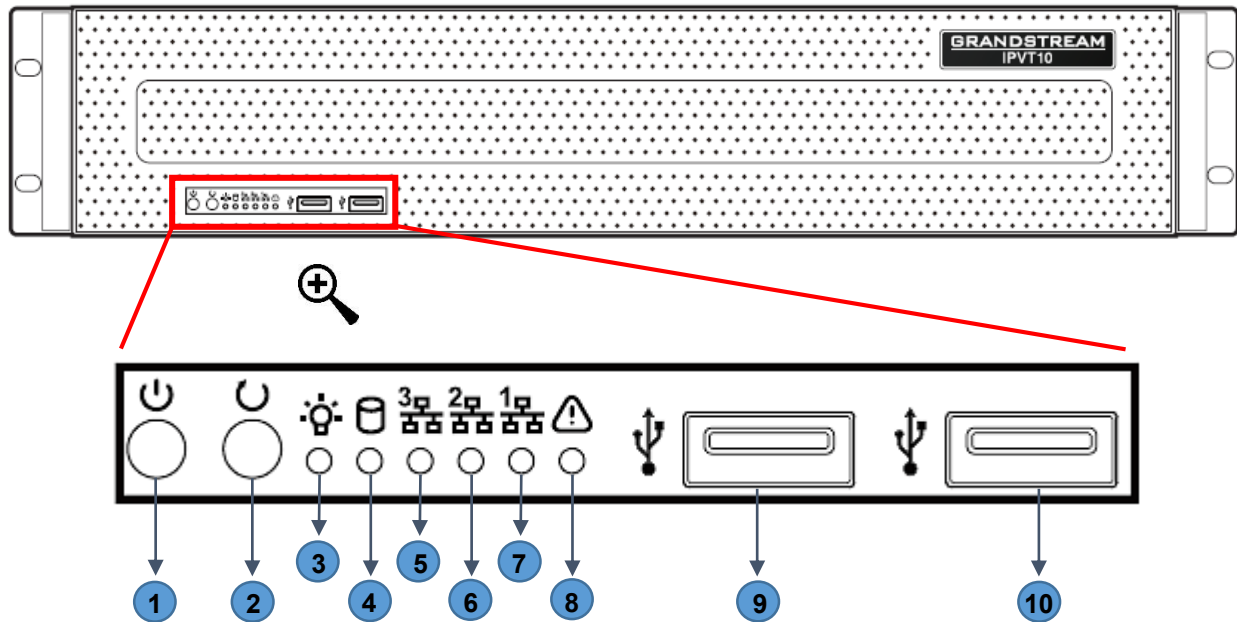


Figure 2: IPVT10 Front Panel

Table 4: IPVT10 Front Panel Description

NO.	Name	Description
1	Equipment Switch	When the equipment is not running, press the switch to turn on the equipment, and when the equipment is running normally, long press the switch (5 seconds) will turn off the equipment.
2	Reboot Switch	When the equipment is running normally, pressing this switch will reboot the equipment.
3	Power Indicator	<ul style="list-style-type: none"> When the equipment is ON and connected to the power supply: the light is solid green. When the equipment is OFF and the power supply is not connected with the equipment: the light is off.
4	Hard Disk Indicator	<ul style="list-style-type: none"> When the hard disk is running normally: the light is off. When the hard disk is reading and writing: the light is solid blue.
5	Network Connection Indicator	<ul style="list-style-type: none"> The light is always off.



6	Ethernet Interface 1 Indicator	<ul style="list-style-type: none"> When the network connection is normal: the light is flashing yellow. When the network connection is abnormal or the network is not connected with the equipment: the light is off.
7	Ethernet Interface 2 Indicator	<ul style="list-style-type: none"> When the network connection is normal: the light is flashing yellow. When the network connection is abnormal or the network is not connected with the equipment: the light is off.
8	Failure Indicator	<ul style="list-style-type: none"> Normal condition: the light is always off. When the equipment is faulted: the light is flashing red.
9	USB Interface 1	USB 2.0.
10	USB Interface 2	USB 3.0.

• **IPVT Back Panel**

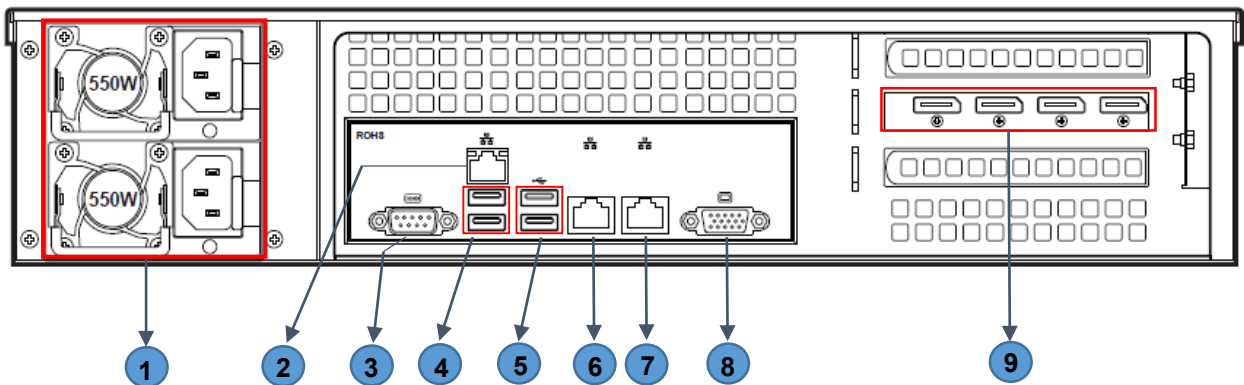


Figure 3: IPVT10 Back Panel

Table 5: IPVT10 Back Panel Description

NO.	Name	Description
1	Power Supply Interfaces	Two Power Supply Interfaces are available on the IPVT10, the users need to connect the power cables to the two interfaces to keep powering the device and to avoid shutting it down in case one of the power supply is defective.
2	IPMI Interface	Intelligent Platform Management Interface.
3	COM Interface	RS-232 serial communication interface
4	USB Interfaces 3 and 4	USB 2.0, this is used to connect with USB cable or USB memory stick
5	USB Interfaces 5 and 6	USB 3.0, this is used to connect with USB cable or USB memory stick



6	1000M Ethernet Interface 1	Connect to the network LAN port, connect with a PC to access the configuration page of the server
7	1000M Ethernet Interface 2	Connect to the network LAN port
8	VGA Input Interface	Connect to a VGA input equipment
9	DVI Interfaces	Digital Visual Interfaces for video display.

Equipment Specifications

Table 6: IPVT10 Equipment Specifications

Name	Description
Power Supply	550W. (Redundancy PSU)
Applicable Cabinet	2U Rackmount Design, and it supports 19" cabinets and rails.
Equipment Size	Base Equipment Size: Height 88mm * Width 430mm * Depth 650mm.
USB Interfaces	3x USB 3.0 (2 rear, 2 via header). 3x USB 2.0 (2 rear, 2 via header).
LAN Interfaces	2x RJ45 Gigabit Ethernet LAN ports. 1x RJ45 Dedicated IPMI LAN port.
Display Interfaces	1 x VGA port.
Operating Temperature	0°C - 45°C.

Mounting IPVT10 Equipment to Cabinet

Users can install the IPVT10 in a 19-inch cabinet that conforms to the IEC (International Electro-Technical Commission) 60297 standard.

1. The IPVT10 server is heavy and we suggest to carry it by two people at least.
2. The cabinet has been installed and we suggest a space of at least "2U" (1U=44.45mm) needs to be reserved.
3. Users can select the regular rail for installation, or optional installation.

Example:

Rail structure: It is composed of inner rail, outer rail and rail holder. The inner rail and the outer rail are



connected together, and they cannot be split. They are mounted on the cabinet through the rail holder; the inner rail is installed on the server equipment (Rails and Rail Holders are not included within the package contents).

Steps:

1. Remove the rail holder and the rails by loosening the 4 screws first, and then removing the front and back rail holders.
2. Install the inner rail to the server case. Pull the inner rail out of the rail until it cannot be pulled.
3. Fix the inner rail with 2 screws to the server case. Fit the smooth surface of the inner rail to the side of the server case and match the screw holes on the inner rail with the screw holes on the server case. Hold the inner rail tightly against the server case and tighten with the screws.
4. Repeat steps 1 to 3 to install the other inner rail on the other side of the server case.
5. Install the rail holder to the cabinet. Make sure the installation position of the front rail holder on the cabinet, align the two fixing holes between the rail holder and the cabinet corner, tighten the screws. Then, according to the depth of the cabinet (the depth of the cabinet is 650mm), adjust the back-rail holder properly, and align the two fixing holes between the back-rail holder and the cabinet corner at the back of the cabinet, tighten the screws. (Note: Please make sure that the front and back rail holders are horizontal.)
6. Repeat the above steps to install the other front and back rail holders to the cabinet. (Note: Please make sure that the left and right-side rails are horizontal)
7. Lift the server up and close to the cabinet so that the back of the server faces the front of the cabinet. Insert the inner rails on the two sides of the server into the front and back rail holders on the cabinet, align the fixing holes and tighten the screws.
8. When the installation is completed, push the server into the cabinet.

Connecting IPVT10 Server

Connecting Network Cables

In order to ensure to run IPVT10 Server properly, users need to connect the server to a Gigabit switch.



Please connect IPVT10 Server according to the following procedures:

1. Connect the RJ45 Ethernet cable with the Ethernet Interface 1.
2. Connect the RJ45 Ethernet cable with the Gigabit switch.
3. Repeat steps “1” and “2” to connect with Ethernet interface 2.



Note:

- Please do not use 100M or 10M switches.
 - If only one network is used, only one network interface needs to be connected with the switch (Internal Network - Setup Ethernet Interface 1, External Network - Setup Ethernet Interface 2).
-

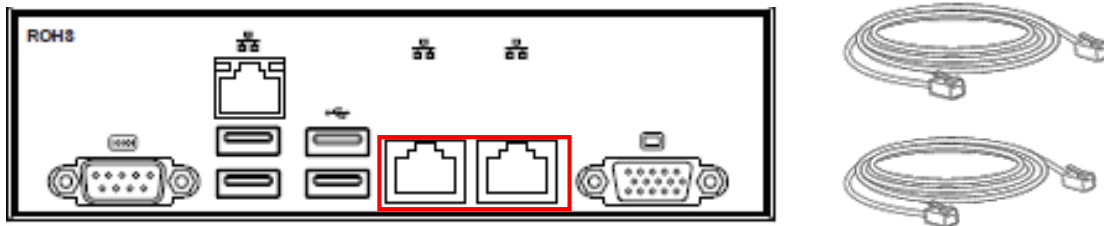


Figure 4: Connecting Ethernet Cables to Ethernet Interfaces

Connecting Power Supply cables

IPVT10 only supports AC power supply, users can connect the two power supply cables following the steps below:

1. Connect the standard power supply cable with the equipment.
2. Plug the power supply into the AC power supply.
3. Repeat steps “1” and “2” to connect the second power supply cable.



Notes:

- Please use the standard three-phase power outlet.
 - Please make sure that the output voltage is within the range of the power module (90~264VAC, 8.5~2.7A, 50/60Hz). If it is not within the working range, correct it and do not power on the equipment.
-



Powering on IPVT10

Before powering on the equipment, users need to ensure that the equipment meets the following conditions:

- If the equipment is installed in a cabinet, please ensure that the screws are fixed, and the equipment has enough space for heat dissipation.
- The connections of the cables on the equipment are normal.
- The input power and current are within the working range of the equipment.
- The distance between the power cable and the Ethernet cable outside the cabinet must be greater than 30 mm.

Once the previous conditions are checked, the users can power up the IPVT10 Server. In order to make the equipment run properly, users need to press the equipment switch in the front panel of the server to power on the equipment. The indicator will turn to solid green.

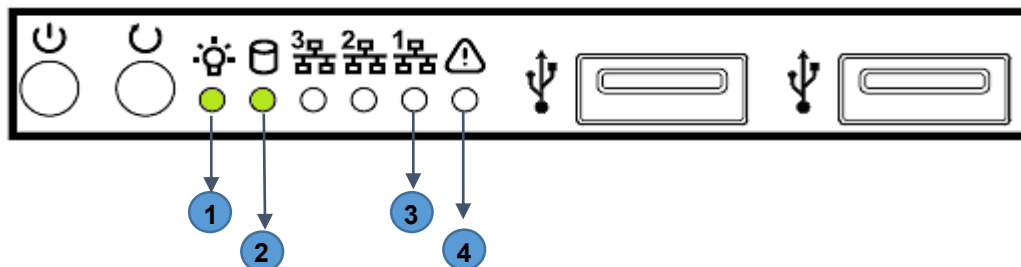


Figure 5: IPVT10 powered on

After the equipment is turned on, please check the following indicators to make sure the equipment is working properly.

Table 7: Checking the indicators after powering up IPVT10

NO.	Name	Description
1	Power Indicator	<ul style="list-style-type: none"> • When the equipment is ON and connected to the power supply: the light is solid green • When the equipment is OFF and the power supply is not connected with the equipment: the light is off
2	Hard Disk Indicator	<ul style="list-style-type: none"> • When the hard disk is running normally: the light is off. • When the hard disk is reading and writing: the light is solid blue.



3	Network Connection Indicator	<ul style="list-style-type: none">• When the network connection is normal: the light is flashing yellow• When the network connection is abnormal or the network is not connected with the equipment: the light is off
4	Failure Indicator	<ul style="list-style-type: none">• Normal condition: the light is always off• When the equipment is faulted: the light is flashing red.

Note: If you encounter any problem about the equipment, please contact with Grandstream support engineer.



CONFIGURING IPVT10

Table 8: IPVT10 Server Meetings Performance

Current Meeting Number	Max Video Feeds	Max Participants	Descriptions
1	120	300 (Dual NICs) 200 (Single NIC)	<ul style="list-style-type: none"> If the participant only uses single NIC to join into the conference, it only supports 200 participants in the conference which is limited by the bandwidth. If the participants use dual NICs at the same time, the participants could use different IP addresses to join into the meeting, and the participants amount is up to 300. Supported H.264/VP8
2	120	200	<ul style="list-style-type: none"> Supported H.264/VP8
4	120	160	<ul style="list-style-type: none"> With more conferences at the same time for the server loading, the maximum number of participants in the conference will be less. Supported H.264/VP8
6	120	140	<ul style="list-style-type: none"> With more conferences at the same time for the server loading, the maximum number of participants in the conference will be less. Supported H.264/VP8
8	120	130	<ul style="list-style-type: none"> With more conferences at the same time for the server loading, the maximum number of participants in the conference will be less. Supported H.264
10	120	120	<ul style="list-style-type: none"> With more conferences at the same time for the server loading, the maximum number of participants in the conference will be less. Supported H.264

Note:

Under poor network condition, packets loss will cause the performance degradation.



Configuration Instructions

Users could manage and configure the IPVT10 configuration information by logging in the Web UI of IPVT10 server via an installed browser in the PC.

First-time Configuration

Users need to properly follow the steps listed in the table below at the first login.

Table 9: Steps for First-time Configuration

Steps	Description
Configure Service IP Address	According to the configuration of the network solution, configure the service IP address. Support to configure dual network adapters, NAT, and routing rules.
Configure SMTP Mailbox	The SMTP mailbox is used as a sender to send the meetings invitation Emails, meetings notification Emails and etc. Users could configure Enterprise email as SMTP Mailbox.
Configure Conference Management Platform Information	This is used to configure the login account, enterprise information, default language, default time-zone, and other information on the platform.

Note: Each one of the steps is described in the next sections. Please, refer to the following sections for more details about IPVT10 initial configuration.

Configuration Parameters Modification

After the deployment is completed, users can modify the configuration parameters.

Table 10: Modify Configuration Options

Parameters	Description
Update Service IP Address	<p>Please configure this parameter carefully:</p> <ul style="list-style-type: none"> If the IP address of the IPVT10 is updated during a meeting, the meeting will encounter abnormal issues. The URLs of the scheduled meetings will be inaccessible. When the IP address of the IPVT10 is updated, the service will be restarted automatically.



Update SMTP Mailbox	When the SMTP Mailbox is updated, it will take effect immediately, and does not affect other data.
Update Conference Management Platform Information	When the Conference Management Platform information is updated, it will take effect immediately, and does not affect other data.

Upgrading Service

If users need to upgrade the software system in the IPVT10, users can log into the Conference Management Platform and upgrade the service.

- Please download the system installation package from Grandstream official website.
- During the upgrading process, the system service will be suspended.
- The upgrading service will not affect the data in the database server and the original configuration.

Factory Reset

Users need to be careful about factory reset operation. When users start to factory reset the device, it will be restored to the factory default settings, and all the data will be erased, including user's data and meetings data.

Accessing the Configuration Page

IPVT10 has a built-in Web Configuration Management Platform, and users could log in the platform via a browser by entering the Web Management Platform IP Address or via IPVideoTalk Portal in order to manage the configuration of the IPVT10.

Accessing the Configuration Page directly via a Browser

Users need to prepare a computer that needs to be under the same VLAN network as the server, in order to be able to log into the server's web management platform.

Table 11: The default login user name and password

Parameters	Description
Web Management Platform IP Address	192.168.88.88
Admin User Name	admin
Admin Default Password	change_me



Users need to follow the steps below to log in into IPVT10 Web UI:

1. Please make sure that the IP address of the computer is under the same network segment as the server's. If not, users need to go to “Network” configuration page of the computer to setup the network segment as the same as IPVT10 server's.
2. Enter the default IP address (<http://192.168.88.88>) of the equipment in the browser of the PC, and press “Enter” to access the configuration page, as the screenshot shows below:



Figure 6: IPVT10 Web GUI - Login

3. Input login user name and password. (The default user name is “admin”, and the default password is “change_me”).
4. (Optional) Users could select the language on the list at the bottom of the configuration page.
5. Click to login the configuration page.

If there is an IP conflict, users can connect the PC directly to the server via an Ethernet cable for configuration purpose. Follow the steps below:

1. Unplug the Ethernet cable from the Ethernet Port 1 on the IPVT equipment (the first cable interface from left to right in the figure).
2. Then, connect the Ethernet Port 1 and a PC with an Ethernet cable as shown in the figure:



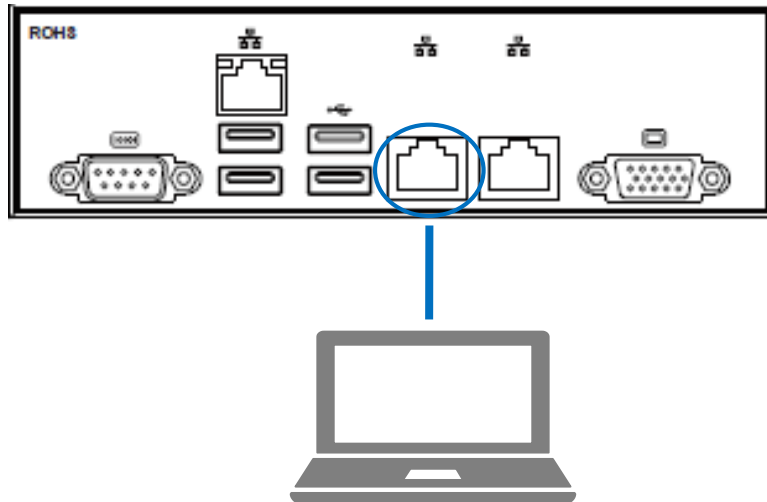


Figure 7: Connect IPVT 10 with a PC Directly

3. Enter the IP address (<http://192.168.88.88>) of the equipment in the browser of the PC, and press “Enter” to access the configuration page.
4. Input login user name and password (The default user name is “admin”, and the default password is “change_me”).
5. (Optional) Users could select the language on the list at the bottom of the configuration page.
6. Click to login the configuration page.



Note:

After the configurations are complete, users must unplug the Ethernet cable from Ether Port 1, and reconnect the server to the Gigabit Ethernet switch to ensure that the two Ethernet ports of the equipment are connected to the Gigabit Ethernet.

Accessing the Configuration Page via IPVideoTalk Portal

Users could log into IPVT10 Web Interface via IPVideoTalk portal by clicking on “Maintenance”. Please, refer to the following figure:



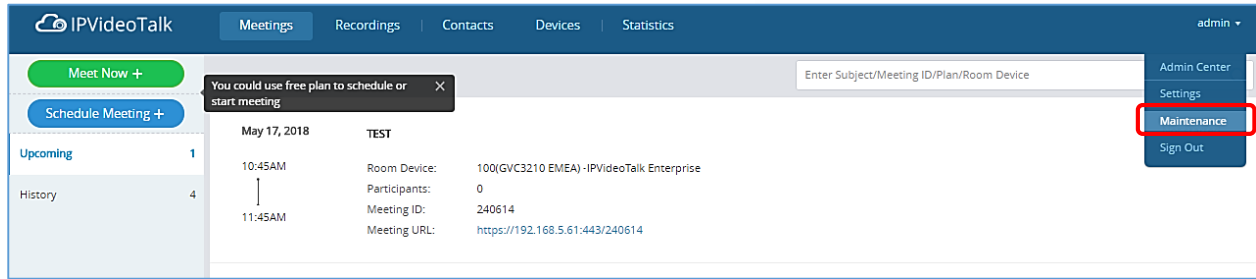


Figure 8: Accessing the IPVT10 Configuration Page via IPVideoTalk Portal

Update Login Password

When users first-time log in to IPVT10 Web Deployment Platform, it is recommended to modify the password of the administrator account to ensure the security of the system. Refer to the following steps:

1. Login to the Web page of IPVT10.
2. Click on the option “Advanced Settings” to access the configuration.

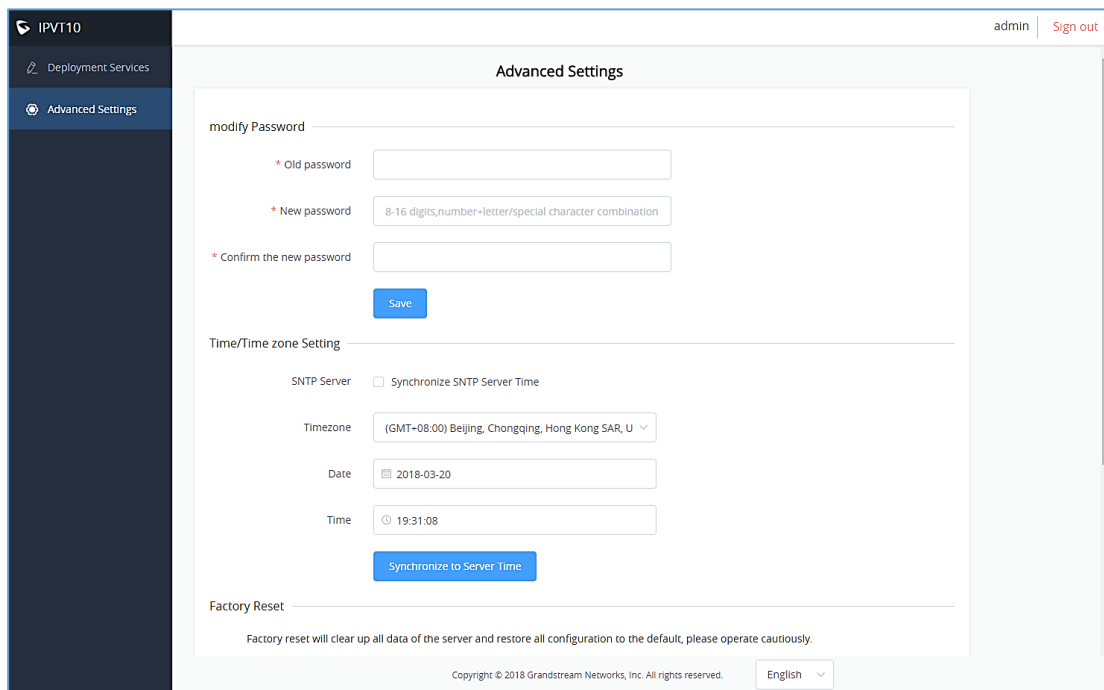


Figure 9: Modify Password

3. Input “Original Password”, “New Password”, and “Confirm New Password”.
4. Click to save the configuration, and the system will prompt to save successfully. If the original password is incorrect, or the new password format is incorrect, the corresponding error will be prompted.




Note:

The password has to contain two of the numbers, lowercase letters, uppercase letters, and special characters, and the length is limited to 8-16 characters

Configure the Service IP Address

The IPVT10 server supports two network adapters that can be configured based on the actual requirements. There are 5 typical network deployment Scenarios:

- **Scenario 1:** The server is deployed on the internal network. The end users use the service only within the internal network. Users could only configure the internal network IP address.
- **Scenario 2:** The server is deployed on the external network. The end users use the service via the public network. Users need to configure the external IP address.
- **Scenario 3:** The server is deployed on the internal network. The end users use the service via the public network. In this case, users need to configure the internal IP address and NAT in the server.
- **Scenario 4:** The server is deployed on the internal network. The end users can use the service via both internal and external network. In this case, users need to configure the server with both internal network and external network, and routing rules.
- **Scenario 5:** The server is deployed on the internal network. The end users can use the service via the internal network and limit certain external IP address to access the service. In this case, users need to configure internal network, external network, NAT, and routing rules in the server.

Options Descriptions

Table 12: Parameters Descriptions

Parameters	Description
Internal Network Adapter	Configures Internal Network Adapter's parameters.
External Network Adapter	Configures External Network Adapter's parameters.
IPv4 Address	Configures the IP Address for IPVideoTalk Portal.
Subnet Mask	Configures the Subnet Mask.
Gateway	Configures the default Gateway.
Preferred DNS	Set the Preferred DNS.



Alternative DNS	Set the Alternative DNS.
NAT	Enable/Disable NAT, and set the NAT IP address.
Routing Rules	Set the advanced configuration Routing Rules to ensure accessing the destination IP address when using two Network Adapters.

Please, refer to the following steps:

1. Login IPVT10 Web UI.
2. Go to “Deployment Services”, and configure “Service IP Address Config” options, as the figure shown below:

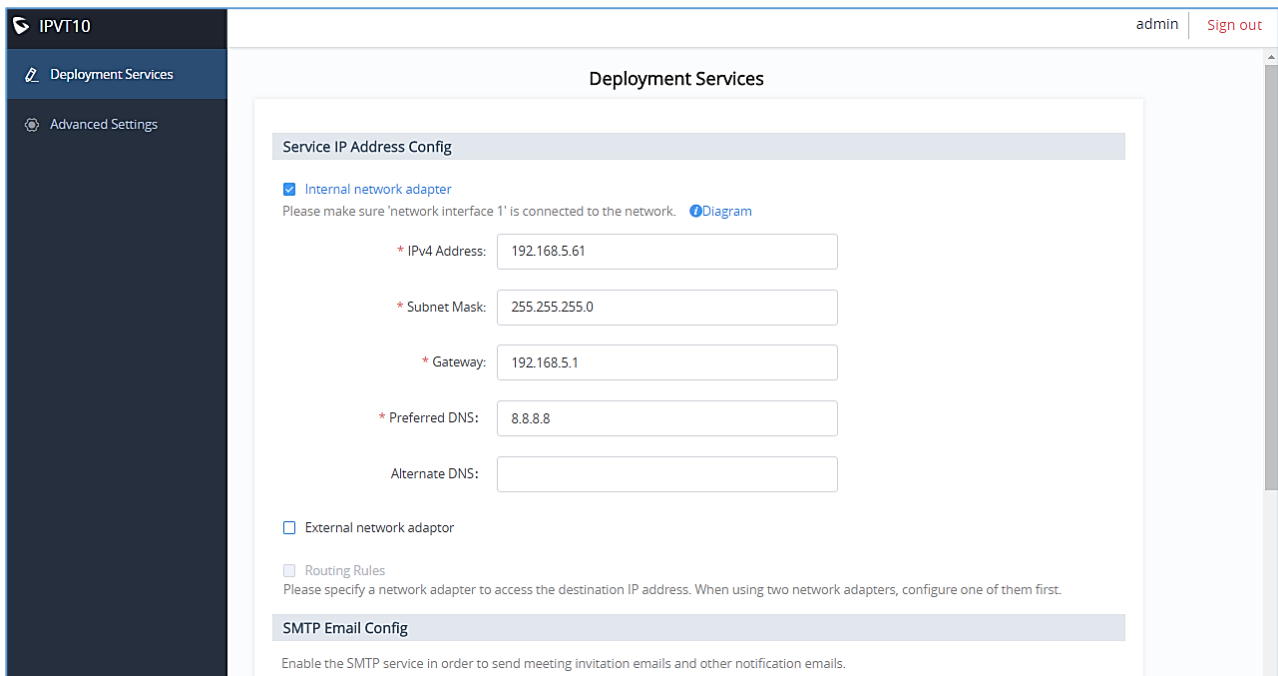


Figure 10: Service IP Address Config – Internal Network Adapter

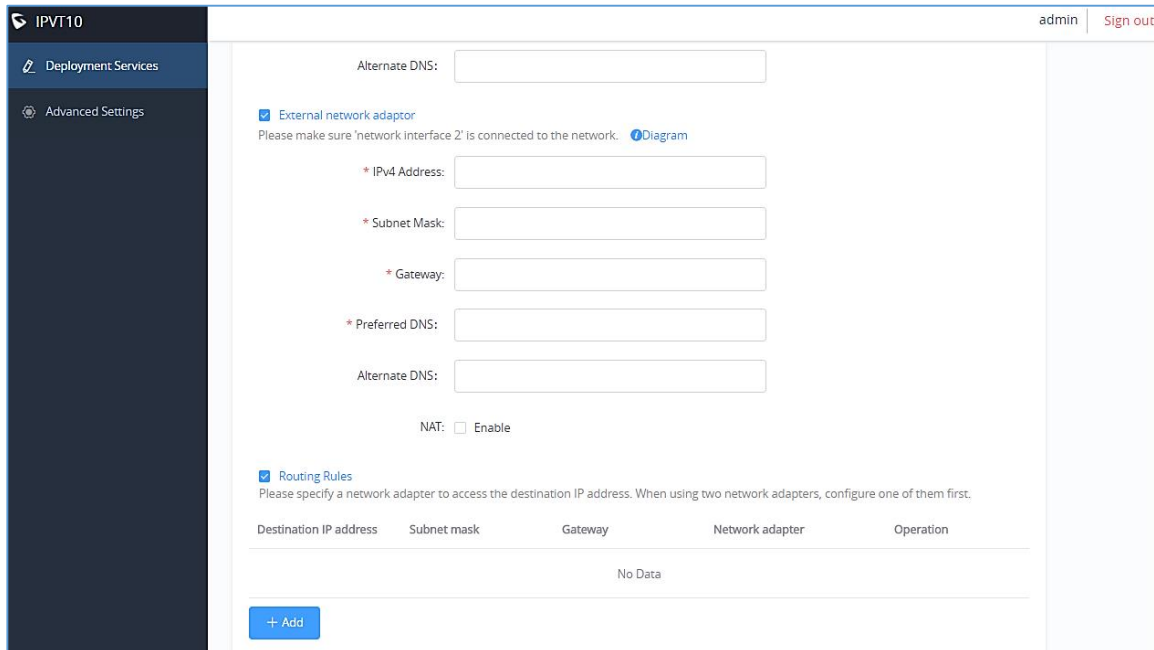
3. According to the actual requirements, users could configure the 1 or 2 network adapters. Users could configure Internal Network Adapter only, External Network Adapter only, or both.
4. Users need to configure “IPv4 Address”, “Subnet Mask”, “Gateway”, “Preferred DNS”, “Alternative DNS” (optional) for the network adapter.

Note: Please make sure that there should be no conflict in the IP address. Otherwise, the service will be unavailable.



- (Optional) If the selected adapter is external network adapter, users could configure static NAT for the IPVT10.

Note: NAT could translate the private IP address of the internal network into a public IP address, so that an external conference client can access the server of the internal network through the public network.



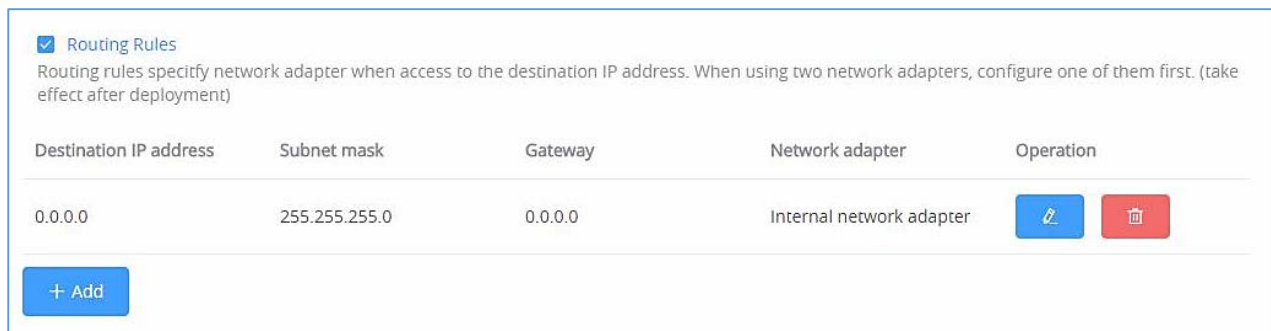
The screenshot shows the 'Advanced Settings' page for an external network adaptor. It includes fields for Alternate DNS, IPv4 Address, Subnet Mask, Gateway, and Preferred DNS. There is a checkbox for 'NAT: Enable' and a section for 'Routing Rules' with a table for configuration.

Destination IP address	Subnet mask	Gateway	Network adapter	Operation
No Data				

Figure 11: Service IP Address Config – Internal Network Adaptor

- When two network adapters are configured, users have to configure the routing rules based on the actual requirements by clicking on **+ Add**. Multiple routing rules can be configured in the IPVT10 server. Users can also edit and delete a certain routing rule.

Note: Routing rules must be specified for the external network and all network segments in the enterprise.



The screenshot shows the 'Routing Rules' section with a table for configuration. A single rule is shown with a destination IP of 0.0.0.0 and an internal network adapter.

Destination IP address	Subnet mask	Gateway	Network adapter	Operation
0.0.0.0	255.255.255.0	0.0.0.0	Internal network adapter	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

Figure 12: Configure Network Routing Rules



Table 13: Configure Network Routing Rules

Parameters	Description
Destination IP Address	This is used to configure the destination IP address for the network. This option has to be configured with the Subnet Mask option.
Subnet Mask	This is used to configure the subnet mask.
Gateway	This is used to configure the gateway of the destination network.
Network Adapter	This is used to select the server network adapter for destination network.

- Continue to fill in the other configuration options. For the first deployment, users have to fill in all required fields.
- Click on “Deploy to Server Now” to apply the entire configurations of this page to the server. When the deployment is complete, it will take effect immediately.


Note:

- When the deployment is complete, users need to check whether all network interfaces of the server are all connected. For a single network, only one network interface needs to be connected to the network (Internal Network – Network Interface 1, External Network – Network Interface 2).
- If users modify the IP address of the server during the conferences, it may cause the abnormal issues for the ongoing conferences, and the scheduled conferences will be inaccessible.
- When users modify the parameters of the server, the server will restart the service automatically.

Configure Service Interfaces

In order to use IPVT10 service under the enterprise’s private network, users could customize the service port. Our default service ports are shown as following below:

Table 14: Service Port Configuration

Server Components	Protocol	Default Port	Descriptions
Web Server	HTTP	80	Conference Web UI, Requests Management, API Server
Web Server	HTTPS/WSS	443	Conference Web UI, Requests Management, API Server, Connect to Web socket
SIP Server	TCP/UDP	5060	SIP signaling access for different devices, Trunk/PSTN Connection
SIP Server	TLS	5061	SIP signaling access for different devices, Trunk/PSTN Connection
Media Server	TCP/UDP	5062	External control port



Media Server	UDP	60000-65000	Port range of media streams: Requirements: Port starting should not be lower than 1024, the range is not less than 3000.
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Please, refer to the following steps:

1. Login IPVT10 Web Management UI.
2. Click on the “Deployment Services” on the left side of the UI and select “Service Port Configuration”, users will see the page below:

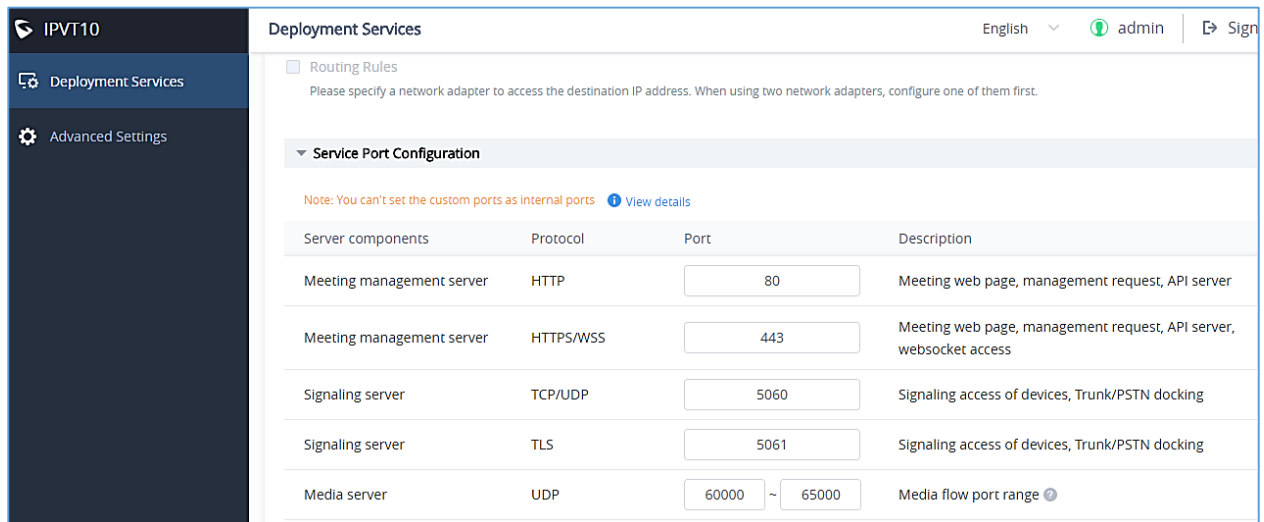


Figure 13: Service Port Configuration

3. Step 3. Click to open the menu “Service Port Configuration”, users could customize the service ports based on the requirements.
4. Step 4. When users finish updating the ports, click on the button “Deploy to Server” to confirm the customized service ports. The server will reboot to apply the changes.

 **Notes:**

- The customized service ports cannot be duplicated.
- The ports below cannot be set as customized service ports: "22, 3000, 3306, 5070, 5071,5072, 5080, 6379, 6380, 6381, 8006, 8008, 8010, 8012, 8080, 8081, 8083, 9080, 80000".
- If the service ports are set incorrectly, users cannot use the corresponding services normally.



Configure SIP Trunk Service Address

(Optional) Users could configure the SIP Trunk server address based on the actual requirements. If users configure this service, users could use PBX platform or PSTN Trunk server to connect via IPVideoTalk conference system, user also could set DialPlan to dial out the 3rd party PBX platform.

Connect to the IPVideoTalk Conference System with 3rd Party Platform (PBX or PSTN)

In order to connect the IPVideoTalk Conference System with a 3rd party platform, please refer to the following steps:

1. Login IPVT10 Web Management UI.
2. Click on the “Deployment Services” on the left side of the UI, users will see the page below:

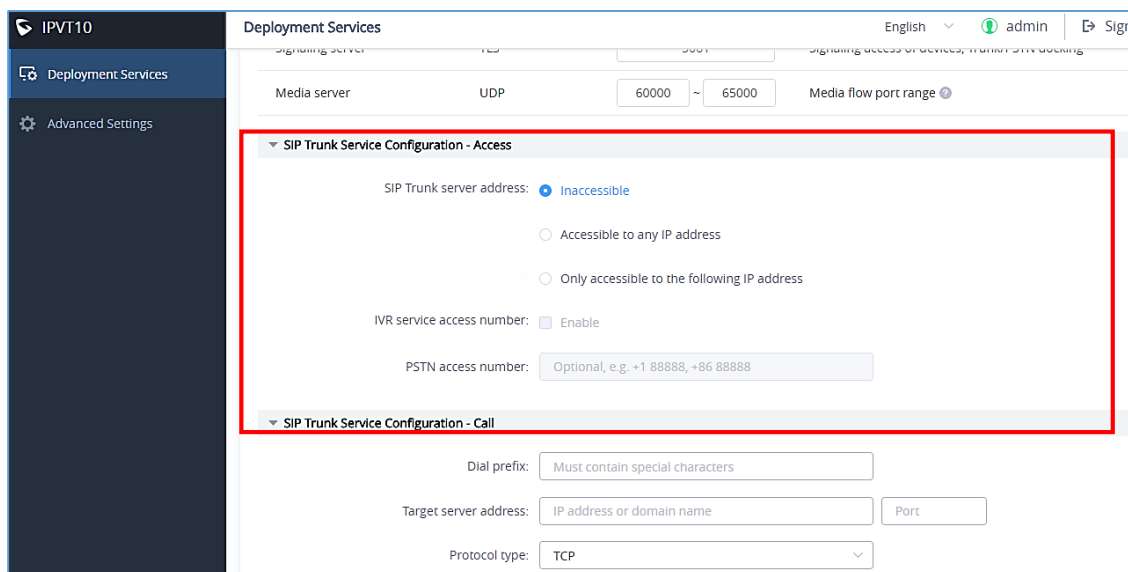


Figure 14: SIP Trunk Service Configuration - Access

3. Configure the SIP Trunk server address. If the option “Accessible to any IP address” is checked, all the IP addresses are able to connect to the IPVT10 server. If the option “Only accessible to the following IP address” is checked, users need to input the certain IP addresses which are allowed to access the IPVT10 server. Users could configure up to 10 IP addresses, and only the candidates are allowed to access the IPVT10 conference system.
4. (Optional) Configure the IVR voice access number. If the configured Trunk server connects to the conference via IVR voice access number, users need to configure the IVR voice access number before using the service. If the Trunk server supports to recognize the IPVideoTalk conference ID, and dials to the IPVT10 server via the conference ID, then users do not need to configure the IVR voice access number.



5. (Optional) Configure the PSTN access number, this is only used for displaying. If users want to show the PSTN access number in the conference invitation Emails, or the meeting details, users could configure this option. If there are multiple PSTN access numbers, please separate the numbers by comma (e.g. +861234567, +8687654321).

Typical Scenarios

Scenario 1

There are one or more SIP Trunk servers in the enterprise, and the administrator wants the users to dial to the meeting by IPVT10 meeting ID directly.

Prerequisites:

SIP Trunk server needs to be able to recognize the conference ID of IPVT10. When users dial this conference ID, users will be connected to IPVT10 server.

Configuration:

Users need to configure one or more SIP Trunk server addresses.

Scenario 2

There are one or more SIP Trunk servers in the enterprise, and the administrator wants the users to dial the unique access number, and follows the IVR to input the conference ID to join into the meeting.

Prerequisites:

SIP Trunk server needs to be able to recognize the IVR access number. When users dial this IVR access number, users will be connected to the IPVT10 server.

Configuration:

- One or more SIP Trunk server addresses
- IVR voice access number

Scenario 3

There are one or more PSTN Trunk servers in the enterprise, and the administrator wants the PSTN users to access to the IPVT10 conference.

Prerequisites:

Users need to configure the unique accessible PSTN numbers for the PSTN Trunk servers. When users dial the PSTN numbers, users are allowed to connect to IPVT10 server.



Configuration:

- One or more SIP Trunk server addresses
- (Optional) IVR voice access number
- If users want to show the PSTN access number in the invitation Emails, users could configure the PSTN access number option.

Scenario 4

There is one SIP Trunk server and one PSTN Trunk server in the enterprise, and the administrator wants the PSTN users and SIP users both could join into the IPVT10 conference.

Prerequisites:

- If users connect to the SIP Trunk server via IVR, the IVR access number should be recognized (refer to scenario 2). Otherwise, please kindly refer to scenario 1.
- Users need to configure the unique accessible PSTN numbers for the PSTN Trunk servers. When users dial the PSTN numbers, users are allowed to connect to IPVT10 server.

Configuration:

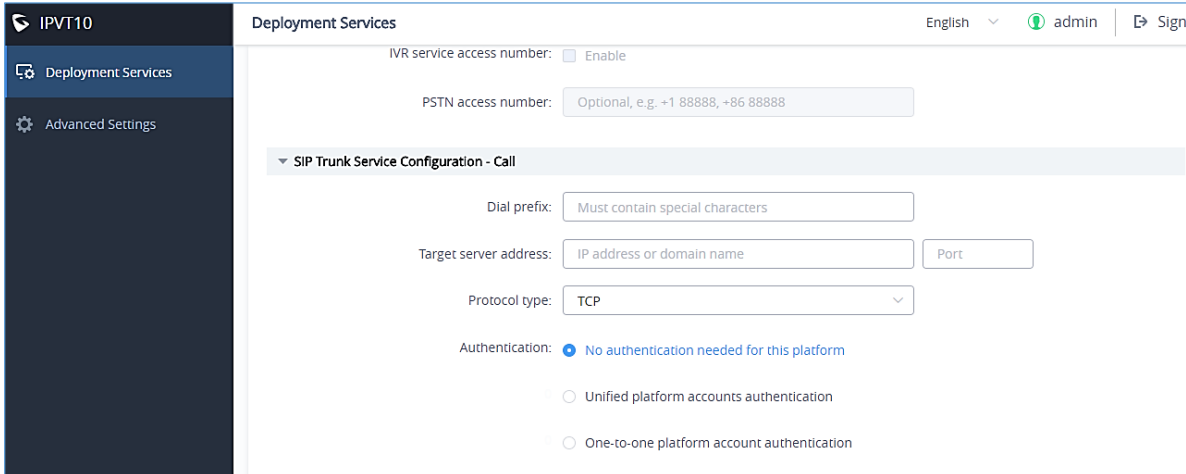
- One or more SIP Trunk server addresses
- (Optional) IVR voice access number
- If users want to show the PSTN access number in the invitation Emails, users could configure the PSTN access number option.

Dial out to the Accounts on the 3rd Party Platform

If users need to join into the IPVT conference with the 3rd party platform accounts, users need to configure the 3rd party platform accounts rules and server address in the IPVT10. Please, refer to the following steps:

1. Login IPVT10 Web Management UI.
2. Step 2. Click on the “Deployment Services” on the left side of the UI, users will see the page below:





The screenshot shows the 'Deployment Services' configuration page for 'IPVT10'. The page is in English and the user is logged in as 'admin'. The configuration is for 'SIP Trunk Service Configuration - Call'. The 'IVR service access number' is set to 'Enable'. The 'PSTN access number' is set to 'Optional, e.g. +1 888888, +86 888888'. The 'Dial prefix' field is empty with a note 'Must contain special characters'. The 'Target server address' field is empty with a note 'IP address or domain name' and a 'Port' field next to it. The 'Protocol type' is set to 'TCP'. The 'Authentication' section has three radio buttons: 'No authentication needed for this platform' (selected), 'Unified platform accounts authentication', and 'One-to-one platform account authentication'.

Figure 15: SIP Trunk Service Configuration - Call

3. Input the dialing prefix, and it is used to recognize the accounts in the 3rd party platform. The special characters (e.g. + * #) are necessary. For example, the account in the 3rd party platform is +86 88888, and the +86 is the dialing prefix. The call will be made to the target server including the prefix.
4. Configure the server address and port for the target server, which is the server IP address or domain name of the 3rd party platform, and the port number of the target server.
5. Select the “Protocol Type” for the 3rd party platform (TCP/TLS/UDP).
6. Select whether if the 3rd party platform requests the authentication. If so, users need to select “Unified platform accounts authentication” or “One-to-one platform account authentication”.
 - **Unified platform accounts authentication:** Users only need to configure 1 SIP account and password on the 3rd party platform, the IPVT10 will always use this SIP account and password authentication to access the 3rd party platform.
 - **One-to-one platform account authentication:** Users need to configure multiple SIP accounts, passwords and mapped IPVT ID on the 3rd party platform. Only the authenticated IPVT IDs are able to access to the 3rd party platform. Users could add multiple accounts, or edit/delete the accounts.

Note: The mapped IPVT IDs have to be the existing accounts in the IPVT10 server.
7. When the configurations are done, users could click on “Deploy to server” button to apply the changes. The server will reboot to apply the changes.

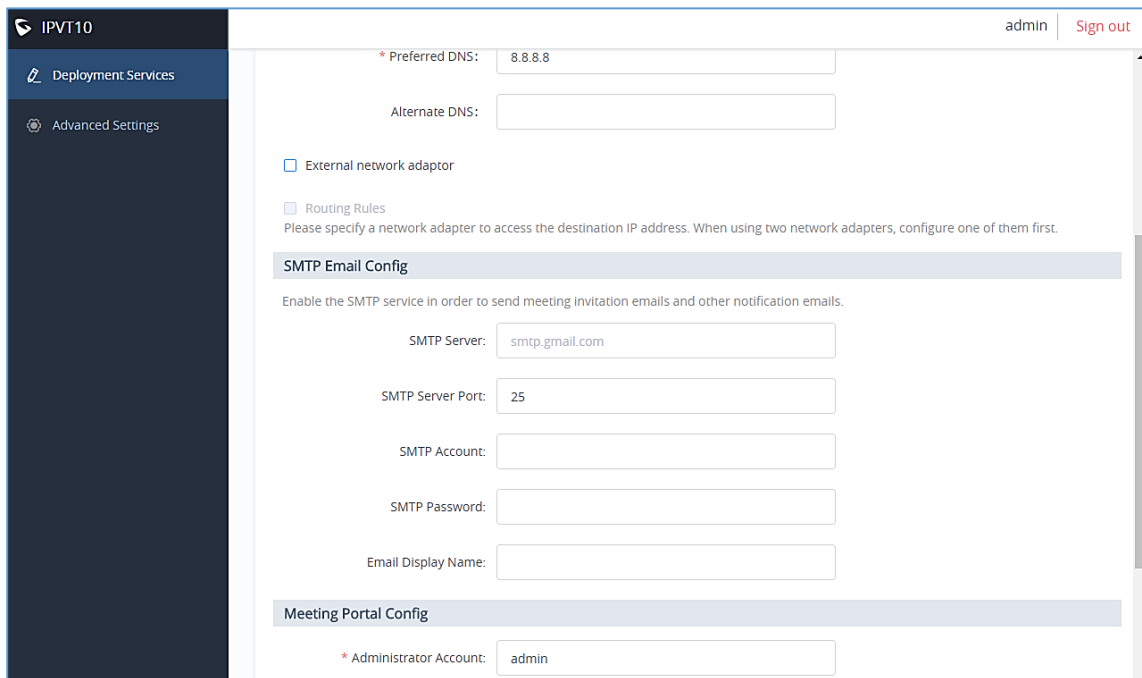


Configure SMTP Mailbox

This Email box is used to send the meeting invitation Emails, meeting reminder, and other notifications as the Email sender. If users do not configure this Email box, the system cannot send the Emails to inform the meeting participants.

Please, refer to the following steps:

1. Login IPVT10 Web UI.
2. Click on “Deployment Services” and configure “SMTP Email Config” options, as shown below:



The screenshot shows the IPVT10 Web UI interface. On the left is a dark sidebar with 'IPVT10' at the top, and 'Deployment Services' and 'Advanced Settings' as menu items. The main content area is white and contains the following configuration options:

- * Preferred DNS: 8.8.8.8
- Alternate DNS: (empty field)
- External network adaptor
- Routing Rules
- Please specify a network adaptor to access the destination IP address. When using two network adapters, configure one of them first.
- SMTP Email Config** (Section Header)
- Enable the SMTP service in order to send meeting invitation emails and other notification emails.
- SMTP Server: smtp.gmail.com
- SMTP Server Port: 25
- SMTP Account: (empty field)
- SMTP Password: (empty field)
- Email Display Name: (empty field)
- Meeting Portal Config** (Section Header)
- * Administrator Account: admin

Figure 16: Configure SMTP Mailbox

3. Input the mailbox and configure the options below:

Table 15: Configure SMTP Mailbox

Parameters	Example
SMTP Server	smtp.gmail.com
SMTP Port	25
SMTP User Name	test@gmail.com
SMTP Password	***
Mailbox Display Name	User's enterprise name



4. Click on “Deploy to Server Now” to apply the entire configurations of this page to the server.
When the deployment is complete, it will take effect immediately.

**Note:**

If the mailbox configuration is incorrect, or not configured, the Conference Management Platform will not be able to send the meeting invitation Emails, meeting reminder, notification Emails, and etc

Configuring Conference Management Platform Information

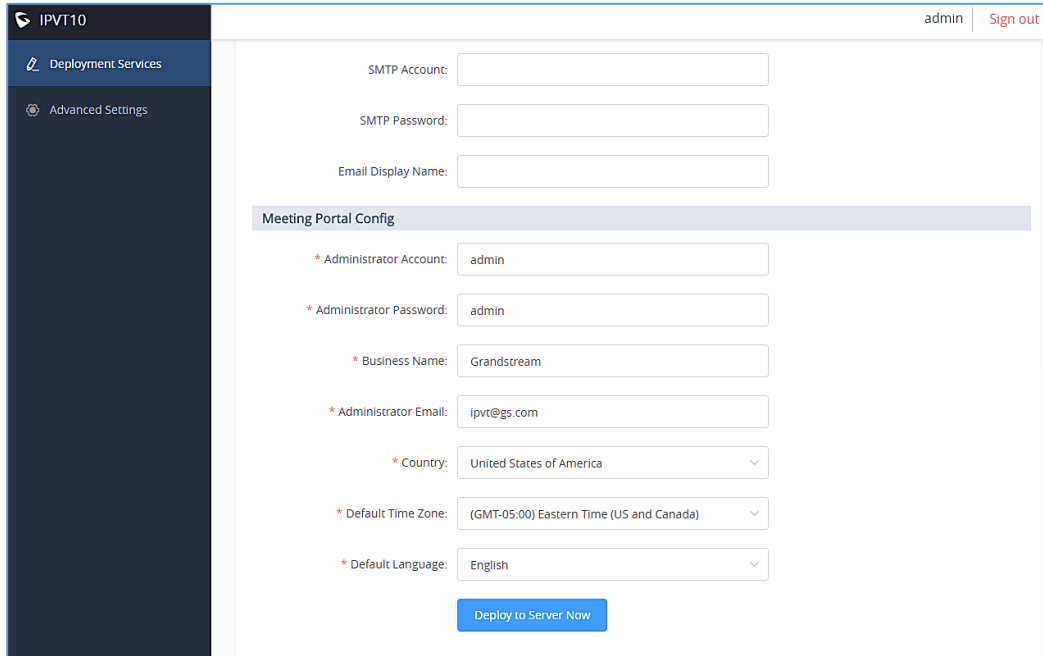
The features of Conference Management Platform:

- **Instant Meeting:** Create a temporary meeting for a certain conference client
- **Schedule Meeting:** Remote schedule a meeting for a certain conference client
- **Join Meeting:** Join a meeting with browser WebRTC client
- **Manage Meeting:** Start/Cancel scheduled meetings, check the meeting histories, check the meeting participants list after the meeting and other statics information
- **Manage Recording Files:** Check/Download cloud recording files
- **Manage Clients:** Manage all clients which are connected to the IPVT10 server, such as GVC32XX.
- Create user accounts for Conference Management Platform

Please, refer to the following steps:

1. Login IPVT10 Web UI.
2. Click on “Deployment Services”, and configure “Meeting Portal Config” options, as the figure shown below:





IPVT10 admin Sign out

Deployment Services

Advanced Settings

SMTP Account:

SMTP Password:

Email Display Name:

Meeting Portal Config

* Administrator Account:

* Administrator Password:

* Business Name:

* Administrator Email:

* Country:

* Default Time Zone:

* Default Language:

[Deploy to Server Now](#)

Figure 17: Configure Conference Management Platform

3. Input the parameters below:

Table 16: Configure Conference Management Platform

Parameters	Description	Example
Admin User Name	Conference Management Platform administrator's username	The default value is "admin".
Admin Password	Conference Management Platform administrator's password	The default value is "admin".
Enterprise Name	Conference Management Platform enterprise display name	User's enterprise name
Admin Email	This is used to retrieve the passwords or receive system notification Emails.	Administrator's Email box
Country	Enterprise Location	The default value is "US".
Time-zone	Conference Management Platform time-zone	The default value is "(GMT) Coordinated Universal Time".
Language	Conference Management Platform language	The default value is "English".

4. Click on "Deploy to Server Now" to apply the entire configurations of this page to the server. When the deployment is complete, it will take effect immediately.



Time/Time Zone Configuration

Users could check the current time and time-zone of the server and correct it at any time to avoid the meeting time inaccurate or cannot be launched issues.

Please, refer to the following steps:

1. Login IPVT10 Web UI.
2. Click on “Advanced Settings”, and configure “Time/Time-zone Settings” options, as the figure shown below:

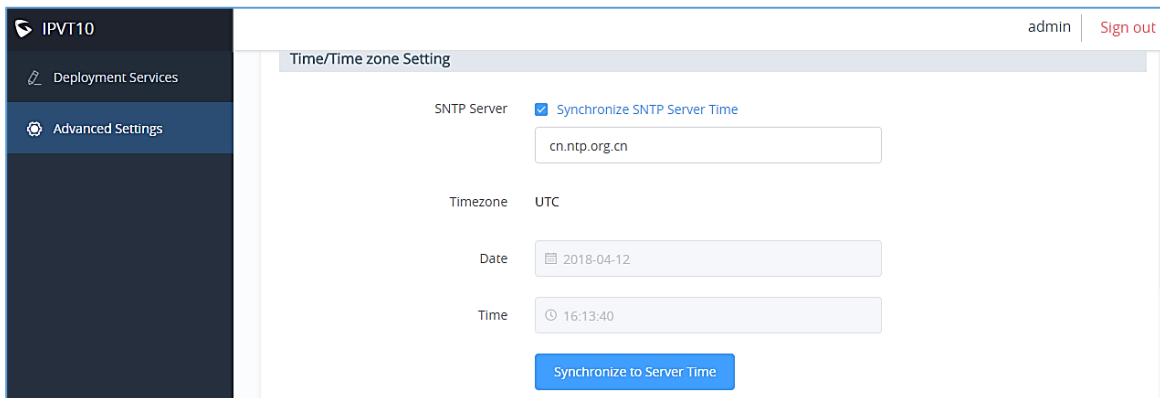


Figure 18: Time/Time Zone Settings

3. It will show the current time and time-zone of the server by default.
4. Users could set whether or not to synchronize the SNTP server time. If there is no available SNTP server, users could adjust the time/time-zone manually.
5. Users could set the time-zone, date and time manually.
6. Users could click on “Synchronize to Server Time” to update the server time immediately.

Factory Reset

When users restore the device to factory reset, all the data in the database server will be erased, including the meetings data and user’s data, as for all the configurations in the server will be erased, and restore to the factory default configuration.

Please, refer to the following steps:

1. Login IPVT10 Web UI.
2. Click on “Advanced Settings”.
3. Click on “Factory Reset”.



- The system will pop up a prompt to ask the users to confirm “Are you sure to factory reset the device?”, and users could click on “Yes” to start to factory reset the device. All the data will be erased, and the service will be restarted.

Upgrade

Users need to take in consideration the following notes when upgrading IPVT10:

- During the upgrading service, the IPVT10 service will be suspended, and users cannot login the Conference Management Platform or start meetings.
- It is suggested to upgrade the device when there is no scheduled or activated meetings during the period.
- It is suggested to download the upgrading firmware from Grandstream official website or using the firmware from Grandstream designated technical support.

Please refer to the following steps:

- Login IPVT10 Web UI.
- Click on “Advanced Settings” and go to “Upgrade Service” option.
- Click on “Upgrade”.

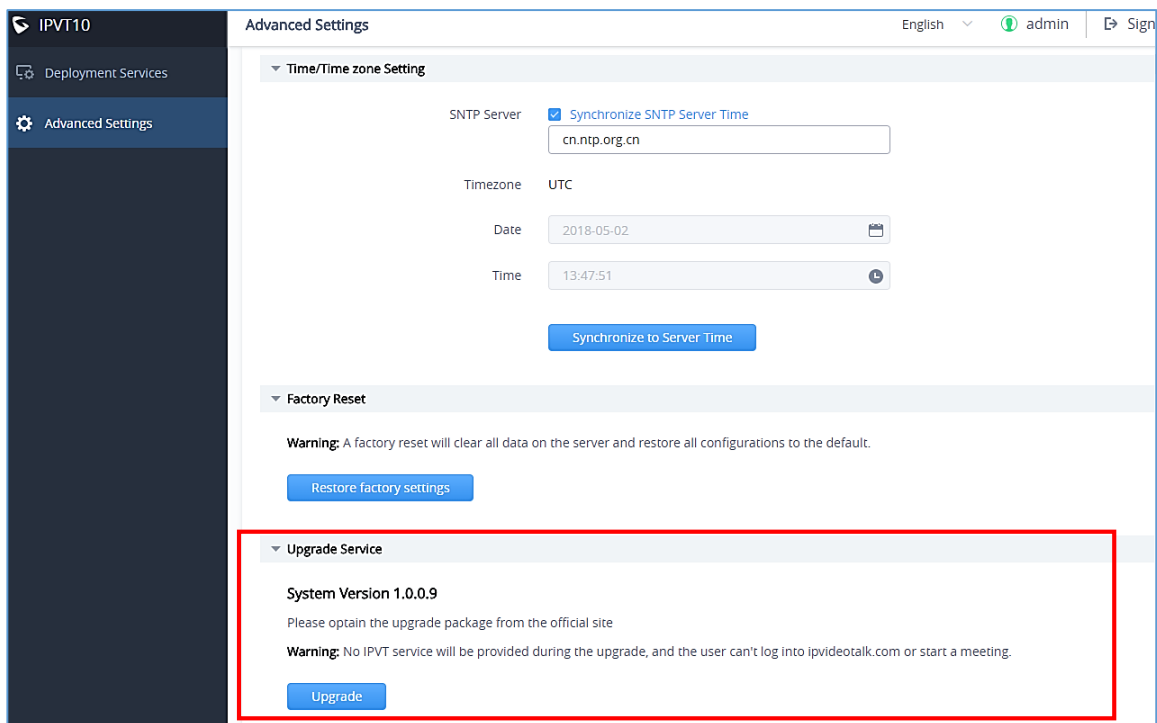


Figure 19: Upgrade Service

- Select the upgrading firmware from the local PC and upload the firmware to the device.



5. When users click to confirm upgrading, the device will process to upgrade the firmware. This process may take several minutes.
6. When the upgrading is complete, the server will restart the service automatically.



TYPICAL NETWORK SOLUTIONS

Users could select the network solutions based on the actual requirements. There are several scenarios:

- **Scenario 1: Internal Network:**

The server is deployed on the internal network. The users use the service via internal network. Users need to configure the internal network IP address for the server. If users register accounts and start conferences on the internal network, and other participants are all on the internal network, users could only deploy the server on the internal network, and only configure the internal network adapter. For example, users could configure this server in the private networks.



Figure 20: Network Deployment Diagram – Internal

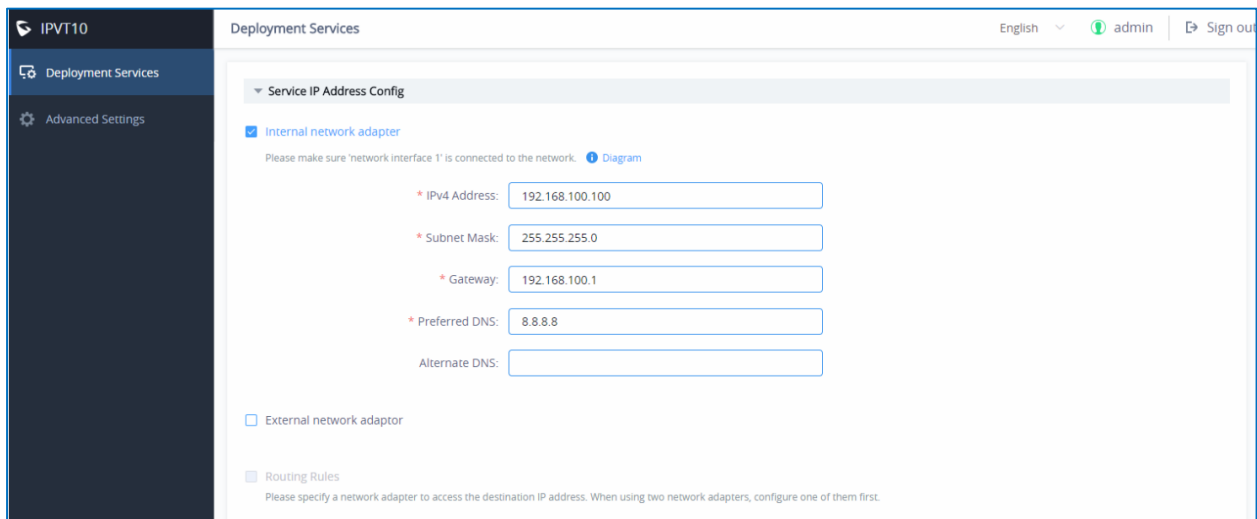


Figure 21: Configure Internal Network Adapter



- **Scenario 2: External network.**

The server is deployed on the external network. Users could access the server via the public network. Users need to configure the external network IP address in the server. If users register accounts and start conferences on the public network, and other participants are all on the public network, users could only deploy the server on the public network and configure the public network adapter.

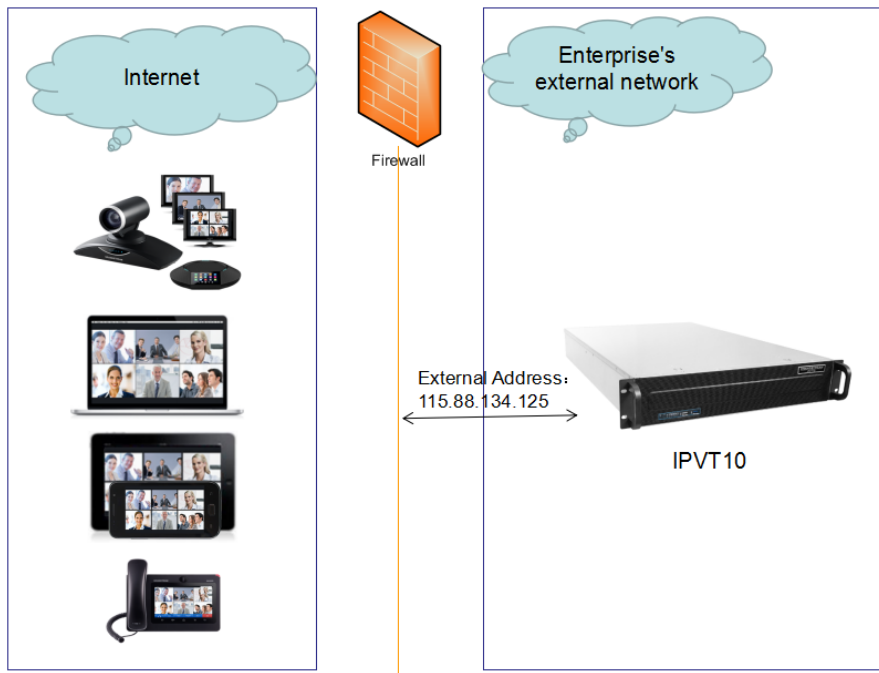


Figure 22: Network Deployment Diagram – External

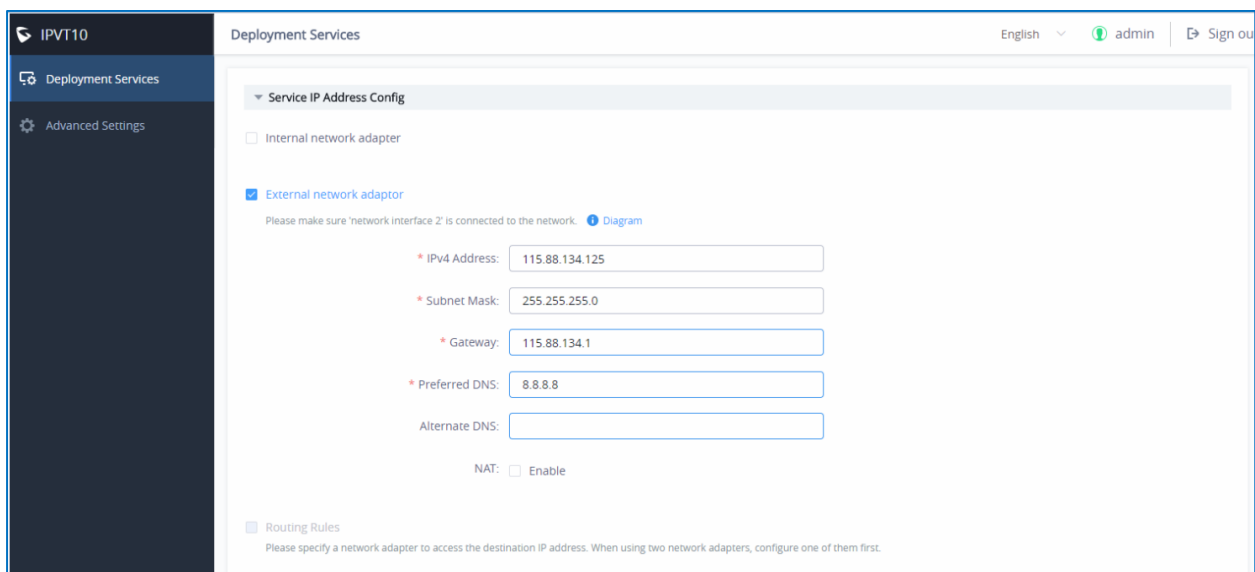


Figure 23: Configure External Network Adapter



- **Scenario 3: External Users to Internal Server**

The server is deployed on the internal network for external users. The users need to use the service via the public network. In this case, users need to configure the external network IP address and static NAT in the server. If the server is deployed on the internal network, and all participants need to use the service via public network, users need to configure the static NAT to ensure the certain public networks are able to access the server. Users could configure the External Network Adapter and NAT to complete the configuration. This deployment does not support users to access the server directly via the internal network. Otherwise, it may cause the abnormal issues for the conferences.

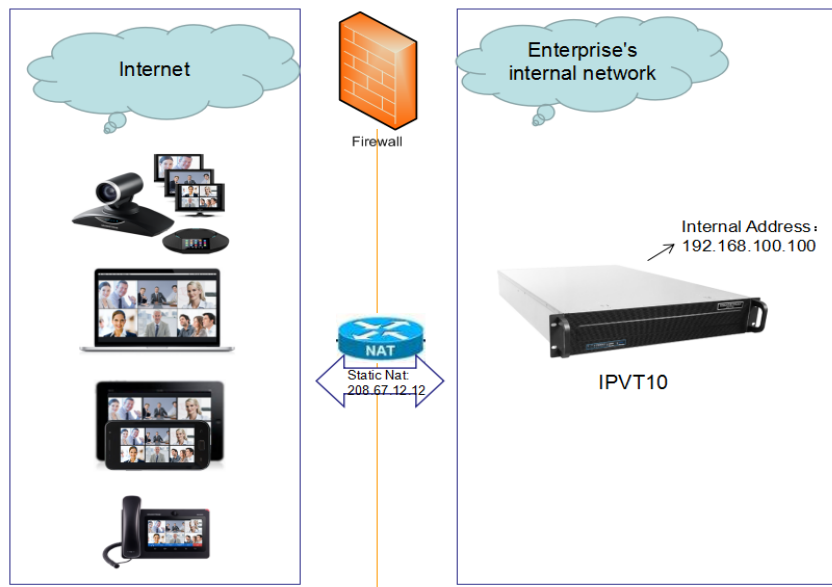


Figure 24: Network Deployment Diagram – External Users to Internal Server

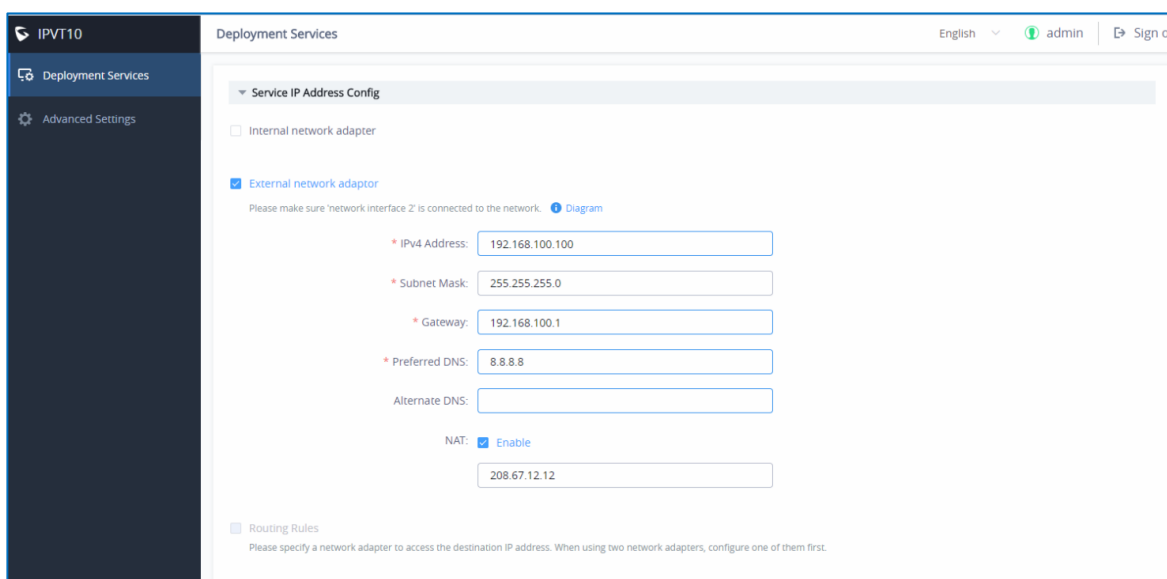


Figure 25: Configure External Network Adapter and NAT



Scenario 4: Internal Network and External Network

The server is deployed on the internal network. The users could access and use the service via either internal network or external network. In this case, users need to configure both internal network and external network in the server, and routing rules. Users need to configure both Internal Network Adapter and External Network Adapter.

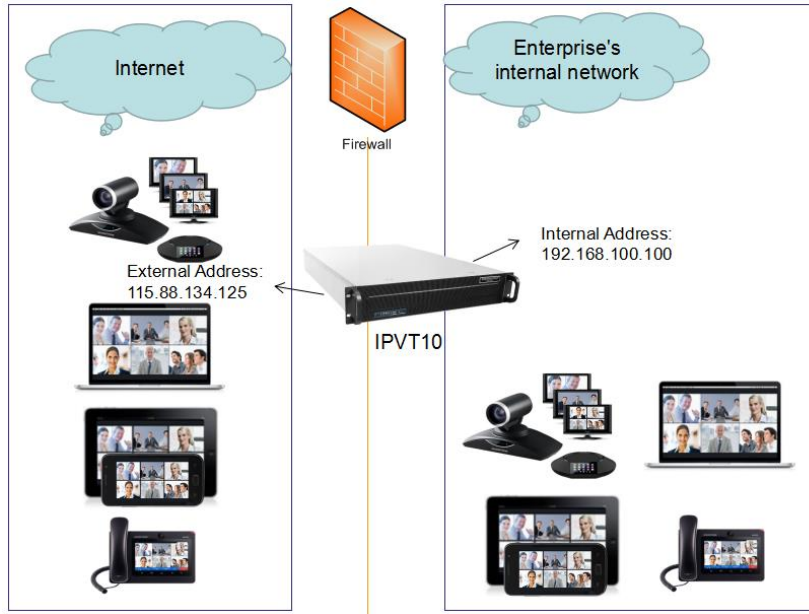


Figure 26: Network Deployment Diagram – Internal Network and External Network

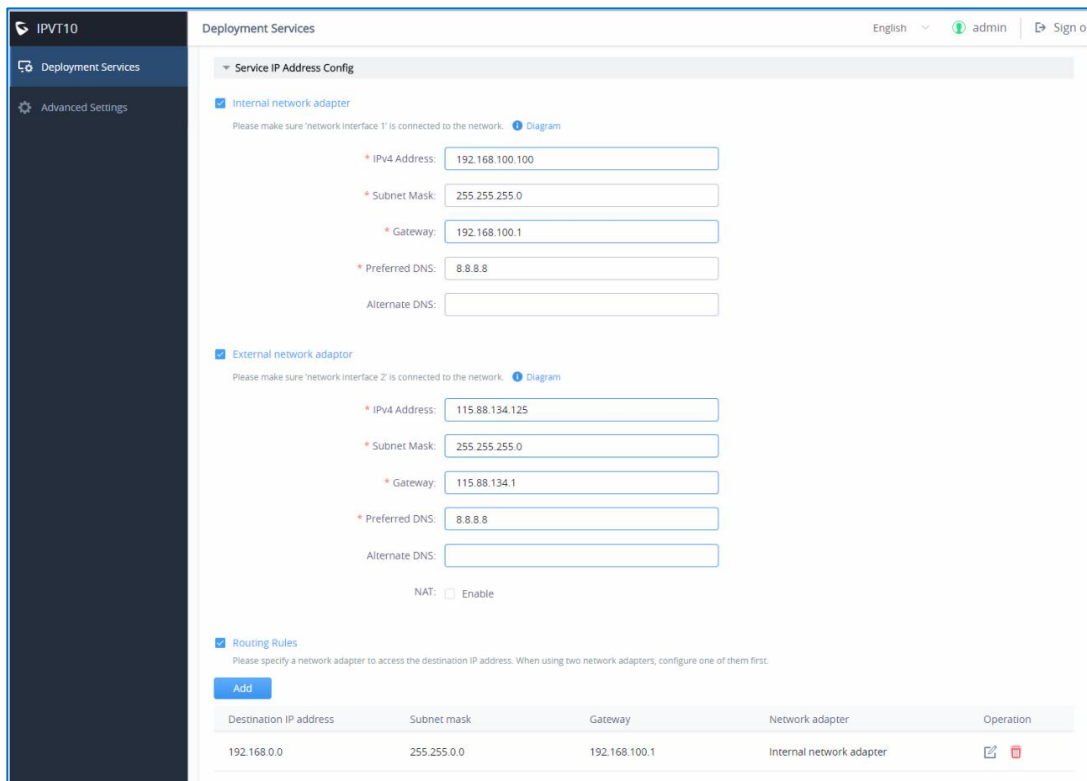


Figure 27: Configure External Network Adaptor and Internal Network Adaptor

Scenario 5: Internal Network and some External Users

The server is deployed on the internal network. Users could access and use the service via internal network and limit some certain public IP address to be able to access the server. In this case, users have to configure 2 networks (Internal network and external network with NAT), and the routing rules. The server's private network address can be configured via static NAT to allow certain external users to access the server.

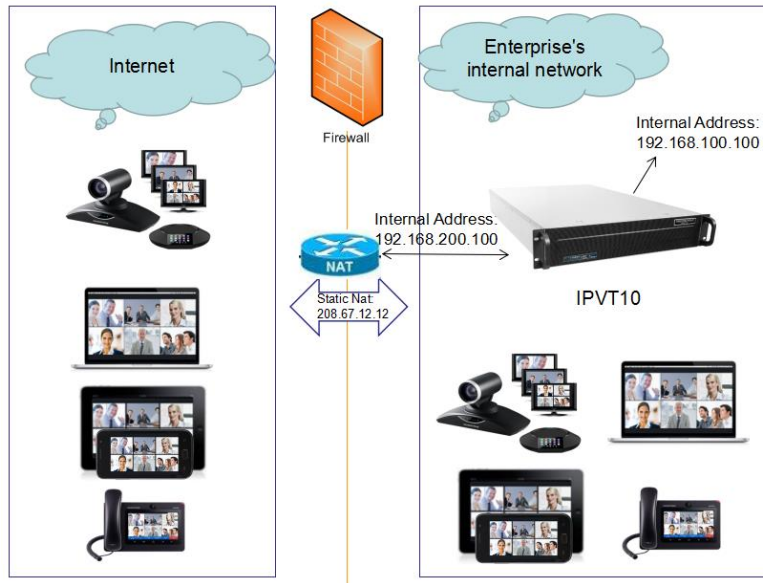
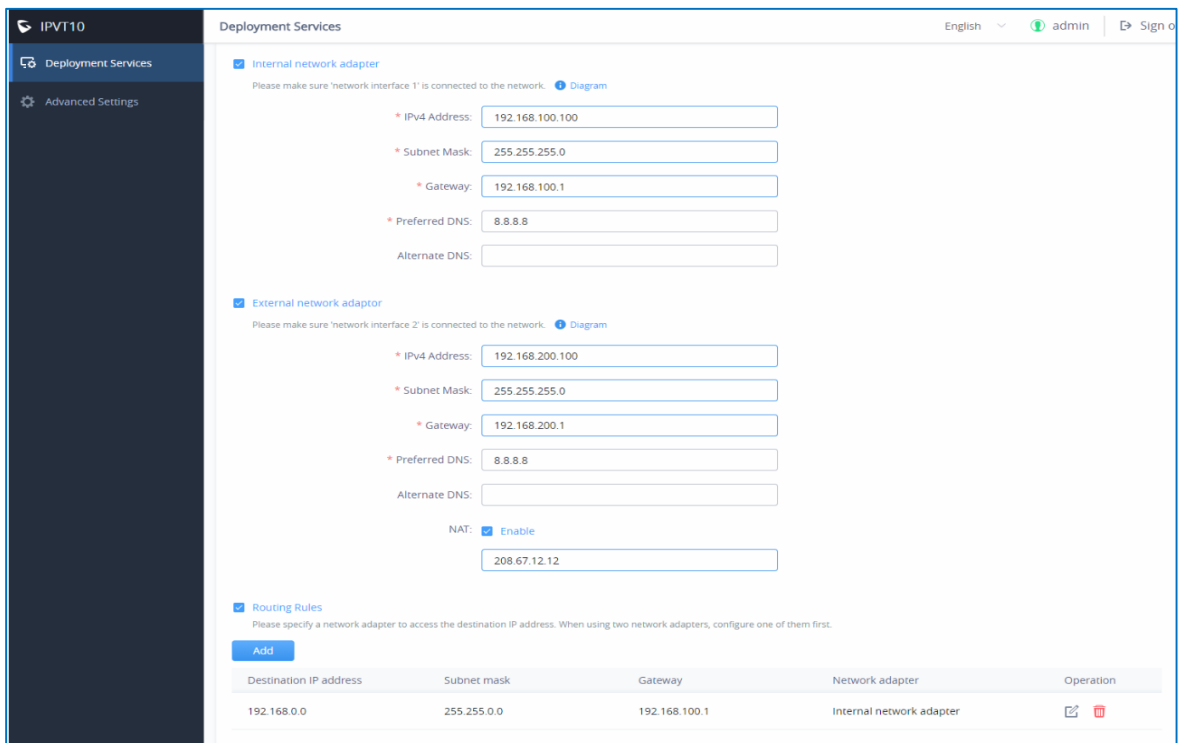


Figure 28: Network Deployment Diagram – Internal Network and Some External Users



The screenshot shows the 'Deployment Services' configuration page in the IPVT10 administration interface. The page is divided into three main sections: 'Internal network adaptor', 'External network adaptor', and 'Routing Rules'.

Internal network adaptor: This section is checked. It includes fields for IPv4 Address (192.168.100.100), Subnet Mask (255.255.255.0), Gateway (192.168.100.1), Preferred DNS (8.8.8.8), and Alternate DNS.

External network adaptor: This section is also checked. It includes fields for IPv4 Address (192.168.200.100), Subnet Mask (255.255.255.0), Gateway (192.168.200.1), Preferred DNS (8.8.8.8), and Alternate DNS. Below these fields, the 'NAT' checkbox is checked and labeled 'Enable', with a corresponding field for the NAT IP address (208.67.12.12).

Routing Rules: This section is checked. It includes a table for specifying a network adaptor to access the destination IP address.



Destination IP address	Subnet mask	Gateway	Network adaptor	Operation
192.168.0.0	255.255.0.0	192.168.100.1	Internal network adaptor	 



Figure 29: Configure External Network Adaptor and Internal Network Adaptor - II



CONFIGURE GVC32XX CONFERENCE CLIENTS

Configure Service IP Address

Before a conference starts on the GVC32xx client, the user has to configure the IP address of the IPVideoTalk server. Please, refer to the following steps the IP address of IPVideoTalk.

1. Start GVC32xx device, and ensure to connect the GVC32xx client to the network correctly
2. Click on IPVideoTalk application .
3. Select “Settings” icon , and go to the configuration as shown below:
4. Input “IPVideoTalk Server” address which is the IP address of IPVT10 server.

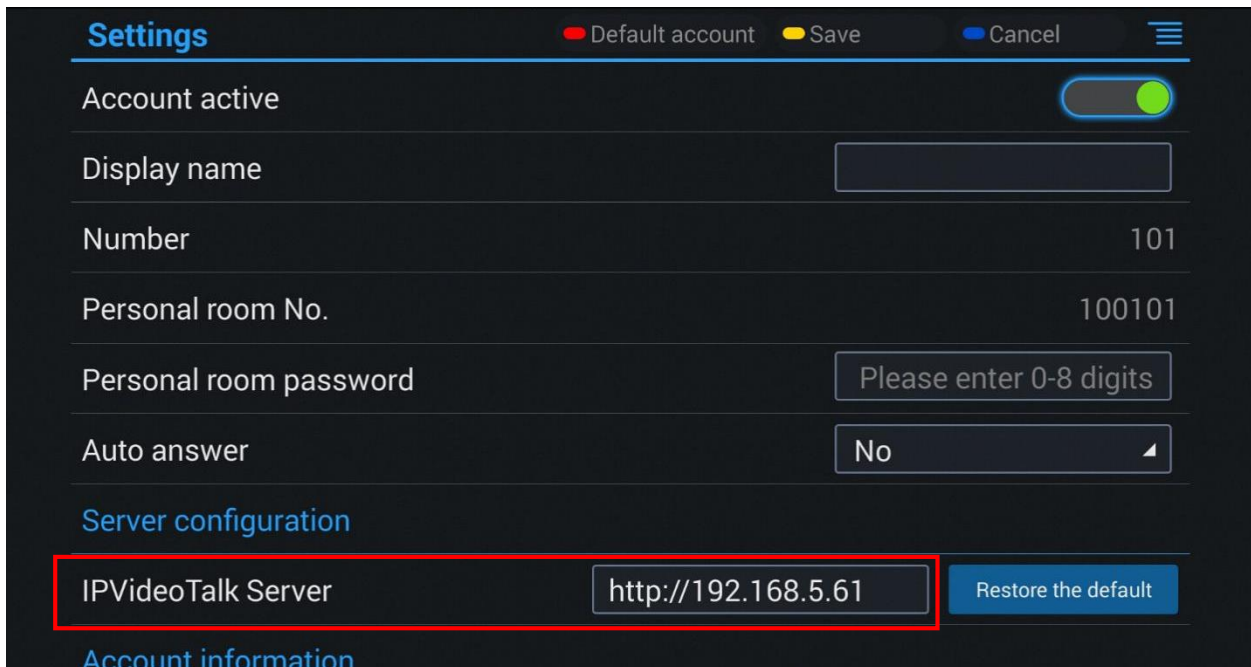


Figure 30: Configure Service IP Address

5. Click to save the configuration, and the device will connect to the IPVideoTalk server automatically. The device will be automatically assigned an IPVideoTalk ID, starting from “100”. If the IPVideoTalk ID status icon turns green, that means the account could be used normally.



START CONFERENCES

When the server is configured, users could use the conference client to start conferences.

For more information, users could go to Grandstream official website <http://www.grandstream.com/support> and download the User Guide of IPVT10 to get more details.



EXPERIENCING IPVT10 VIDEO CONFERENCING SERVER

Please visit our product website at <http://www.ipvideotalk.com> for the latest release, features instructions, FAQs, latest documentations, and latest products information.

We encourage you to browse our [product related documentation](#), [FAQs](#) and [User and Developer Forum](#) for answers to your general questions. If you have purchased our products through a Grandstream Certified Partner or Reseller, please contact them directly for immediate support.

Our technical support staff is trained and ready to answer all your questions. Contact a technical support member or [submit a trouble ticket online](#) to receive in-depth support.

Thank you again for using Grandstream IPVT10 Conferencing Server, it will be sure to bring convenience to both your business and personal life.

